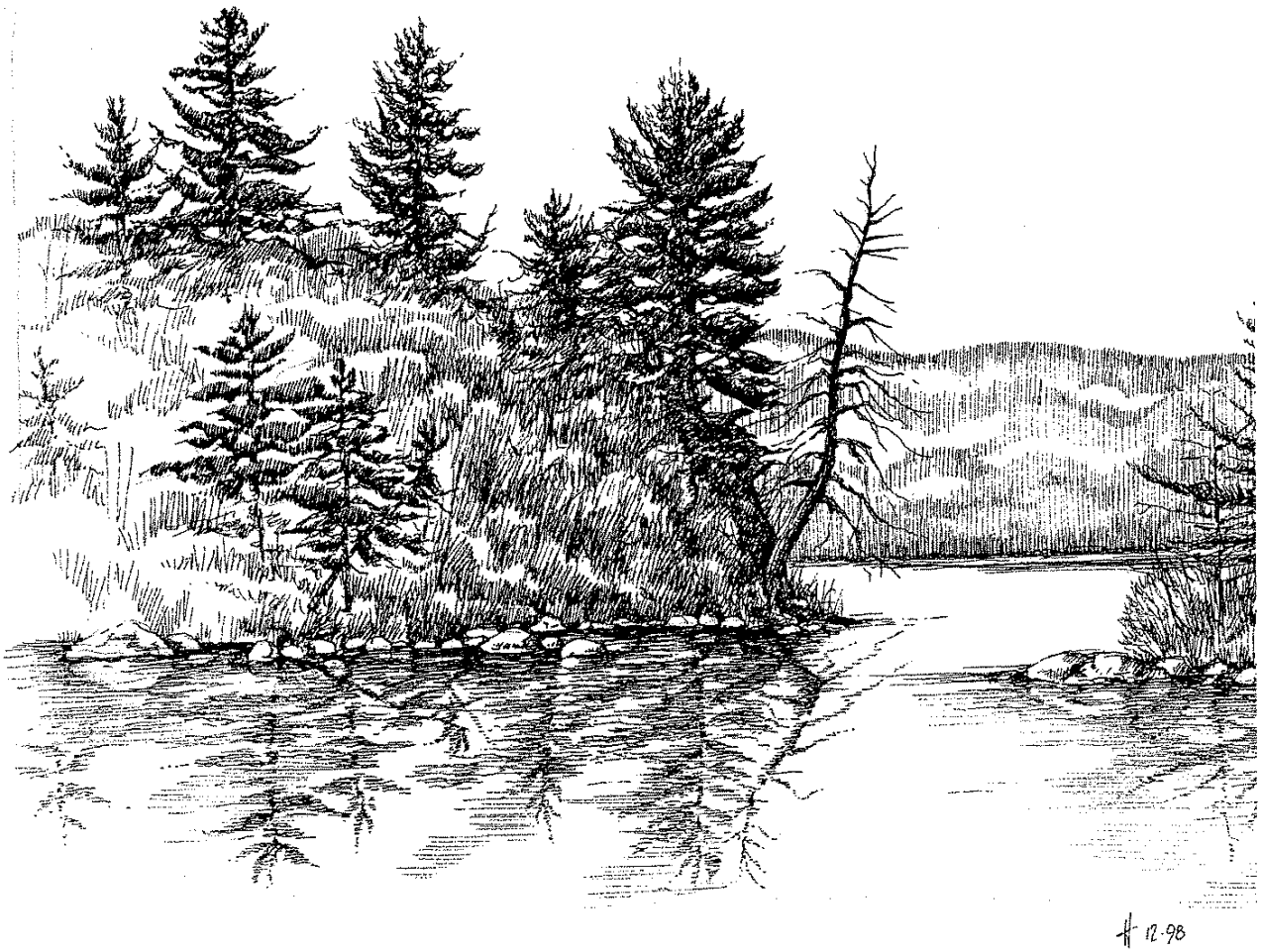

TOWN OF ACTON
OPEN SPACE AND RECREATION PLAN
2002 – 2007

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Mark Twain, when asked for investment advice, once said: "Buy land, they've stopped making it."

SECTION 1 - PLAN SUMMARY

In the past five years, Acton has implemented many of the action recommendations contained in the previous Open Space and Recreation Plan (OSRP) with the greatest strides made in the areas of active and passive recreation. Although much work remains to improve recreational opportunities in Acton, our biggest challenge in the next five years lies in our ability to preserve Acton's character and to protect the environment, most notably our water supply.

In this plan update, we have reexamined our previous goals and revised our objectives to reflect: the accomplishments of the past five years; the problems we now face; and the needs of residents as expressed in the 1998 Master Plan Update, as well as the 2001 OSRP Survey. Our overall goals remain the same as those set in the last plan:

Goal 1: Preserve the remaining elements of Acton's rural character
Goal 2: Protect the environment
Goal 3: Improve recreational opportunities

The previous OSRP was completed at a time when many Acton residents were feeling the benefits of a booming economy. Approval of funds to develop the North Acton Recreation Area (NARA), and purchase of the Morrison Farm and Boy Scout land all occurred during this time. The growth in school population, and the popularity of sports among young people made recreation a value nearly everyone in Acton could understand and support. For those reasons, the previous OSRP became a powerful document for focusing public efforts on open space and recreation.

Since that time, and in part because of the OSRP, Acton has seen a gratifying increase in its human infrastructure, both in town government and in the many individuals motivated to work together, volunteering their time to improve resources for the town and, in many cases, for the region. In the last five years: Acton has put in place a new Recreation Department and Recreation Commission; the Acton Conservation Trust, a private non-profit organization, has refocused its mission to become a land trust; the Acton Stream Teams have become an active group; and there is an Environmental Manager at the Acton Water District. The Friends of the Acton Arboretum, a private non-profit organization, continues to improve that unique park. One of the busiest and most productive of all groups, the Land Stewardship Committee (LSCom), a subcommittee of the Conservation Commission, has provided consistent, first-rate management for Acton's conservation lands and has made huge strides in improving public access to these lands.

Overview of Five-Year Action Plan
The growing, powerful public interest in open space and recreation, and the constraints we face in addressing the public's needs, have shaped the actions we recommend in this plan.

As part of this plan, nearly every significant parcel of open space has been reviewed and its value as recreation or open space established. Although this is a huge step forward from the last plan,

it is not enough. Aggressive actions must now be taken to preserve these lands, to protect our natural resources, especially our water supply, and to ensure recreational opportunities keep pace with the needs of our growing population.

At present Acton has a town-sponsored Economic Development Committee (EDC) whose mission is to advise the Board of Selectmen on issues related to economic development, but there is no formal town entity charged with the same role for open space protection. This plan presents fifteen specific actions to accomplish our three OSR goals; many of these actions are tied to the creation of a permanent OSR Committee charged with advising the Selectmen and advocating for open space and recreation issues.

Acton's human infrastructure—the dozen or more groups (largely volunteer) working to protect the environment, to maintain open space and its values, and to encourage active and passive recreation—are a formidable resource whose efforts underpin this plan. To keep these groups, the town boards and the general public, informed of the progress in implementing this plan, the OSR Committee should remain active, reporting to the public on a yearly basis gains and losses. In addition, this plan recommends measures the OSR Committee must take to:

- Evaluate open space preservation opportunities and act as an advocate to Town boards
- Serve as an advocate for Acton's farms
- Develop a policy to ensure that the OSR Committee is informed of potential changes of use for prioritized parcels
- Advocate for zoning changes to mitigate and control growth

Despite our OSRP survey results that showed that a majority of residents say they want to protect open space with purchase, if necessary, Acton still has lost major parcels to development. Acton needs alternative ways to purchase or legally protect open space from development. Approval of the Community Preservation Act would help provide a source of funding for ongoing land protection. Should passage of the CPA fail at the November 2002 ballot vote, the OSR Committee must place a high priority on developing other funding options, such as including an annual budget line item for open space and recreation land purchases. In addition, the Committee should work with the Acton Conservation Trust, as well as other area land trusts, in order to further their work in obtaining conservation restrictions on prioritized parcels.

Acton's greatest environmental problem, water, is the frame in which our future will take place. Although summer watering bans have been in place for years, the current water supply will support little new development of any kind, according to Acton's Water District. A town wide planning effort must be undertaken in the area of water supply protection, and further controls on outdoor summer water use must be implemented as soon as possible.

Acton is like many Massachusetts towns in that industrial activities of previous decades have left an unfortunate legacy of contaminated groundwater. Although Superfund designation of the former W.R. Grace site in South Acton has leveraged a massive cleanup program, contamination of Acton's groundwater remains. Smaller 21E sites have created "hot spots" of soil and water contamination within town and non-point pollution from residential developments has

exacerbated eutrophication in Acton's surface water bodies.

Acton's greatest successes in the past five years have been in the area of active and passive recreation. The opening of NARA, the Recreation Department's many field improvements in other parts of town and the Land Stewardship Committee's (LSCom) numerous projects to improve public access to our conservation lands have all contributed to vastly expand Acton's recreational opportunities.

In the next five years, the town's recreation offerings must keep pace with growth in the school population and address the need for bicycle paths and additional hiking/cross-country ski trails preferred by those responding to the Open Space and Recreation Survey. The Recreation Department's five-year plan addresses the need to improve existing recreation facilities and develop new recreation sites and fields. As part of this plan, funds will be sought for the final design and construction of athletic fields at the Morrison Farm. In addition, plans are underway to procure land, finalize design plans and construct the T.J. O'Grady Memorial Skate Park.

Acton is participating in the area's efforts to develop two regional bike paths; the Assabet River Rail Trail (ARRT) and the Bruce N. Freeman Memorial Bicycle Path (BFBP). The Planning Department had submitted an article for the 2002 town meeting to fund Acton's 1.1 mile portion of the ARRT, but due to budget constraints this article was not included on the final warrant. This may be brought up again in 2003. The ARRT is planned as a multi-use recreational rail trail that will pass through the communities of Marlborough, Hudson, Stow, Maynard and Acton, with a terminus adjacent to the South Acton train station.

Acton's current five-year plan for the BFBP includes a feasibility study, trail survey, and grant research to position Acton for available funding for construction of the trail. The BFBP is planned as a multi-use rail trail running from Sudbury to Lowell. Acton's portion of this trail, traversing a distance of 4.5 miles, will provide a path running from the Morrison Farm/Ice House Pond in East Acton to NARA Park in North Acton, and will touch points on the Isaac Davis Trail, the Route 2A/27 Little League complex, and the Nashoba Brook Conservation Area.

The LSCom's five-year plan focuses on public outreach and inter-town trail connections. The plan includes further work on their website, publication of a greatly improved Guide to Conservation Lands, increased publicity concerning LSCom activities, introduction of educational programs into the schools, some town wide projects such as vernal pool certification, and both intra-town connectors between parcels, where possible, and inter-town connectors to conservation lands in several of the contiguous towns where these lie just across the boundary. Since the OSR Survey respondents placed a high value on hiking paths and cross-country ski trails, funding for the ongoing publication of the Guide is recommended as part of this OSR plan update.

SECTION 2 - INTRODUCTION

A. Statement of Purpose

The purpose of this plan is to review our accomplishments during the last five years and closely examine our needs with an eye to developing realistic goals and tools for open space preservation, environmental protection and expanded recreational opportunities.

This plan has another goal - to provide Acton citizens with a solid understanding of our remaining open space and our goals for preservation. We hope this plan will become an active document for citizens in town to use for conservation and recreation planning. By protecting our town's open space, we will provide for Acton's future by maintaining our quality of life and ensuring that we continue to enjoy a safe and adequate water supply.

This is Acton's fifth open space and recreation plan. It is part of an ongoing effort, begun in 1989, to plan for Acton's future. While the last plan was written under the pressure of an intended land purchase, for which the town hoped to (and did) receive state funds, this plan occurs just as the town has completed several exciting projects. Given the local interest in the issues discussed here, as presented in the previous summary, this report is, in fact, being produced as much for the town's enlightenment as it is for the State.

This is the latest in a series of planning documents. In 1991 the town accepted a Master Plan; this plan called for the town's planning department to create detailed plans for five different areas of Acton. The department has completed three of these (reviewed in the last OSRP): a village plan for West Acton Village, a village plan for South Acton, and an economic development plan for Acton's commercial center at Kelley's Corner. The completed plans set forth specific goals for each of those areas with strategies for reaching those goals. The public participated in creating each document.

In 1998, a Master Plan Update was completed, which is described in Section 2B. In 2001, the Board of Selectmen appointed the East Acton Village Planning Committee. Their plan is scheduled for completion in 2003 and should come before Town Meeting in 2004. The North Acton Village Plan process will begin after the Town has accepted the East Acton Plan.

Open Space Gains and Losses 1996 to the Present

Gains

The town purchased the 32-acre Morrison Farm in 1997 (funded in large part by a $1.3 million debt-exclusion override), as General Municipal Property, with plans for turning the open areas into ball fields, and placing trails in the forested area. This farm was listed in the previous OSRP as one of our top parcels for protection.

In the years since the prior plan was prepared, the town has received 44.5 acres of land from cluster developments and subdivisions. In late October 1995, the town received a narrow 14.5-acre conservation corridor that runs between the rear of the Meadow View subdivision house lots

and the extensive wetlands beyond them; this corridor is connected at both ends to the Heath Hen Meadow Brook Conservation Area.

In 1997, the town received 13 acres of open space from Marshall Crossing, a cluster development in the north section of town. In 1999, the Captain Handley Road subdivision granted the town 17 acres along its perimeter; this land provides a conservation corridor from Harris Road to the Wills Hole Conservation Area.

In December 1995, the Conant family donated 24.25 acres of land, valued at $500,000, to the Acton Water District for enhancement of Acton's water supply.

There have been two conservation restrictions (CRs) placed on a total of 26 acres in the last five years. In March 1998, the Haartz Corporation granted the Acton Conservation Commission a conservation restriction on 15 acres of forested uplands located on the Haartz property.

In December 2001, a CR was finalized on 11 acres of the James and Mary Donald's property abutting the Arboretum. The Acton Conservation Trust and the Sudbury Valley Trustees hold this CR jointly. This property was donated to the Town of Acton and accepted by the town at Spring Town Meeting in 2002.

Losses

Unfortunately, since the last OSRP, other efforts to protect forests and farm fields have been unsuccessful. The town did not purchase the DiDuca Farm on Great Road in East Acton (which was under Chapter 61A classification). This former farm will soon become a shopping mall. This is a loss of farmland, although it satisfies a state and local planning goal of concentrating commercial development in one or two areas.

One of the largest undeveloped properties in town, the 230 plus acre cluster of forested parcels, known collectively as the Robbins Mill Pond Land (RMPL), that lies near the Concord and Carlisle borders, has been lost to residential development. RMPL abuts 400 acres of existing conservation land, including Camp Acton, Nashoba Brook, and the Spring Hill conservation areas. RMPL was identified in the last OSRP as a top priority for protection and would have provided a corridor of open space through Concord, Carlisle and Acton. Although purchase approval was granted by Town Meeting in the spring of 2000, the debt override, for $6.8 million, was defeated in the subsequent ballot vote.

The Palmer land, a 130-acre plus property in the Nashoba Brook Greenbelt, was also a priority for protection in the last OSRP. This land is being developed into a golf course, which is a loss of natural open space, but will satisfy the regional need for more recreation facilities. Local environmentalists have concerns about the impact this golf course will have on our water supply and on wildlife habitat.

B. Planning Process and Public Participation

Formation of Open Space and Recreation Committee

In the spring of 2001, at the behest of the Board of Selectmen and the Conservation Commission, an Open Space and Recreation Committee was formed for the initial purpose of updating the five year Open Space and Recreation Plan (OSRP) which expired at the end of 2001.

The committee consists of a dozen members representing various boards and groups in town. Barbara Smith and Morene Bodner, former Conservation Commissioners and principal authors of the previous OSRP, are the co-chairs of the committee. Other members are:

Peter Ashton – Chairman of the Board of Selectman
Jane Ceraso – Environmental Manager of the Acton Water District
Dick Hatfield – Environmental Coordinator for the Haartz Corporation, a local business
Terry Maitland – Conservation Commission member
Linda McElroy – Chair of the Land Stewardship Committee
Hart Millet – Planning Board member
Susan Mitchell- Hardt – President of the Acton Conservation Trust (ACT)
Bill Mullin – ACT member and former selectman
Laura Sikalis – Recreation Commission member
Tom Tidman – Director of Natural Resources

Although the initial task of the committee was to update the OSRP, with the approval of the Board of Selectman, the Committee plans to continue as a group to advocate for open space and recreation issues, reporting to the Board of Selectmen, after the Plan is finalized.

Open Space and Recreation Survey

The committee decided that a survey was needed to gather input about Acton residents' open space and recreation needs. A sub-committee, headed by Peter Ashton, drew up a survey form that was mailed in May 2001 to all of Acton's 6,700 households. Over 1,400 surveys were completed and mailed back, a better than 20% response rate. The respondents' ages and residential locations reflected a good cross section of the town's demographics. The cost of mailing and printing the survey forms was funded by the Acton Conservation Trust. The survey results were published in The Beacon, the local newspaper, in a front-page story in the October 4, 2001 issue. Refer to the Appendix, Section 12a for a copy of the survey form and the compilation of the survey results.

The survey results and percentages detailed below only pertain, of course, to the respondents and may not reflect the desires of the entire town.

Some of the survey results were surprising (and gratifying). The first survey question asked how important it was to preserve:

- Historic buildings
- Historical places

- Farmlands
- Open space for water and conservation needs
- Open space for recreation

Open space for water and conservation needs was given the highest rank of importance. In addition, 81% of the respondents said that they would vote for a town-supported land purchase, while 77% said they would support adding a line item to the town budget for open space acquisition. Passage of the Community Preservation Act was favored by 69% of the respondents.

Residents favored a residential growth policy that would provide for (in order of preference):

- No more growth
- Increased lot sizes through down zoning
- A subtraction of wetlands from the definition of a lot
- An annual building cap.

Regarding commercial growth, the survey respondents were overwhelmingly in favor of limiting growth to those areas already zoned for commercial development.

Residents were asked to cite the top five recreational facilities most needed in Acton. Bike trails were the top preference, followed by conservation areas and hiking/skiing trails. Athletic areas and children's areas came in as the fourth and fifth choices.

The acquisition and preservation of conservation land was ranked as either very important, or important, by 87% of the respondents.

There were also open-ended survey questions about what residents liked best and least about living in town. Not surprisingly, residents liked the schools, the town's character, the community and location. They disliked traffic, congestion, development, growth and higher taxes.

The results of the survey were utilized in developing the goals, objectives and action steps for this updated Open Space and Recreation Plan. (See the Appendix for a more complete description of the survey results).

1998 Master Plan Update

Summary

In 1997 Acton began to update its Master Plan, which had been completed 6 years earlier, in 1991. Just after the original plan's completion, according to the Update's Executive Summary, "the region suffered a sharp recession, the recovery from which was led by residential, rather than commercial, construction." It became clear that changed circumstances within the town, including the increase in residential development, merited a new look at the Master Plan.

That perception was supported by the OSRP completed in 1996. Research for that plan found residents often dismayed over steady residential development, loss of open space and graceless suburbanization of the town. The OSRP process found community support for retaining Acton's

semi-rural appearance, the character of its villages, and the open space and forests that have made the town so attractive.

A year later the Acton Planning Board held two town-wide workshops as part of its Master Plan Update process. Three priorities emerged: to slow residential growth, encourage economic development, and protect the environment. These priorities were defined by objectives and, further, by strategies and actions town departments could take in the future.

In our effort to make this OSRP update consistent with town planning documents we have summarized portions of the Master Plan goals below:

Land Use Goals

- Preserve those features which contribute to Acton's New England town character.
- Direct new residential development to protect Acton's natural environment and other resources, to be consistent with Acton's New England town character, and to encourage diversity in Acton's population. In the master plan, the definition of "New England character" includes features which strengthen village centers, rural and historic elements, and natural and man-made features, including tree buffers along roads.

In other words, strengthen village centers, rural and historic elements, the natural and man-made features (stone walls, ponds) that give Acton its character, adjust the style and intensity of residential development to promote diversity, protect the environment and open space.

Natural, Cultural and Historic Resources Goals

- Protect and sustain Acton's natural environment and resources
- Preserve Acton's historic and cultural resources
- Enforce environmental laws and regional solutions to protect Acton's resources, including water supply.
- Address environmental problems stemming from new development, wastewater and solid waste management.
- Provide incentives to preserve historic structures and places.

Open Space and Recreation Goals

- Preserve the remaining elements of Acton's rural character
- Provide a variety of recreational opportunities for all Acton residents

Prioritized List of Open Space

Tom Tidman, Director of Natural Resources, David Abbt, Engineering Administrator, and Belle Choate, long-time resident, laboriously went through all of the town maps and highlighted all open space parcels that were important to preserve for their rural, environmental and/or recreational significance. Mark Hald, the town's IT Director, provided computerized extracts from the assessor's database, listing these parcels.

Once these automated lists were obtained, the Director of Natural Resources, together with members of the OSRC, assigned each parcel a score between 1 and 10 for each criterion. Total

scores were then used to develop an initial ranked list, which was then reviewed by assorted groups and individuals, familiar with the parcels, including the Conscom, LSCom, ACT, David Abbt and Belle Choate. The prioritized lists for Chapter 61 property and non-61 property can be found in Section 12.

Plan Preparation and Public Review Process

PLAN PREPARATION

The co-chairs of the OSR Committee wish to thank Tom Tidman, Acton's Director of Natural Resources, for his input to all parts of this plan; without his help, the preparation of this document would not have been possible. A number of other individuals contributed greatly to the writing of this plan:

Linda McElroy, Chair of the LSCom, wrote the descriptions of our conservation lands, including projects accomplished in the last five years, conservation needs and the LSCom's plans for the next five years. (See Sections 5, 7 and 9)

Nancy McShea, Acton's Recreation Department Director, provided much information about athletic fields, playgrounds and water-based recreation, including accomplishments of the last five years, recreation needs and the Recreation Department's plans for the next five years. (See Sections 5, 7 and 9).

Jane Ceraso, the Environmental Manager for Acton's Water District, provided a great deal of information on Acton's water resources, environmental challenges and the AWD's plans for the next five years. (See Sections 4, 7 and 9).

Peter Ashton, Selectman, directed the efforts to prepare and compile the OSR survey and compiled the results from the dozen volunteers who tabulated the over 1400 completed surveys. Peter also wrote the sections on Population Characteristics and Growth and Development Patterns. (See Section 3).

Mary Michelman, Coordinator of the Acton Stream Teams, provided information on that group's activities and on environmental challenges and needs for Acton's streams. (See Sections 4 and 7)

David Abbt, Engineering Administrator and *Belle Choate*, longtime Acton resident, worked with Tom Tidman to identify non-Chapter 61 parcels of conservation and recreation significance.

Susan Mitchell-Hardt, President of the Acton Conservation Trust, was responsible for getting the OSR survey printed and mailed; the Trust also provided the funding for this survey.

Karen O'Neill, Board member of the Acton Conservation Trust, wrote the section on the Trust and the Donald Conservation Restriction (See Section 5).

Donna Jacobs, a former member of Acton's Planning Department, wrote the section on The Metropolitan Area Planning Council (MAPC) and The Minuteman Advisory Group on Interlocal coordination (MAGIC).

There are two sections of this plan that remain unchanged from the previous plan: Geology (in Section 4) written by Peter Shanahan, former Conservation Commission member; and History (in Section 3), written by Acton Historical Society member Belle Choate.

Specific suggestions were solicited from many other individuals during the preparation of the first draft of this Open Space and Recreation Plan. Those contacted in Acton included members of the following boards, departments and non-profit organizations:

Conservation Commission
Municipal Properties
Planning Department
Engineering
Board of Health
Assessor's Department
Acton's IT Director
Acton Water District
Acton Stream Teams
Acton Conservation Trust

In addition, information was obtained from the following sources outside of Acton:
Littleton Open Space Planning Committee
Westford Conservation Administrator
Stow Conservation Administrator
Maynard Conservation Commission Chair
Citizen Planning and Training Collaborative (University of Massachusetts)
New England Small Farm Institute
Cape Cod Commission
Central Massachusetts Regional Planning Commission
Southeastern Massachusetts Regional Planning Commission
Metropolitan Area Planning Council

PUBLIC REVIEW PROCESS

A public presentation was held at a Conservation Commission meeting on June 5, 2002. Copies of the revised draft were circulated to all town departments, relevant boards and community groups for comments for inclusion in the final document. The distribution list is included below:

All town departments
Board of Selectmen
Conservation Commission
Cemetery Commission
Commission on Disabilities
Finance Committee
Historic District Commission
Historical Commission
Land Stewardship Committee
Planning Board
Recreation Commission
School Department

Acton Community Housing Corp.
Acton Conservation Trust
Acton League of Women Voters
Acton Stream Teams
Acton Water District
Citizens for Acton CPA
Friends of the Acton Arboretum
Memorial Library

MAPC
State Senator Pam Resor

Athletic Leagues:
- AB Youth Baseball
- Acton Adult Softball League
- Pop Warner Football
- AB Youth Soccer
- AB Youth Softball

Interested Citizens:
Isabella V. Choate
Brewster Conant
Peter Shanahan

SECTION 3 - COMMUNITY SETTING

A. Regional Context

Acton is an upper middle class suburban community, located approximately 25 miles west of 50Boston, between Routes 495 and 128. It is in the SuAsCo (Sudbury, Assabet and Concord rivers) Watershed. Route 2 bisects the town, and serves as a major commuting route into Boston for residents of Acton and towns located to the west and north. Route 2A, which runs east to west, is a commercial, retail and residential zone. The stores, offices and services on Route 2A are used by residents of Acton, Boxborough, Westford, Littleton, Carlisle, Stow, Concord, Maynard and Harvard. The Route 2A corridor also contains a large residential component consisting of apartment buildings, condominiums complexes, some single-family homes and several large subdivisions. A significant part of the Route 2A corridor runs parallel to the Nashoba Brook, which provides both important wildlife habitat and recreation opportunities. The M.B.T.A. commuter rail runs through West and South Acton. A train stop is located in South Acton where the town maintains a commuter parking facility.

The socioeconomic class of the majority of Acton's residents, the historic use of the majority of Acton's land, and the patterns of development all have had an impact on the use of open space and recreation lands. The older residents of Acton remember what the town was like when it was a farming community and, along with newer residents, have supported some public purchases of land to provide open space, to protect the environment, and to help maintain property values. As a result, nearly 1600 acres of land have been protected since 1960. Some of this was procured through cluster development. In the last few years the Acton Conservation Trust (the local land trust) has pursued conservation restrictions to protect land. As forests and farmlands have been developed the public has exerted pressure to keep such areas open, and to place open space parcels adjacent to all major subdivisions. Consequently, there are conservation lands in nearly all parts of town.

Nevertheless, much of Acton's rural character has disappeared in the past 10 years, a change that many residents noted with regret in a recent survey of open space and recreation needs taken for this update (see Section 2B). The economic upturn of the past 10 years has claimed more open space for residential construction, with an average of 95 building permits issued per year since 1993, as opposed to 60 per year during the late 1980s.

Several parcels of conservation land in Acton either abut, or are close to, neighboring towns, offering the potential for regional trail systems. Each one of our neighboring communities lies close to one of Acton's conservation lands, as detailed below:

Westford - Will's Hole/Town Forest (and the North Acton Recreation Area)
Littleton - Nagog Hill and Grassy Pond
Boxborough - Guggins Brook
Stow - Heath Hen Meadow
Maynard - the Steinman and McGloin lands

Concord - Stoneymeade and Camp Acton
Carlisle - Nashoba Brook, Spring Hill and Camp Acton

Regional Facilities in Acton.
Acton's development of the *North Acton Recreation Area, NARA*, through a debt exclusion override of $1.6 million, approved by voters in 1996, has already provided a regional recreation destination. A large multi-use park, NARA has a beach and a 9-acre pond for swimming, fishing and boat rentals. Site amenities include playgrounds, athletic fields, a walking path encircling the property and a 2,000 seat amphitheater. NARA hosts recreation and cultural programs throughout the year, including evening summer concerts, and a summer camp.

In 2001, 40 out-of-town seasonal beach memberships were sold (over 600 resident memberships are sold each year). The Recreation Department estimates that approximately 1,000 people from other areas attended the July 4th 2001 celebration and about 50 non-residents partook in our summer evening concert series. Registration lists show that approximately 15% of the program participants were non-residents. Non-residents account for about 10% of field rentals at NARA.

Approximately 30 children from other towns, or 10% of the participants, attend the NARA Youth Summer Program. For the youth sport leagues that use NARA, about 20% of the participants are non-residents.

Camp Acton, formerly used by the Boy Scouts of America as a camping ground, is owned by the town (purchased in 1995) and is still maintained for campouts as well as evening campfires. Camp Acton is open to both residents and non-residents. Town records show that in the year 2000, Camp Acton was used by boy scouts from all over Massachusetts and New Hampshire, a church group from Arlington and Belmont, and by a number of groups, both resident and non-resident that used the camping area for evening campfires. In 2001, 18 out-of-town groups, most of them Cub Scouts, used Camp Acton.

The *Acton Arboretum* is a cross-country ski destination in the winter. In the summer, the Arboretum's gardens are open to all, and can be rented for certain functions.

The planned golf course, *Quail Ridge*, will also serve as a private regional recreation destination for its members. The developer has stated that during the off-season the course will be available for cross-country skiing.

Communication Links with Conservation Areas in Contiguous Towns
Acton is contiguous to seven towns. Of these, five have conservation properties of their own just beyond the common boundaries at places where Acton conservation areas also exist. The Land Stewardship Committee (LSCom) plans to initiate talks with these towns to establish inter-town links across the common boundaries so that hiking trails can be extended and connected to those existing in these other towns.

LSCom has already initiated a dialogue with the Littleton Conservation Trust to attempt to provide a permanent corridor between our Nagog Hill property and their Sarah Doublet property.

The intervening land runs along the shore of Nagog Pond across the Concord Water District property, where a fisherman's trail already exists. In order to utilize this trail, approval would be required from the Concord Water District.

Other possible trail connections include:

- West Acton's Heath Hen Meadow to Stow's Captain Sargent Farm Conservation Area
- West Acton's Jenks Land along the railroad bed to Boxborough's Sargent Road Half Moon Meadow Conservation Land and a heron rookery
- South Acton's McGloin and Steinman properties across the golf course to the Maynard Assabet Riverway property
- East Acton's Stoneymeade land to the contiguous Concord conservation land
- North Acton's Nashoba Brook Conservation Area via the Robbins Mill Pond land to the Carlisle Spencer Brook conservation land

Each of these possibilities presents a different challenge. The simplest, the erection of a sign announcing the connection, will only require an agreement between towns. The most difficult, acquisition by both towns of one landlocked parcel on each side of the boundary, will require funding to purchase the intervening land as well as to construct a long boardwalk through a beautiful wetland that is home to many species of birds and mammals. This latter project, between Acton and Stow, would require considerable cooperation between the two towns as well as local and, possibly, state funding. The resulting connection would represent a splendid achievement for both environmental protection and enjoyment, but also for inter-town cooperative effort.

Specific Regional Issues in Acton's Seven Abutting Towns

MAYNARD: Maynard, to the south of Acton, also has water problems and allows no lawn watering, except with a hand-held hose. Acton and Maynard are connected by a common wetland as well as by the Assabet River. A new Maynard wellhead lies off Rockland Avenue near Conant Street. Acton and Maynard have joint jurisdiction over the Maynard Country Club and the Club has appeared before the Acton Conservation Commission before it performed work on its property. The Assabet River Rail Trail runs through both Acton and Maynard. Finally, Maynard's sewage treatment plant lies partially within Acton and Acton's sewage treatment plant is close to the Maynard town line.

BOXBOROUGH: Acton is closely associated with Boxborough through regional schools, many community and cultural organizations, and athletic leagues. The arrival of Cisco Systems several years ago has had a great impact on Boxborough, driving up property values and requiring the expansion of the Route 495 exit at Route 111. One of the most rapidly-growing communities in the state, Boxborough could face even more pressure to develop its remaining open space. Boxborough's voters failed to approve the Community Preservation Act at its last spring town meeting.

Beaver activity on Acton conservation land adjoining Boxborough is flooding land belonging to

a Boxborough condominium complex. Acton has had some success draining the growing pond without trapping these beavers.

STOW: Recently, Stow and Boxborough jointly purchased 285 acres of conservation land at Flagg Hill, where Stow, Boxborough and Acton intersect. The Stow Conservation Trust has just purchased a conservation restriction on 196 acres of land, The Red Acre Farm Foundation property, which is also near Acton. The LSCom would like to link conservation lands with Stow, as noted above. Stow has approved the CPA with a 3% surcharge. This measure together with Stow's large-lot zoning and vigorous land trust should enable Stow to protect their remaining open space and preserve the character of their town.

The towns of Stow and Acton share concerns about Heath Hen Meadow, a major flood plain for Boxborough, Acton and Stow. According to the 2000 SuAsCo Biodiversity Protection and Stewardship Plan, written by Francis Clark, Heath Hen Meadow is one of the largest red maple swamp and stream systems in the area, containing over three miles of relatively unfragmented stream and providing an extensive wildlife corridor. Acton's portion of Heath Hen Meadow is conservation land. Almost 200 acres of Stow's portion of this valuable resource is zoned industrial; Heath Hen Meadow Brook could be adversely impacted by expansion and improvements to nearby Minuteman Airfield in Stow, which lies nearby.

CONCORD: The surface water supply for the Town of Concord is Nagog Pond, which is located within Littleton and Acton. Concord prohibits public use of the pond, owns some of the pond's shoreline, and needs to protect the pond's water quality.

In the last five years, the Town of Concord, or its land trust, have either purchased or protected: the 40-acre Mattison Field, a former cow pasture on Old Road to Nine Acre Corner, the Coburn Benson Farm on Ball's Hill Road, Simon Willard Woods, Piney Woods, as well as another 12 acres of land near Nine Acre Corner. Concord also purchased the 20-acre Breen (Thoreau) Farm on Virginia Road; part of this property is now back in agricultural use under Gaining Ground, Inc., a non-profit farming organization.

Of concern to both Acton and Concord is the proposed relocation of Route 2 to state-owned property along the existing route. The wide stretch of farm fields on both sides of Route 2 just west of the Route 2 rotary provides a rare, sweeping view of open farmland that is regionally significant. This farm, owned and operated by the state Department of Corrections for the inmates of the Concord reformatory, was one of the largest in this area and is located in both Acton and Concord. As of this writing, the State has sold off the farm's dairy herd, as a cost cutting measure, and the future of continued farming on this land is uncertain. Few such open spaces exist, and it is one of Acton's and Concord's priorities to preserve this landscape.

LITTLETON: A commuter rail station has been proposed for property above the Route 2 heron rookery on a beaver pond just east of I-495 in Littleton, and abutting Acton. Concern for this unusual wildlife habitat has sent the state looking for alternative sites.

In 2000, Littleton voters approved funds to preserve Nagog Hill Orchard (Morrison land) above

Nagog Pond. This significant pastoral vista of pond and orchards is listed on the state's Scenic Landscape Inventory. This property will remain an orchard and, along with shoreline owned by the Town of Concord, will help protect Nagog Pond and the wildlife corridor running east through Littleton and into Acton's Nagog Hill Conservation Area.

CARLISLE: Having approved the Community Preservation Act (CPA) last year, with large-lot zoning and a vigorous land trust, Carlisle is in no immediate danger of over-development.

Development in Acton is a greater concern, in particular, the loss to residential development of the substantial Robbins Mill Pond property, which lies on the Carlisle border. The Acton Conservation Trust, Acton's land trust, had sought to preserve the land, but voters failed to approve a Prop. 2 1/2 override. In the last five years, Carlisle's land trust has preserved or protected over 100 acres of land.

WESTFORD: Traffic congestion is perhaps the greatest problem for the town of Westford, another semi-rural community trying to adjust to rapid development. Fortunately, Westford residents give strong support for land protection. In a recent survey taken for Westford's OSRP update, residents ranked open space protection and acquisition second only to schools in order of importance. Westford has over 600 acres in several contiguous parcels of land held by the town or by the Massachusetts Audubon Society, or protected through conservation restrictions. Westford recently purchased an additional 6 acres to add to this property. In addition, in 2001 Westford voters passed the CPA with a 3% tax surcharge, the maximum level.

Westford is reviewing a proposal for a golf course on the Kennedy Farm near the Acton town line and Acton's Kennedy Well Zone 2 protection area. However, Westford is ready to apply strict controls on golf course fertilizer and pesticide use to protect Acton's water supply.

Other Regional Issues and Activities

ACTON CONSERVATION TRUST (ACT): ACT has stimulated regional efforts to protect open space and biodiversity. In January 2001, ACT hosted a meeting of representatives from area land trusts (Boxborough, Carlisle, Concord, Littleton, Stow, Westford, Sudbury Valley Trustees and Mass. Audubon) to explore the ways they could share resources, as well as to discuss regional open space issues. A month later ACT hosted environmental consultant Francis Clark who spoke on Biodiversity in the SuAsCo Watershed (see Section 4F for a review of Acton's biodiversity sites).

COMMUNITY PRESERVATION ACT (CPA): The CPA allows communities to enact up to a 3% surcharge on local property taxes to establish a dedicated fund, to be matched by the Commonwealth, for open space acquisition, historic preservation and affordable housing. Acton's neighboring communities of Bedford, Carlisle, Chelmsford, Harvard, Stow and Westford have all passed the CPA. In 2000, Acton's Board of Selectmen voted not to place the question before Acton voters. In 2001, the Board appointed a CPA advisory group to study this issue, and the group recommended that Acton adopt the CPA. The CPA was voted in at the Town Meeting in 2002 and is scheduled for a ballot vote in November 2002.

BAY CIRCUIT TRAIL: Acton has dedicated its portion of the Bay Circuit Trail, a state recreation priority, that runs through the Nashoba Brook, Spring Hill, Camp Acton and Stoneymeade conservation areas. The trail dedication was made possible by the purchase, in 1995, of Camp Acton. Acton's LSCom is maintaining the trail and signs within Acton's boundaries.

BICYCLE TRAILS: Acton is working to realize two regional bicycle trails. (Refer also to more detailed write-ups in Section 5.)

Lowell to South Sudbury: Bruce Freeman Bikeway Path (BFBP)
The BFBP is planned as a multi-use rail trail running from Sudbury to Lowell via the decommissioned Penn Central Railroad, which is now owned by the Commonwealth of Massachusetts, Executive Office of Transportation and Construction (EOTC).

Acton's current five-year plan includes the development of a feasibility study, a trail survey, and grant research to position Acton for available funding for construction of the trail. Throughout the five-year planning period, a high priority will be placed on public outreach and obtaining access to publicly owned lands.

Assabet River Rail Trail (ARRT)
The ARRT is planned as a multi-use recreational rail trail that will pass through the communities of Marlborough, Hudson, Stow, Maynard and Acton. The trail will be built along the abandoned rail bed of the former Marlborough Branch RR, which was active between 1850 and 1980. As of July 20, 2001, a 3/4 mile section of the trail in Marlborough is paved and open to the public.

In October 2001, the MBTA Executive Board voted to transfer the 0.7 mile MBTA right of way to the Town of Acton at no cost. Also that month, the Acton Board of Selectman indicated its support for the Assabet River Rail Trail. At Acton's annual town meeting in April 2003, an article may be brought forward to fund Acton's 1.1 mile portion of the trail. The total estimated cost of Acton's portion of the $12 to $13 million dollar trail is $1.3 million, most of which will be supplied by federal funds and grants. The local appropriation for the trail will be between $200,000 and $230,000.

MAPC
The Metropolitan Area Planning Council (MAPC) is the regional planning agency representing 101 cities and towns in the metropolitan Boston area. Created by an act of the Legislature in 1963, it serves as a forum for state and local officials to address issues of regional importance. Through eight subregional organizations, MAPC works with its 101 cities and towns. Each subregion has members appointed by the chief elected officials and planning boards of the member communities and is coordinated by an MAPC staff planner. MAPC has been involved in a variety of activities that affect communities within the region. MAPC revised the current Traffic Analysis Zones (TAZs) structure, used in the regional transportation model, to improve future analysis of the effects of alternative zoning, open space, and development policies on the transportation system.

During 2001, the federal government released Census 2000 data. MAPC staff has been busy analyzing the data to identify growth trends and disseminating information to legislators, municipalities, public and private agencies, and the general public. To this end, MAPC drafted two important documents. *Decade of Change* highlights key regional growth trends that occurred during the 1990s. *Community Profiles,* a partnering document to *Decade of Change,* is a compilation of demographic, socioeconomic and land use data for the 101 cities and towns in the MAPC region. The profiles present a portrait of each community through the presentation of key growth indicators, which are documented over time to pinpoint specific trends.

MAPC completed the two-year process of producing build-out analyses for communities throughout the region. MAPC and Executive Office of Environmental Affairs (EOEA) staff introduced information about the Community Preservation Act and build-out analyses results during presentations to Mayors, City Councils, Boards of Selectmen, and interested citizens. EOEA funded the effort and contracted with MAPC to complete build-out analyses for every city and town in the region. The purpose of the study was to create an approximate "vision" of the potential future growth permitted by a community's bylaws and encourage discussion of growth management options. Build-out analysis results have been the basis for zoning changes in a number of communities and have provided critical information for water resource planning at the local and regional level. These analyses will form the basis for planning work under Executive Order 418 and other comprehensive planning efforts, including an update to MetroPlan, the regional development plan for the Boston metropolitan area.

MetroPlan is an outgrowth of MAPC's commitment to promote efficient and environmentally sound development. Adopted in 1990, the plan's framework promotes a sustainable development pattern focusing on existing infrastructure to strengthen the region's economy and safeguard air, water, and land resources. Acton's new build-out analysis, presented to Acton's Board of Selectmen this past year, showed that the town's water supply will not support that level of development. This OSRP update addresses that problem.

METROGREEN: MetroGreen is the land resources protection element of the Metropolitan Area Planning Council's (MAPC) regional development plan. It refers to all land that contributes to the environmental health of the metropolitan region. These are areas that supply the regional community with clean water, flood protection, recreation, natural beauty and a sense of place or local character. The goals of MetroGreen are:

- To preserve and protect critical land resources
- To shape the growth of the region
- To help preserve and enhance a "sense of place" for the region
- To fulfill the recreational needs of the region's population and to provide access, when appropriate, to protected open areas

Acton's open space plan accommodates MetroGreen's criteria for resource protection in both the mapped and unmapped component. The required resource protection maps are included in this OSRP. In fact, the state has wisely incorporated the goals of MetroGreen into the revised open space plan requirements outlined in the Open Space Planners' Workbook.

MAGIC: The Minuteman Advisory Group on Interlocal Coordination (Acton, Bedford, Boxborough, Concord, Carlisle, Hudson, Maynard, Marlborough, Lexington, Lincoln, Littleton, and Stow) meets monthly to discuss and work on issues of interlocal concern. In 2001, MAGIC:

- Participated in Phase I of the "MAGIC Carpet" Study of alternative transportation options;
- Prepared feature slide presentations for the I-495 Regional Conference, which focused on the "Northern Tier" communities and their issues;
- Hosted two, well-attended Legislative Breakfasts;
- Initiated meetings with regional leaders along the Fitchburg Line to collaborate in supporting reverse commute and other service improvements;
- Prepared a development database cataloguing projects in the pipeline; and
- Participated in the development of various regional transportation plans.

MAGIC has a direct voice in transportation planning and project selection via its Bedford representative, Selectman Gordon Feltman, who serves on the Metropolitan Planning Organization (MPO). Lexington representative Richard Canale also speaks for MAGIC on transportation issues as the subregion's representative to the Joint Regional Transportation Committee (JRTC). MAGIC has discussed implications of potential growth with member communities.

I-495 Initiative

The MAGIC communities are part of the I-495 Initiative, a partnership of local officials, business leaders, and others affected by growth along the I-495 Corridor. The Initiative is a joint project of MAPC and the Massachusetts Technology Collaborative with funding from the Massachusetts Office of Business Development. During 2001, the I-495 Initiative sponsored its 4th Annual Conference of Growth and Shared Solutions, which this year featured the MAGIC towns; organized a Water and Sewer Conference; offered training programs through the new I-495 Institute for Local Officials; and worked actively on transportation initiatives, including reverse commute and formation of a Regional Transportation Authority.

B. History of the Community

Nearly all of present day Acton's 12,990 acres are composed of early land grants. The largest of these grants were Major Simon Willard's Grant of 2000 acres (most of which became Iron Work Farm) and the New Grants of 1655 (5000 acres) and 1665 (3000 acres), which were given to the people of Concord and were commonly called Concord Village. Next to these grants was the Praying Indian township of Nashoba which lay entirely outside present day Acton, although artifacts from earlier Indian hunting and fishing villages have been found in Acton, especially in the area of Nagog Pond.

The early landscape included large areas of meadows. These grazing lands were the reason Concord first sought to annex the land in 1655. The earliest European settler was John Law, Concord's shepherd, who built his home in 1656 on School Street near Lawsbrook Road. Law was joined in 1661 by John Shepherd who was granted land by Concord to build his house near Hosmer Street. In 1668 Capt. Thomas Wheeler built a house near the intersection of present day Concord Road and Alcott Street, under a lease from the town of Concord to herd its cattle.

The Iron Work Farm, which was entirely separate from Concord's New Grants, was worked as a plantation to support those who worked at the iron works which had been established in 1658 in what is now West Concord. The farm had at least three families living on it in 1684. The 1707 Faulkner house at Main and High Streets, the 1709 Knight-Forbush house on Martin Street, and Stonefield Farm lie within the bounds of the original Iron Work Farm.

By 1730 there were at least two dozen settlers scattered across the town. The Proprietors of Concord Village or New Grant proceeded to divide their lands among the various proprietors. The records of the proprietors' clerk, which have only recently become available for research, give a picture of the Acton landscape from around 1730 until 1780.

In 1735 Acton was incorporated as a town. A meeting house was built in the center of town with roads from the outlying farms leading to it. Early industry included the mills on Fort Pond Brook in South Acton as early as 1701, the Forge on Nashoba Brook below Ice House Pond in 1728, and at least four mills along Nashoba Brook as early as 1738. Portions of these mills are still visible, a number of them located on the town's conservation land.

Although Acton was primarily an agricultural community in its early days, saw mills and grist mills were necessities. The manufacture of barrels to store food stuffs became the first light industry. It continued to the early 1900s, as young birch trees became hoopoles for Florida citrus crates. The woolen industry centered around the Faulkner Mills, said to have been one of the first large-scale manufacturers of woolen cloth in this country.

In 1835 the powder mills were started on the Acton, Concord, Maynard (then Sudbury) line, and continued to operate into the 1940s. The Powder Mill dam on Old High Street has been repaired and is again generating electricity. In 1843 the railroad came to Acton. Only with the arrival of the railroad did West Acton, hitherto known as the West part of town, become a village. In 1848

the pencil factories on Nashoba Brook opened, continuing in use until 1888.

The 1870s brought several other industries to Acton: the Merriam Piano Stool Factory on Fort Pond Brook in South Acton; Hall Brothers pail and churn factory and the Knowlton Cigar factory, both located in West Acton. Hall Brothers cut the trees from local woodlots for their products, which were shipped across the country.

Quarrying was done in Acton throughout the 1800s but did not become a major industry until the 1880s. The Harris quarry, one of several in North Acton, was noted for its "slickened sides" granite. This was formed by faults in the ledge that rubbed together, heating and forming a polished look. The final product had a look similar to a light green and beige marble. Earlier times saw small-scale quarrying being done by the farmers to cut fence posts and foundation stones. Many examples of this can be found scattered through the woods. One such example is located near a trail at the Arboretum. Some of these small quarries form the upland vernal pools that the Conservation Commission sought to protect with the bylaw changes at the April, 1996 Town Meeting.

The 1890s brought a shift in population towards South and West Acton which caused precincts and school districts to be realigned. The North and East district schools were merged into the Center School. Although their districts had been officially changed, residents from the lost districts still thought of themselves as being from North or East Acton. The 1991 Master Plan proposed revitalizing these areas and rebuilding their village character. Both the North Acton Recreation Area and Ice House Pond are located in these communities and will be included as part of the village plans for their area. In addition, the North Acton Recreation Area (see Section 5) has become the town's major recreation facility.

At the start of the 20th century, Acton was still an agricultural community, divided into five geographical areas with a total population of 2,120. Apples were Acton's main agricultural export, being shipped not only to Boston but through Boston to Europe. Before modern refrigeration, space in the cellar of the Town Hall was auctioned off for storage. Into the 1950s apples were stored in the center of West Acton from which at one time as many as 20 freight cars of apples were shipped to Boston daily.

The year 1950 marked the shift from apples to houses. There were 3500 people living in Acton in 1950. By 1974 there were 17,000. The orchards and open fields turned into subdivisions, although apples were still a major crop into the 1960s. The town itself was composed now of three villages: Acton Center, South Acton, and West Acton. The form of government eventually changed to Town Manager-Board of Selectmen-Open Town Meeting as it remains to date.

Further information on the history of Acton can be found in: the History of the Town of Acton by Harold R. Phalen, 1954; A Brief History of Acton, Acton Historical Society, 1974; and Images of America - Acton, by William A. Klauer, 2001. Acton's Historical Properties Inventory, updated in 1989, is a source of information on some of the older structures in town. The early Concord Village proprietors' records and many other papers and photographs of Acton are available for research in the collection of the Acton Historical Society.

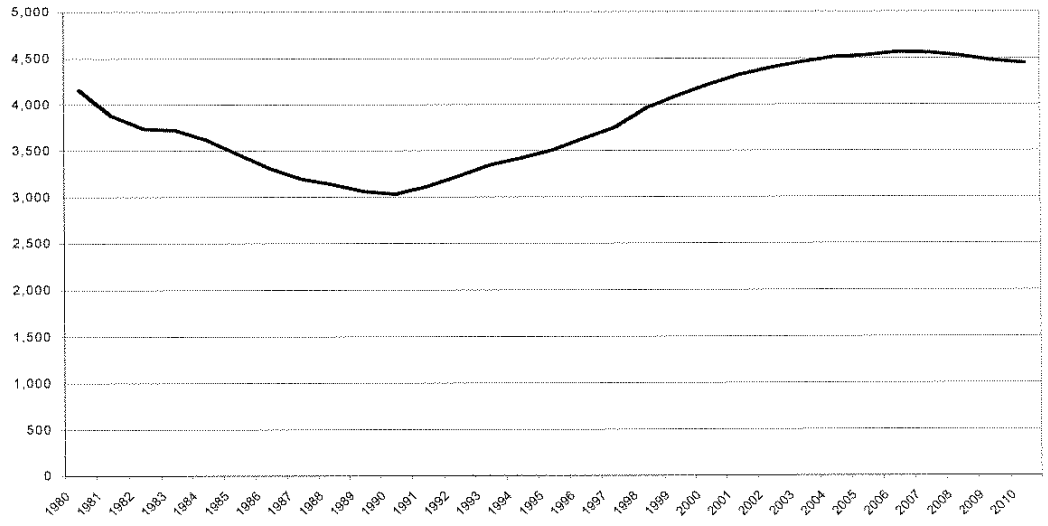
C. Population Characteristics

The total population of Acton according to the 2000 census was 20,331 versus 17,872 in 1990. This figure represents an increase of approximately 14 % from 1990 as new residential construction in town is once again on the increase, but the rate of growth is still slower than that of the period between 1951 and 1970. The number of inhabitants per household increased slightly between 1990 and 2000, from 2.69 persons per household in 1990 to 2.71 persons per household in 2000. After a decrease in the number of inhabitants under the age of 18 during the 1980s, the number of young people in this category has risen dramatically during the 1990s, signaling an increasing need for services and recreation facilities to accommodate their needs. In the 2000 census, 5,992 persons were in the category of age 17 and under, up from 4,486 in this age group in 1990. This represents an increase of 34% between 1990 and 2000.

In 1990, 95% of Acton's total population was Caucasian, 3.6% Asian, 1.5% Hispanic, and .9% Black. In the most recent estimate from the state (2000 Census data are not yet available by ethnicity), 92.0% of Acton's population is estimated to be Caucasian, 4.8% Asian, 2.3 % Hispanic, and 0.9% Black.

School-age population and school enrollment has increased markedly during the 1990s and is projected to continue to increase, especially at the junior and senior high schools. Between 1994 and 2000, Acton's school enrollment increased by almost 25% and is expected to increase almost another 10 % over the next five years. This enrollment trend is shown below in Figure 1.

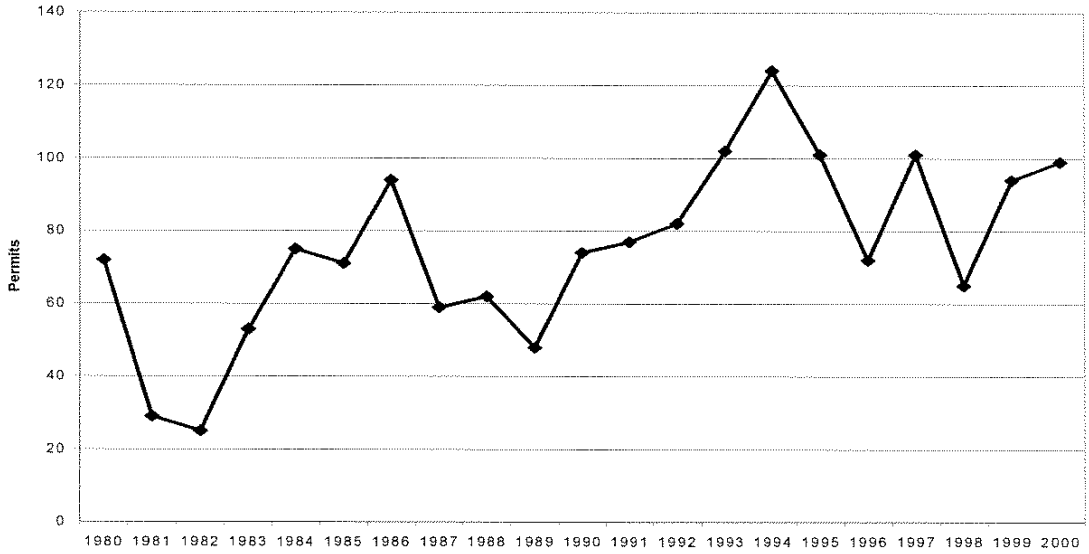
Figure 1: Acton Public School Enrollment
1980-2010



The average assessed value of single-family homes has risen significantly in recent years, from $227,000 in 1995 to $331,000 in 2000. The total valuation of the town has also risen significantly during this time period, from approximately $1,418,000,000 in fiscal year 1994 to approximately $2,314,000,000 in fiscal year 2001, an increase of over 63%. In recent years, not only has the residential component of property value increased, but also the commercial and industrial segment has increased in value steadily over the last five years. The increase in property valuation has helped drive the increase in the average residential tax bill. Between 1995 and 2001, the average tax bill has increased at an annual average rate of slightly over 5%t whereas the average single family home has increased in value at an annual rate of almost 8% per year.

During the 1990s, the town once again experienced a boom in housing construction, with new housing starts averaging 95 per year since 1993 as opposed to 60 per year during the late 1980s. The figure below illustrates the trend in building permits issued in Acton over the last twenty years.

Figure 2: Building Permits Issued in Acton
1980-2000



This increased demand to use undeveloped land for residential development has had a serious impact on the town, with less open space to accommodate the recreational and conservation needs of a growing population. In the 1998 Master Plan Update, purchase of open land and a subdivision-phasing requirement were two options recommended to preserve open space. Open space zoning provisions in our zoning bylaws do allow clustering of homes and in return for the granting of density bonuses, developers are required to provide a minimum of open space. According to the Master Plan Update, thirteen such residential developments have been created and 406 new housing units have been added on 668 acres while 434 acres of open space have been preserved which would likely not have occurred if standard subdivisions had been constructed.

Although some residential developments have their own treatment plants, Acton has not had town-wide wastewater collection and treatment. The Middle Fort Pond Sewer District, which came on line in 2002, is the first municipal sewer system in town, and will service approximately 10% of the homes and businesses in town, primarily in South Acton and on the main school campus.

The Master Plan Update placed a greater emphasis on encouraging commercial growth in town as the commercial and industrial component of the tax base has dropped from about 20% to less than 15% of the total assessed valuation. The Master Plan Update established as a goal to increase the commercial and industrial tax revenue share to 20% over the next five years, although it is not likely that we can achieve this increase. As part of the plan to encourage economic development in town, the town approved the formation of an Economic Development and Industrial Corporation (EDIC) in 2000, which could assist in the development of certain commercial parcels in town in the future.

Employment

No single employer dominates Acton's workforce. The town's commercial activities are largely services, 38.1%, although 27.4% are in manufacturing, and 16.6% are in wholesale and retail trade. (Source, 1990 U.S. Census; 2000 Census data not available yet for this information.) The Haartz Corporation has placed a conservation restriction on a 15 acre piece of forested uplands on its property (see Section 5B Conservation Restrictions). No other private employer supplies open space.

Projections and Needs Identified by the Regional Planning Agency

Most recently, MAPC's build-out projections for Acton have identified a future water supply shortage. This OSRP update has made water supply and conservation one of its major goals for the next five years and addresses the means to accomplish that goal in Section 9.

METROPLAN 2000

MetroPlan 2000, the state's Regional Development Plan for Greater Boston, was adopted in 1991, and it accurately identifies regional planning issues we address in this OSRP Update. (See Regional Context) We particularly applaud Action Recommendations for Land Resources Element #6 and #7. The objective of the first is to preserve agricultural lands through such tools as APR, cluster or open space zoning, Transfer of Developments Rights, etc. The second instructs the state to retain federal and state surplus lands for long-term public benefits. As we state elsewhere in this Update, one of Acton's priorities is to protect the Department of Correction's farm fields along Route 2; with the state selling off the dairy herd, a decision to close the farm operation at the prison is a real possibility in the near future.

EXECUTIVE ORDER 418: AFFORDABLE HOUSING AND THE COMMUNITY DEVELOPMENT GUIDE

The state has recently linked the environment and open space with its efforts to increase affordable housing in communities such as Acton that either have not met, or even demonstrated compliance with, the state's affordable housing goals. Recently, the state required such

communities to prepare a Community Development Plan that will set forth a process to increase affordable housing while protecting open space and the environment. The completed OSRP Update should contain some of the information Acton must present to the state in its efforts to comply with the state's requirements.

Acton residents and open space advocates should become aware that the state will make discretionary state funds, such as those for open space purchases, available only to those communities that either meet or demonstrate compliance with the state's goals for affordable housing. In crafting tools to protect open space Acton must not limit the opportunities for affordable housing in this town. Currently, about 2% of Acton's housing stock is classified as "affordable", far below the 10% mandate set by the state. Unfortunately, Acton has lost valuable open space to residential development without satisfying this important state mandate.

Table 1 - Population and Density

Date	Population	Population/ square mile
1930	2482	124
1940	2710	135
1950	3510	174
1960	7238	359
1970	14,770	732
1980	17,544	875
1990	17,872	894
2000	20,331	1013
2010*	22,704	1131
2020*	24,017	1197
2025*	24,526	1223

* MAPC Forecasts

D. Growth and Development Patterns

Pattern and Trends
Acton started as a farming community with saw and grist mills centered around Nashoba and Fort Pond Brooks. For a review of Acton's early growth trends, refer back to the history write-up in Section 3B.

After World War II, Acton quickly grew into a suburban bedroom community due to its proximity to Boston and major commuting highways, as well as commuter rail. In 1960, approximately 20% of Acton's tax base was from the commercial and industrial sector. That same split, 80% residential/20% commercial remained relatively constant until the mid-1990s when it fell to approximately 85% residential/15% commercial, where it stands today.

The typical development pattern in the 1950s through 1970s consisted of single-family home subdivisions, with lot sizes ranging from half acre to two acres, depending upon the section of town. The early 1970s saw a few years of growth of apartment buildings, principally along Route 2A, but also in isolated areas of West and South Acton. Many of these units have now been converted to condominiums, either investor-owned or owner-occupied. More recently, residential development has occurred in clustered developments in response to zoning that allows density bonuses (and condominiums) for such developments in return for preservation of open space. In recent years, the average new single-family home constructed in Acton has increased in size and in value. New homes in town now typically are valued in the $500,000-$750,000 range. The mean home value is $383,000, while the median home value is $350,000; these averages have risen over $100,000 in the last four years.

Infrastructure
Acton is bisected by Route 2, which provides a commuting route not only into Boston, but also to the industrial areas along Routes 128 and 495. Growth along the 495 corridor has placed increasing demands on housing and other infrastructure in town. Route 2A (Great Road) serves as significant regional retail and commercial corridor. Traffic along these major arteries has grown significantly in recent years, at an annual average rate of over 2 percent. Increasing commercial and residential development along Rt. 2A is placing greater traffic burdens on that road than can be handled. The town recently reached a compromise with the developer of a commercial development along Great Road reducing it in size due to concerns about traffic impacts. The town is also served by the MBTA commuter rail with service into Boston, and a stop in South Acton.

Public water is available in the majority of town and gas is available on about half the public roads. Electricity and telephone service exists on virtually all public roads. Acton is constructing a public wastewater collection and treatment system for a portion of the town, and several commercial and residential developments also have private wastewater collection and treatment plants.

Acton has approximately 120 miles of public roads: 10 miles consist of major state highways,

approximately 50 miles consist of "historic" town roads, and around 60 miles consist of subdivision roads built since the mid-1950s. The 60 miles of subdivision roads built in the last 45 years say a great deal about the recent changes in Acton and the impact on open space, culture, and environment.

Long-term Development Patterns

The 1998 Master Plan update reiterated citizens' desire to maintain the character of the community. The Plan noted that with increasing development activity, the future of our open fields, forested lands, and scenic country roads depends on active preservation efforts. A balanced mixture of homes and businesses clustered in villages and separated by open spaces helps define distinct areas in a community and more efficiently utilizes town resources. Subsequent to the 1991 Master Plan the town revised its land use regulations to facilitate clustered residential development to provide a village feeling and to set aside and preserve open space. As of 1999, the town had approved 13 cluster developments, and these developments had conserved 434 acres of open space out of a total of 668 acres. Recently there has been concern that clustered developments have led to larger developments in terms of number of units compared to those allowed under a standard subdivision plan. This is precisely the trade-off that clustered zoning provides: more housing units in return for preservation of open space. It is important to note that some other towns do not provide such density bonuses in their cluster developments. There is a study group investigating potential changes for Acton's PCRC bylaw.

The Master Plan update conveyed that there is now increased concern regarding the rate of residential growth in town and the impact such growth has in the future on the character of the town and the demand for town services (including schools). One goal of the update is to find ways to "preserve those elements or features which contribute to Acton's New England town character as a suburban residential community with strong rural and historic roots" and in pursuit of this goal, the update recommends various options to be considered for slowing residential growth.

Acton must address the problem of future water shortages before much more growth can occur. (See Section 4 below on Water Resources and Environmental Problems.) However, even given a solution to our water constraints, residential growth will likely slow as open space disappears and infill lots become more marginal. Recent modeling work by the Acton 2020 Planning group predicts that residential development is likely to decline to levels seen during the 1980s (60-70 new units per year) in the near future and by 2020 fall to about 50 new units per year under existing rules and regulations. Policies that restrict residential development (such as down zoning, building caps, etc.), or at least the size of the cleared lawn area, will in the long run decrease the per capita demand for water and will also improve the appearance of new development.

An extensive and authoritative analysis of Acton's growth and development patterns can be found in the Master Plan Update produced in late 1998. The Master Plan Update Executive Summary may be found in the Appendix along with the present zoning maps.

Build-Out Analysis

A build-out analysis for Acton was included in the 1998 Master Plan Update, and should be consulted for detailed analysis. Changes in zoning in 2000 increased somewhat the available land for commercial development at the expense of residentially zoned land, but Acton's developed area is presently approximately 15% commercial, and 85% residential in nature.

The build-out analysis showed a maximum potential increase of 3,400 residential lots at full build-out, an increase of 47% over present conditions. Almost 70 percent of the additional housing growth represents the subdivision of existing single-family lots, or an increase of roughly 2,300 single-family units on so-called "infill" lots. Development of open land plays a smaller role, accounting for about 30 percent of housing growth, or about an additional 1,100 units. The Master Plan update indicates that actual ultimate build-out is likely to be less than the maximum, as some landowners will choose not to subdivide. The Master Plan update estimates a "most likely" residential build-out of 10,200 units and an ultimate total population at build-out of about 29,000 (an increase of about 45% over the latest 2000 figures, although the final build-out is more likely to be between 25,000-26,000).

Nonresidential build-out estimates the maximum floor area that can be developed on a parcel. Commercial/industrial build-out is estimated at 8.38 million square feet (MSF), an increase of 3.68 MSF above the current (1999) 4.70 MSF, or 78 percent. As with residential development, about 30 percent of potential nonresidential growth is attributable to open land with the rest occurring on existing developed parcels.

One implication of this updated build-out analysis is that over the long term, redevelopment of existing sites will play an increasingly important role in Acton's residential and commercial growth. Also, there will be increasing pressure to develop remaining open space for residential development. The current plan to develop over 230 acres in North Acton and construct as many as 100 homes on the Robbins Mill Pond parcel illustrates this issue clearly. Also, as our population continues to grow, increasing pressure will be placed on our recreation areas, particularly our already over-burdened playing fields in town.

SECTION 4 - ENVIRONMENTAL INVENTORY AND ANALYSIS

A. Geology, Soils and Topography

The topography of the town is best described as hilly, with a series of glacial drumlins separated by broad glacial outwash valleys. The general elevation is about 230 feet above mean sea level, with one hill rising to 430 feet above sea level. The lowest elevation of the town, 130 feet above sea level, is located at the Concord town line. The streams and their location are covered more completely under the Water Resources part of this section.

Soils
Soils are predominantly moist, but rough and stony in character, with many areas of sandy loam. Wet soils are associated with the stream valleys, and certain areas of town have a number of ledge outcroppings.

The soil types identified in this report were compiled for the Town of Acton by the Natural Resources Conservation Service and reported in "Soils and Their Interpretations for Various Land Uses" US SCS, Dated: August 1983.

1. Hinckley-Windsor-Ninegret: These associated soils are droughty and moderately well drained sandy and gravelly soils on 3%-25% slopes. They occupy about 22% of the town. Generally they are good for all types of development, residential, commercial and industrial. They are also excellent sources of large volume groundwater. About 50% of this association is wooded. It is good for agricultural uses as well.

2. Charlton-Narragansett-Sutton: Occupying about 20% of the town, these soils are well drained and moderately well drained, stony and bouldery soils on 3%-15% slopes. Development of residential, commercial and industrial uses is satisfactory in this association. Large volumes of groundwater supplies are not available though enough for individual home use is possible. Most of this association is wooded.

3. Paxton-Woodbridge: Approximately 27% of the town is in this association. It is composed of well drained and moderately well drained stony and boulder soils on 3% to 15% slopes and underlain by hardpan. This type of soil is limited for commercial, industrial or high density residential use because of the hardpan located about 2 feet under the surface. Wells can produce sufficient quantity for individual home use but not for commercial or industrial use. These soils are excellent for agricultural and forestry use. Currently most of this association is wooded.

4. Hollis: Rocky, shallow, stony and very stony soils on 3%-35% slopes make up 10% of the town. While individual residences are possible, on-site sewage disposal is difficult to locate. Groundwater supplies are difficult to develop. A small amount of this association is farmed but most is wooded.

5. Muck-Whitman-Scarboro: Scattered throughout the town, this association is very poorly drained organic and mineral soils on level terrain. Approximately 20% of the town is composed of these soils. They are very severely limited for any type of development. Vegetation consists mostly of wetlands species. Soil types place a variety of restrictions on development in a town especially if, as in the case of Acton, the town does not provide sewage disposal facilities. Development here has been somewhat restricted due to the limitations of the soils for on-site wastewater disposal.

There are limited prime agricultural soils and a limited number of active farms in town. However, the predominance of soils good for forestry have placed many acres, about 10% of the town, in Chapter 61, forestry use.

Geology

Acton is underlain by old metamorphic rocks which were reshaped and covered during the continental ice ages. The bedrock beneath Acton is the Nashoba Formation, an assemblage of metamorphic rocks (Hansen, 1956; Alvord, 1975). These rocks were originally sandstones and similar sedimentary rocks, but were altered by heat and pressure over geologic time into metamorphic rocks. The Formation is largely gneiss, a relatively coarse-grained rock which shows different layers of minerals upon close examination. There is considerable variety in the mineral composition of the rocks in the Nashoba Formation, and numerous subdivisions have been identified. Most of the Formation in Acton is biotite gneiss, in which can be seen small plate-like crystals of the mineral biotite, a black form of mica. The Formation is relatively old, dating back to the Ordovician geologic period which occurred between 430 and 500 million years ago.

The Nashoba Formation has been subjected to extreme forces over geologic time as at least one mountain range rose and was eroded away. As a result, the Formation is extensively folded and faulted (Goldsmith, 1991). The various subgroups within the Nashoba Formation are mapped as elongated bands that stretch from northeast to southwest. Faults separate the Formation from the neighboring rocks to the northwest and southeast. These faults are minor and do not present a significant geologic hazard. Nonetheless, small magnitude earthquakes occur once every year or two. If residents even notice these earthquakes they often mistake them for a large truck passing on the road, although sometimes they are accompanied by a sudden loud noise like a cannon shot.

The Nashoba Formation is punctuated in places by younger volcanic rocks, known as the Acton granite. Granite deposits were formed when molten magma intruded from the subsurface into the Nashoba Formation. The intrusions, which are relatively small features, were mined in the past in several small quarries in Acton. Quarries are located in North Acton off Quarry Road and in the Acorn Park subdivision. The large foundation stones seen in colonial houses and barns around Acton are usually Acton granite.

The geologic character of Acton is largely determined by younger deposits that overlie the bedrock. These varied formations were deposited during the continental ice ages which ended 10,000 years ago, a very recent time geologically. During the ice ages, sheets of ice, over a mile

thick in places, blanketed Canada, New England, and the north central United States. The glaciers formed, wasted away, and reformed although only the effects of the most recent ice age are clearly discernible in the area's geology. During each ice age, massive sheets of ice moved over the landscape, scraping and redepositing rocks and sediment. In Acton, the last glacier moved more or less due south. Glacial striations, marks scraped by the moving glacier and the rocks it carried, can still be seen on smooth rock outcrops.

The ice ages resulted in numerous and varied geologic deposits, formed when the glacier passed and also during the post-glacial period as the melting glacier produced torrents of water. Much of Acton is blanketed by glacial till, a compact mixture of sediment. Till is composed of a wide range of grain sizes, from very fine clay particles to large boulders. These various grain sizes were compressed under the moving glaciers into a poorly sorted mixture that is tight to water. The high water tables and poor drainage that interfere with on-site wastewater treatment system performance in much of Acton are caused by these till deposits. The rocky soils that discourage farming in New England are also a consequence of the glacial till soils.

One striking manifestation of till are drumlins, elongated hills aligned with the direction of movement of the glacier. There are nine drumlins in Acton, ranging in height from 310 to 430 feet above mean sea level. They include Faulkner Hill in South Acton, Wright or Mead's Hills in West Acton, and Great Hill near the intersection of Routes 27 and 111.

The lower elevations are generally occupied by glacial outwash deposits, sand and gravel deposited in water running from the melting glaciers. Fine-grained clay and silt were washed from these deposits by the running water, and therefore these soils are more open and drain more readily than the till soils. All of Acton's public water-supply wells are located in sand and gravel outwash, and these deposits generally require greater protection from pollution than the areas covered by till.

The sand and gravel outwash deposits are punctuated by a variety of intriguing glacial features. Blocks of ice left by the wasting glacier eventually melted to create kettle-holes in the outwash. Grassy Pond and Will's Hole formed in such glacial kettle holes. Today, these two ponds have evolved into quaking bogs in which mats of sphagnum moss float on the water. With time, the floating mats will slowly close in on the open water and eventually the ponds will disappear and give way to meadows.

Eskers, long sinuous gravel deposits, are also found in Acton. These deposits were probably made in tunnels under the wasting glacier. Today, they stand as narrow causeways, 10 to 30 feet high, winding through the woods. Were it not for their tortuous path, one would mistake them for constructed road or railroad beds. Eskers are found in the Town Forest in North Acton and in the Acton Arboretum.

Other glacial deposits include kames, kame terraces, and kame deltas. Kames are relatively flat-topped hills that formed in holes in the ice sheet. Kame terraces were formed by glacial melt-water streams along the margin between the wasting ice sheet and higher valley walls. Where these streams flowed off the ice onto ice-free land they formed kame deltas. A large kame delta

occupies the area south of Fort Pond Brook along the Concord town line and west to Parker Street. A kame terrace lies to the north of the brook along School Street. Forest Road runs on top of a kame west of Hosmer Street.

Acton's geology continues to change in present times, and there are geologic formations that postdate the ice ages. They include swamp deposits, which are forming in wetlands throughout the town, and alluvium, which forms in stream beds.

There are few commercial rock or mineral deposits in Acton. Historically, Acton granite was quarried and deposits of bog iron were used to produce a low quality ore. Several gravel pits were recently active, producing aggregate from esker and glacial outwash deposits.

There are no features that pose significant geologic hazards or limitations on development. Perhaps the only exception are the recent swamp deposits, which have poor bearing capacity for structures. These deposits generally occur within wetlands, which are precluded from development by town bylaw and the Massachusetts Wetlands Protection Act.

Climate

Acton is located on the western side of Route 128, traditionally seen as the snow/rain line beyond which heavier snowfalls often resulted than in Boston. However, in the last 5-10 years that "snow line" appears to have moved westward to Route 495, whether this is a minor variation or a sign of long-term climate change remains to be seen. Acton is on the zone line for plant hardiness zone six, with zone five starting a few miles further west, as charted by the National Arboretum and the United States Department of Agriculture.

Meteorological Data

Normal Temperature in January: 27.80 F
Normal Temperature in July: 72.00 F
Normal annual precipitation: 43.02 inches

References:

Alvord, D.C., 1975. Preliminary Bedrock Geologic Map of the Westford and Billerica Quadrangles, Massachusetts. Open File Report 75-387. United States Geological Survey, Washington, D.C.

Goldsmith, R., 1991. "Stratigraphy of the Nashoba Zone, Eastern Massachusetts: An Enigmatic Terrane." In: N.L. Hatch, Editor. *The Bedrock Geology of Massachusetts*. Professional Paper 1366-E-J. United States Geological Survey, Washington, D.C.

Hansen, W.R., 1956. "Geology and Mineral Resources of the Hudson and Maynard Quadrangles, Massachusetts." Geological Survey Bulletin 1038. United States Geological Survey, Washington, D.C.

B. Landscape Character

The evolution of Acton's landscape began 10,000 years ago during an atmospheric warming period when North America's most recent continental glacier began its slow recession north. Local topography is dotted with glacial features mentioned in the geology section. The early European settlers found the scant existing topsoil was acidic and densely mixed with glacial cobble. The results of their painstaking efforts to clear these marginal fields for crops can be seen in the many stone walls criss-crossing the landscape. While several successful farms still operate, most small subsistence farms were abandoned between 1860 and the 1930s; thus many of the mature red oak and white pine forests are about 70 years old, some slightly older.

Acton's most noticeable landscape aspect has been its abundance of trees; although even newcomers are watching familiar woody lots become new homes. As noted elsewhere, Acton's farming past--open fields, pastures, and orchards--is rapidly becoming obscured by forest regrowth. The town has run an active street tree maintenance and planting program since the time of the depression, and most new home buyers in the subdivisions immediately plant their yards heavily. Acton has been recognized by the nation's Arbor Day Foundation as a "Tree City USA" since 1984.

Acton's center corridor, running east west from Acton Center to the Littleton town line, is particularly woodsy, and contains two large conservation areas, including Nagog Hill and Grassy Pond. Nagog Hill Road is on Acton's scenic road list. Grassy Pond, small and boggy, is important habitat. It has relatively few homes; development should be guided away from this area.

Acton's heavy tree cover, although it provides a beautiful, cool, leafy appearance to the streets and public areas, and a habitat for birds and small mammals, is a mixed blessing. Acton has very few long vistas. Its many hills disappear and many streams and small ponds are not visible from the road. Many structures that are noteworthy from an historic or architectural point of view are obscured. Beavers have created several beaver ponds; killing stands of swamp maples and providing open areas and new ecosystems.

For reasons of diverse habitat as well as aesthetic beauty, unforested open space should be preserved not only from development, but also from the encroaching forest. The town "brush-hogs" all open fields on conservation lands on a periodic basis to maintain a grass and forbe environment. Open fields, such as at Grassy Pond Conservation Area on Nagog Hill Road, where the Boston skyline is visible, are enlarged as time allows.

C. Water Resources

As stated in the beginning of this plan, Acton's water resources are threatened by the ongoing pressures of development. In this section, a description is provided of existing water resources and the measures taken to protect them. Further discussion of water resources is provided in Section 4G Environmental Problems, in Section 7A Summary of Resource Protection Needs and in Sections 8 and 9 where our goals, objectives and plans for the future are reviewed.

Acton's Streams and Ponds
Two major streams flow through the town. Fort Pond Brook, fed by Grassy Pond, Guggins Brook, and Heath Hen Meadow Brook flows through the western and southern portions of town. Nashoba Brook flows across the eastern portion of the town; Butter Brook, Will's Hole Brook and Nagog Brook are its tributaries. Spencer Brook, and its tributaries, drains the extreme northeast corner of town. Since approximately 75% of the watershed areas for Fort Pond and Nashoba Brooks are located in Acton, the quality of these brooks depends on how well we protect them. The streams and associated wetlands mentioned above provide an estimated average of 65% of the recharge of the aquifers, the source of Acton's water.

Other than the pond at NARA, the town does not have any large ponds or lakes that are used for public swimming as do many surrounding towns. Ice House Pond, located off Concord Road, was used as a source of ice for many years. Grassy Pond, with its bog-like characteristics, is a source of many rare plants and home to a diverse wildlife population. Part of Nagog Pond is located in Acton (the other part is in Littleton) although water supply rights were assigned to Concord by the General Court in 1884.

The state has classified all of Acton's surface waters, with the exception of Nagog Pond, as Class B waters. This classification indicates the waters are generally suitable for primary and secondary contact recreation, may be used for water supply with appropriate treatment, and will provide good wildlife habitat. Nagog Pond is classified as Class A water, reflecting its high quality and use by Concord for drinking water.

Excess nutrients are a problem in Acton's surface water bodies. During the summer and early fall a green carpet of aquatic plants, indicating eutropic conditions, can be seen on Robbins Mill Pond, an impounded section of Nashoba Brook. Ice House Pond has had problems in the past with water chestnut.

In addition to the nine acre pond at NARA, Acton has numerous water-related recreational options as are detailed in the description of water-based recreation in Section 5B5. Some of the town's waters are popular for fishing, skating, boating, and wildlife observation. Many of the ponds and streams can only be accessed by hiking through town conservation lands, but some, such as Ice House Pond, are adjacent to parking. These bodies of water are discussed further in Section 5AB Water Based Recreation.

Acton's Water Protection and Conservation Measures – Acton Water District (AWD)
Protection of Acton's water resources is a high priority for the town. Relying on wells entirely, Acton pumps its water from groundwater aquifers. In addition the state regulates through DEP the amount of water any large-scale user withdraws. Land purchases have been made to acquire possible sites for future wells. Since the last OSR plan, Jane Ceraso was hired by the Acton Water District as their Environmental Manager, to address water conservation and other environmental issues.

Jointly, the state Department of Environmental Protection and the Department of Environmental Management analyze Acton's water use – its current, past and future demand—and adopt a permit level for how much water can be pumped from all Acton's public wells. The state not only regulates that "bottom line", but also how much water each well can pump. For example, pumping from the Conant II well, located near a vernal pool, is limited to a daily maximum.

Acton's current withdrawal limit for 2002 is 1.92 million gallons daily, averaged over the year. In 2001, for the first time ever, Acton exceeded its permit.

Although most residents in Acton use town water, approximately 4% have private wells. The state does not count this water toward the town's total. Even a moratorium on connections to town water would not prevent new water uses (residences) from obtaining water through new private wells. Private wells are regulated by the town's Health Department, which require annual coliform testing and limited chemical testing every three years. Additional chemical testing for volatile organic compounds (VOCs) and other potential contaminants may be advisable for private wells.

Optimizing Water Supply And Managing Demand
In order to optimize the amount of water that can be provided from existing wells, the Water District is currently implementing the following procedures:

- A new central control system (SCADA) to better manage all wells
- Upgrading the School Street Treatment facility and the Scribner well field
- Annual replacement of media used to remove natural color from the Clapp and Whitcomb wells, and begin using these offline wells.
- Ongoing program of well rehabilitation and cleaning.
- Complete inventory and analysis of "high risk" land uses within the critical protective area (Zone II) surrounding each well
- Ongoing monitoring of water quality in each well
- Study of treatment options to reduce color at the Marshall and Kennedy wells.

Activities to help manage demand include:

- Providing customers with information on both indoor and outdoor water conservation via public forums; Acton Earth Day and related events; the AWD information center, newsletter, and Web site; and landscaping demonstration projects

- Coordination with Acton's Planning Department to encourage water conservation and groundwater protection in new developments
- Sponsoring a forum on water conservation and source protection for planners, developers and others
- Outreach and education in the Acton public schools, including special events during Drinking Water Week
- Investigation of a rate structure to better encourage conservation
- Letters to high water users (residential and commercial)
- Calls to customers whose bills increase dramatically (leak awareness)
- Ongoing leak detection and repair
- Town wide upgrade of water meters
- Registration of irrigation systems
- Free water audits for high water

Water conservation methods are necessary to compensate for increasing water consumption due to Acton's burgeoning population and a trend towards larger homes and more water-intensive landscaping. Water consumption can double during the summer months, placing a strain on the Acton Water District's wells and depleting storage tank levels. Acton used more water in 2001 than ever before and, for the first time ever, exceeded its annual withdrawal limit set by DEP.

Additionally, high spring and summer water use can threaten the full operation of all wells and deplete storage tanks to unsafe levels. Because of this situation, the Acton Water District has implemented more stringent outdoor water use restrictions that go into effect from May 1 to October 1 every year, regardless of weather conditions. In addition, the Water District has launched an effort to educate the public and developers about the importance of water conservation.

Protecting Water Quality

Past volatile organic chemical (VOC) contamination of the Assabet wells, causing their temporary closure, has hastened efforts to protect all well fields. Monies available from the W.R Grace settlement have allowed aeration towers to be installed at most of the District's well fields. These aeration towers allow the Water District to ensure that all regulated VOCs are virtually undetectable. The Acton Water District has its own regulation of one part per billion for any regulated VOC. This level is substantially lower than standards set by the state or EPA, and gives the Acton Water District the most protective VOC regulations of any public water supplier in the state. In addition, the aeration towers allow for the removal of naturally occurring radon to levels below detection. The full extent of groundwater cleanup near the Grace property has yet to be realized, and Grace continues to work with Acton, DEP, and EPA on cleanup efforts.

Acton's zoning bylaw provides several layers of protection for the town's water supply, including flood plain and groundwater protection districts. In addition, the Board of Health has non-zoning protection for town aquifers. A hazardous materials bylaw has also been enacted. The aquifer map may be found in Section 13. The town also installed 12 groundwater monitoring wells

which are sampled quarterly, primarily for nitrates. This sampling allows the Board of Health to assess whether on-site wastewater treatment systems or other nitrate sources are adversely affecting groundwater.

Acton follows state and federal water quality regulations, annually collecting over 600 water samples and testing for over 100 different contaminants. The Acton Board of Health requires package sewage treatment plants where appropriate, applies state storm water management regulations, and holds a semiannual hazardous material collection day.

Acton has embarked on a process to evaluate a more comprehensive solution to sewage treatment than is currently available. In early 2002 about ten percent of the town became part of a centralized sewer system (Middle Fort Pond Brook). The majority of the town is still served by private on-site wastewater treatment systems, with a few developments having medium-sized treatment facilities in place. Parts of town are plagued by high water tables and the resultant frequent failures of on-site wastewater treatment systems. With the implementation of the Middle Fort Pond Brook Sewer District, and, at a later date, a comprehensive sewage treatment solution, groundwater quality will undoubtedly benefit.

Board of Health Non-Point Source Control Program (Stormwater Nutrient Reduction)
The Board of Health has started a Non-point Source Control Program thanks in part to a Section 319 federal matching grant. The program is divided into two sections. The first section is a Watershed Trading Exercise, which will implement two structural Best Management Practices (BMP), implement a non-structural BMP program and monitor the results of the structural and non-structural components. This program will provide a valuable study tool for the Town, State and Federal governments, help the Town meet the NPDES Phase II compliance schedule and set the framework for Acton and other communities with storm-water nutrient reduction projects. The second component involves phosphorus reduction through the use of a constructed wetland at the headwaters of the new swimming pond at NARA. The benefits of this component include the treatment of storm-water entering the swimming pond, heightened water quality in the pond and valuable data on wetland nutrient removal. (Refer to Section 4G Environmental Challenges, Non-point Source Pollution heading, for a detailed description of the integrated treatment wetlands project at NARA).

Acton's Stream Teams
The Acton Stream Teams, an all-volunteer group, were formed in 1998 to conduct a visual shoreline survey of over 25 miles of Acton streams. The Acton Stream Teams sought to identify and reduce sources of pollution and excessive nutrients to Acton waterways, and to raise awareness of the wildlife habitat and recreational opportunities provided by Acton's local streams.

Project partners for this effort were the Organization for the Assabet River (OAR), the town of Acton, the Acton Water District (AWD), and Acton Citizens for Environmental Safety (ACES). All of these project partners share an interest in identifying and reducing potential sources of pollution and excessive nutrients to Acton's streams. The shoreline survey was funded by a grant from the Crossroads Community Foundation, obtained by OAR.

Between April 22 and May 7, 1998, more than 120 Acton volunteer members of the Fort Pond Brook and the Nashoba Brook Stream Teams conducted the Spring 1998 Acton Shoreline Survey of thirty-six stream sections, covering approximately 25 miles. Stream sections were visually surveyed and data sheets were completed. Stream conditions and field observations of vegetation types, wildlife sighted, and other noteworthy observations were recorded. Pipe, bridge, and wetland surveys were also completed, as appropriate. Photographs were taken and time, date, location and photo descriptions were recorded in photo logs. Locations of relevant observations were noted on the survey maps. Volunteers also wrote narrative descriptions of their stream sections.

OAR's funding of the Acton Stream Teams concluded with the successful completion of the shoreline survey final report, an EPA Certificate of Appreciation and "Adopt-a-Stream" designation by the State of Massachusetts during the fall of 1998. Subsequent to the initial 1998 shoreline survey, the Stream Teams have worked to raise community awareness on such subjects as ecological landscaping, and the effect on streams of phosphates and automatic dishwashing products. Also, the Teams have performed storm-drain stenciling to raise awareness of connections between residential dwellings and nearby waterways; has created a web site that provides information on Acton streams; written handout on ways residents can reduce non-point source pollution; held town cleanups; and gathered information on fish in Acton streams. This important work has helped create a constituency in Acton for its streams, and for reducing non-point source pollution that pollutes groundwater. That makes it one of the significant accomplishments since the last OSRP.

SuAsCo River Basin Water Supply Protection Plan

Acton is one of the fourteen towns included in the Sudbury-Assabet-Concord (SuAsCo) River Basin. The Assabet River, which originates in a swamp on the Westborough/Grafton town line, flows through the southeast corner of Acton and Acton's waters all drain into the Assabet. Acton actively participated in the development of the SuAsCo River Basin Water Supply Protection Plan. For two years, eight communities worked with MAPC to develop the protection plan, which was funded by the U.S. Environmental Protection Agency through the Massachusetts Department of Environmental Protection under a Clean Water Act grant. Public information meetings were held throughout the planning process to ensure that input was received from local officials and the general public.

The plan includes four major elements: 1) an inventory of each community's water resources and delineation of a study area that incorporates watershed and aquifer recharge areas; 2) an inventory of potential sources of contamination in the study area; 3) an analysis of local, state and federal water resource protection measures; and 4) recommendations for additional water supply protection measures, based on the findings of the three preceding elements. Recommendations for all participating towns include modification of zoning bylaws, general bylaws and local regulations, as well as non-regulatory measures such as review and comment on utilities' plans for herbicide applications on rights-of-way, revision of local road salting practices, emergency response planning and preparedness, educational programs, and inter-community cooperation. Some major recommendations specific to Acton were:

- Submit all Zone 2 delineations to DEP for approval and update groundwater protection district boundaries as needed.
- Encourage neighboring communities to protect Acton's Zone 2 areas that extend into those communities.
- Establish a watershed protection overlay zoning district surrounding Nagog Pond.

As of June 2001, all of the Acton Water District's Zone IIs have been delineated and approved by DEP. A map of these Zone IIs is provided in Section 13. The District is initiating an inventory of land uses that have the potential to impact water quality within any of the Zone II areas. This effort involves working with the towns of Carlisle, Concord, Westford and Boxborough to collect land use information and request that these towns put in place local controls to protect the Zone II area that extends into their town. Concord may request, at a future date, specific source protection controls for the Nagog Pond watershed.

Flood Plains Protection

Parts of Acton are vulnerable to flood damage. Because of low descent rates, Acton's brooks tend to meander, resulting in silty, broad flood plains. It has been estimated that 20% of the town is flood plain. The flood plains store peak water during wet periods, and moderate the discharge rates of flood waters. The protection of these flood plain areas is critical to the inhabitants of Acton and its neighboring towns. In Acton's past, when farming dominated its economy, many wetlands and smaller streams were channelized to drain land for agricultural use. With the passage of time many of these ditches have filled in, causing much slower drainage after storms. This delayed drainage is beneficial for flood control regionally, but may be detrimental locally if poorly drained areas have been developed for residential use. Over time, development has increased the rate of runoff generally, also worsening flooding and drainage in parts of town. For these reasons, the town seeks to reduce flooding impacts through flood plain zoning and wetlands protection. Through these two mechanisms, virtually all new development in flood plains is prohibited.

Acton participates in the National Flood Insurance Program. The town's zoning bylaw contains a flood plain overlay district that restricts development within flood plains. Acton's zoning bylaws also limit certain land use activities within the Groundwater Protection District to protect the town's present and future drinking water supply.

D. Vegetation

Acton's natural plant life still echoes the town's agricultural past, and is typical of vegetation elsewhere in the region. Acton, like most of Massachusetts, was essentially clear-cut during the Colonial era, and as late as 1900, over 90% of the town was in open fields. As the town was subdivided, starting in 1950, many developments were established in old orchards, fields, and areas that were just beginning to revert to forest. In 1990, those areas of town that were not covered with structures, pavement, or maintained lawns, were approximately 90% forested, with most trees between 25 and 75 years old.

The principal native forest type in Acton is red and white oak, hickory, and white pine in the upland areas, with most flood plains, that had once been excellent hay meadows, reverting to a red maple monoculture. Since 1900, a variety of causes have limited the diversity of the town's woodlands from what existed in pre-Colonial times. Chestnut blight has eliminated American chestnut, which was once one of Acton's most valuable species, from its predominant place in the forest. Virtually all American elms of any size have succumbed to Dutch elm disease. The sugar maples planted along our roadways at the turn of the century have now naturalized into the woodlands, and many of the white ash trees are now dying of "ash decline." This loss of diversity in the woodlands could have serious consequences if the area is faced with a new insect or disease complex; in fact, the over-abundance of oak has been a liability during the gypsy moth outbreaks of the early 1980s and again in 1990-1991. Acton is beginning to see occurrence of the Hemlock wooly adelgid, which has decimated hemlocks south of Massachusetts.

A number of non-native species are naturalizing into the woodlands. These include Norway maple, little leaf linden, burning bush, and even an occasional Japanese red maple. In isolated areas, such as ravines and steep north slopes, there are stands of beech, birch, and hemlock, and in some areas thickets of flowering dogwood and witch hazel can be found, but these plant communities are sharply limited in size.

Vegetation management activities undertaken by the town include the following programs:

1. Roadside mowing – Road shoulders are mowed on an annual basis, providing for traffic visibility while allowing wildflowers to flourish.

2. Street tree maintenance – Public shade trees, as defined under MGL Chapter 87, are pruned and cared for, to provide for both safety and aesthetic quality.

3. Shade tree planting program –The town has run a tree-planting program since 1941. Over 2000 trees have been planted, set back from the road edge, under this program. The town has attempted to plant no more than 10% of any one species, so as to maintain diversity in street trees. Both funding considerations and a lack of suitable planting spots have prevented a "one for one" replanting program for street trees, although natural forest regrowth is a significant factor not only in the woods, but also along the roadsides.

4. Poison ivy control – The Town sprays poison ivy growing along the roadsides and hiking trails to allow the public to safely use those areas. A Vegetation Management Plan, which is required to apply herbicides to a right-of-way, has been filed with the Massachusetts Pesticide Bureau.

5. Wildlife openings – Any open fields on conservation lands are mowed each fall with a brush hog to keep the fields open and provide a diversity of habitat. As time allows, new fields are also placed on the annual mowing schedule. Despite the loss of many forest species as noted above, a wide variety of plant species exist in Acton. A plant list of the species found in the Arboretum was compiled by Dr. Richard Howard in 1986 and is included in the Appendix. Disease-resistant elms have also been planted at the Arboretum, and in a limited way, on conservation land.

Acton is seeing the growth of new habitats as many of the 30-year-old red maple swamps are flooded by beaver activity. With the inundation of water, the trees have died, and the swamps are becoming open marshes. This circular progression is inviting new species such as spotted turtles and herons. The growing open marsh on Newtown Road is a good example of such a new habitat, although the flooding nearby in residential areas has endangered septic systems.

D. Fisheries and Wildlife

Overview

Over the last 30 years, Acton, like many suburban communities within the Route 495 belt, has experienced a transformation from an agrarian/orchard community to a residential community with greater than 70% forest cover. As a result of this dramatic change in land use and increased forest cover, Acton has experienced an influx of many wildlife species, which have been uncommon in eastern New England for the past 150 years. While it is true that wildlife can be found in the most densely populated areas of town, the most productive and diverse wildlife habitat corridors follow the two major stream basins, Nashoba Brook and Fort Pond Brook. Together these streams and their associated tributaries represent Acton's contribution to the Assabet River watershed and are home to a rich wildlife community.

Nashoba Brook enters Acton from Westford and flows in a southerly direction, eventually running under Route 2 near the Concord line. The brook traverses a distance of 4.5 miles before it converges with Fort Pond Brook and feeds into Warner's Pond. Fort Pond Brook enters Acton from Boxborough and runs in a southerly and easterly direction. Each of these major stream basins and associated tributaries are rich in floodplain/wetlands habitat.

This section of the report focuses on the two major stream basins described above. Each basin's wildlife species are identified, as are the important unprotected open space parcels essential to preserving contiguous, unfragmented habitat. The goal of this section is to identify both inter and intra town wildlife corridors vital to the survival success of native species.

Although vernal pools are not discussed in this section, it is important to note the intent of the Land Stewardship Committee in the next five years to identify as many vernal pools as possible on all of our publicly owned lands and to follow through with the certification process for these pools. This information will be used to improve our understanding of the vernal pool species found in Acton.

Nashoba Brook Drainage Basin

NORTHERN NASHOBA BROOK BASIN – NORTH ACTON TO GREAT ROAD

Nashoba Brook and Butter Brook converge in North Acton and flow south into the Robbins Mill impoundment. The northernmost portion of Nashoba Brook is characterized by open marsh/floodplain habitat utilized primarily by beaver, mink, otter and fisher. Much of the flooded red maple swamp associated with recent beaver activity has produced favorable habitat for wood ducks and other cavity nesting species. Many acres of young red maple swamp common to this riverine ecosystem have been flooded and drowned by beaver activity within the past five years. Muskrats, beaver and river otter populate the open marsh region bordering the inlet to Robbins Mill Pond. Many songbird species nest in the extensive cattail marsh borders.

Of greatest value to the diversity of wildlife species in this area is the undisturbed acreage running north and west into Westford. To the south and east, the unprotected Robbins Mill parcels (slotted for development after a ballot vote to purchase this property was defeated), when

combined with the existing conservation lands of Spring Hill, Camp Acton, Nashoba Brook and Hearthstone Hill represent more than 600 acres of contiguous undisturbed uplands forest habitat, as well as extensive forested wetlands. Collectively, the properties along the east side of the Robbins Mill impoundment represent diverse wildlife habitat. The uninterrupted corridor running north into Carlisle and east into Concord should be preserved wherever possible. In addition to providing critical habitat for many common forest species, both mammal and bird, the uplands forested swamps east of the Robbin's Mill impoundment are home to a nesting pair of northern goshawks.

The section of Nashoba Brook running south towards Great Road has open marsh and floodplains that have been cited as critical habitat for wood turtles. A cooperative project employing both students and professionals will be formed to conduct habitat and population assessments for wood turtles in this section of Nashoba Brook.

SOUTHERN NASHOBA BROOK BASIN – LAKE NAGOG TO ICE HOUSE POND

South of Great Road and flowing into the Ice House Pond Basin, Nashoba Brook meanders, forming a series of deep pools with steep banks and broad floodplains. This is a prized area for trout fishing and is populated by both beaver and otter. Beginning in this region and running in a westerly direction, including Conant Brook and Nagog Brook, is an extensive unbroken chain of open space parcels producing one of the most significant wildlife corridors in Acton. This broad wildlife corridor is important to deer, coyote, fox, fisher and the occasional black bear; it connects the Nashoba Brook Basin with Lake Nagog, Nagog Hill Conservation Area, Nagog Brook, Grassy Pond, Wills Hole Brook and several critical unprotected parcels west of Route 27. The blend of both stream corridor and uplands hardwood forest create habitat suitable for white-tailed deer, coyote, red fox, barred owls, screech owls, sharp-shinned hawk, Coopers hawk, broad winged hawk, and wild turkeys as well as many species of song birds. Access and viewing the Nashoba Brook riverine ecosystem will be made easier for the public as implementation and construction of the Bruce Freeman Bike Path becomes a reality.

The portion of the Nashoba Brook Basin, south of Brook Street, also provides a diverse wildlife habitat. South of the Brook Street bridge, there is a large tract of land,(town atlas E-4, Parcel 47) with rich habitat value containing a tapestry of forested uplands, open pastureland and floodplain/marsh. This important unprotected open space provides a critical connection to the properties in the Nagog Brook drainage basin. White-tailed deer follow a well-traveled corridor to the open space parcels on the west side of Route 27.

The Ice House Pond Basin, in combination with the Morrison Farm and Woodlawn Cemetery property, represents an uninterrupted wildlife corridor through to the Acton Arboretum. White-tailed deer, coyote, red fox and fisher frequent this travel corridor. The Ice House Pond Basin and connected open marsh represent important wildlife habitat for a variety of migratory ducks, as well as nesting habitat for mallards, Canada geese, wood ducks, and a healthy population of muskrats and beaver. Since the dredging of Ice House Pond in 1995 to control the infestation of water chestnut, this area has once again become a favorite fishing spot for Acton residents. A long-term management plan for the removal of water chestnut in the Nashoba Brook Basin should be considered.

SOUTHERN NASHOBA BROOK BASIN – ICE HOUSE POND TO ROUTE 2

The southern extent of Nashoba Brook in Acton is an area encompassing the farm fields owned by the Commonwealth of Massachusetts, Route 2 conservation land and an unprotected parcel, (Town Atlas Plate G-4, Parcel 174*)*; the combined area representing more than 100 acres of open space with high wildlife value. This is an area frequented by Canada geese, white-tailed deer, coyote, and several nesting pairs of eastern bluebirds.

Fort Pond Brook Drainage Basin

Fort Pond Brook enters Acton from Boxborough and flows in a southerly and easterly direction through much of West and South Acton. A considerable portion of Fort Pond Brook runs through heavily developed residential areas. The major tributaries associated with Fort Pond Brook are Guggins Brook, Heath Hen Meadow Brook, Grassy Pond Brook, Muddy Brook, Pratt's Brook and Cole's Brook.

FORT POND BROOK BASIN – WEST ACTON/BOXBOROUGH

Guggins Brook and the associated open marsh habitat, specifically near the Boxborough town line, have proven to be significant breeding habitat for both wood turtles and spotted turtles. In the next five years the Natural Resources Department will undertake a habitat restoration project designed to enhance and protect the sand/gravel beds necessary for successful turtle breeding. This work may occur on Acton Water District land and will require the permission of that entity. In addition, research involving radio tracking will be completed to better evaluate the population and extent of habitat for these species of special concern.

Throughout the Fort Pond Brook watershed beaver activity is extensive, requiring monitoring and management in the next five years. Evidence of flooding and groundwater infiltration into septic systems (resulting from beaver activity) has been experienced in the Flint Road area south of Massachusetts Avenue. Beaver activity along the Heath Hen Meadow Brook and Muddy Brook tributaries will be monitored, but do not now pose a health or safety concern to West Acton residents. In fact, in both locations impoundments caused by beaver dams have greatly diversified wetlands ecosystems by killing off large stands of red maple.

FORT POND BROOK BASIN – SOUTH ACTON/STOW

The Heath Hen Meadow riverine ecosystem contains extensive wetlands habitat, much of which is protected open space, however, there are several critically important unprotected parcels near the Stow line. A particularly important 16-acre parcel (Town Atlas G-1, Parcel 319) exhibits habitat ranging from red maple swamp to uplands hardwood forest. This parcel, along with several abutting unprotected parcels, makes possible an unbroken wildlife corridor connecting conservation land in Acton to protected conservation land in Stow. The upstream section of Heath Hen Meadow Brook represents diverse riverine habitat and an extensive red maple swamp. In the winter of 2000-2001 evidence of moose browsing was observed in this area. Beaver activity is widespread in the watershed.

FORT POND BROOK BASIN – ACTON CENTER – GRASSY POND

Grassy Pond exhibits peat land characteristics with many associated bog species; the pond and connected wetlands provide important wildlife habitat. There are two unprotected parcels in this

area that are very important to protect for their wildlife habitat and corridor benefits. The first parcel (Town Atlas D-3, parcel 11) is a 14 acre forested property on Newtown Road, abutting Grassy Pond and the Grassy Pond Conservation Area. It contains significant wetlands and provides habitats for important species of birds and warblers. The second parcel, (Town Atlas D-3, parcel 10) is a 39-acre property abutting Bulette Road and the Bulette Town Forest. Preserving this property would safeguard a wildlife corridor running from Grassy Pond to Route 2.

In the future, the outlet to Grassy Pond at the intersection of Newtown Road and Arlington Street will require management to eliminate the impoundment caused by beaver activity.

F. Scenic Resources and Unique Environments

Acton has a variety of scenic areas and unique environments worthy of preserving, and fortunately, many of these areas already have some form of protection.

Town Common
Acton is blessed with a traditional town common, which still marks the governmental center of town, and is the geographic center as well. This area includes "Meeting House Hill", the site of the first meetinghouse in Acton, which is now a small park and wildflower garden maintained by the Acton Garden Club. The wide grass expanses, mature trees, historic homes, and stone monuments complete the "New England small town" tableau. The town common itself is protected by both its Chapter 40C Historic District designation, and as part of the Acton Center National Historic Register District. However, its appearance could benefit from having the utilities put underground, and any attempt to widen busy Route 27 which bisects the Common, should be resisted.

In The Past Five Years:
The Acton Congregational Church, a traditional New England structure with spire and a well-maintained street-front garden, recently expanded the church building and its parking area on a previously wooded parcel of land, Boardman's Hill, in town center. This loss of a charming rural lot in the town center was offset somewhat by additional parking for the church that will keep vehicles off the narrow residential roads during church functions.

The expansion of the Acton Memorial Library required the use of Goward Field for parking. This change in use required a vote of the State Legislature. The adjoining residential property, where portions of the Library's septic system are located, was purchased by the Town for future municipal use. The Library's 1890 building which faces Main Street was not changed. The small playground located behind the Library on land that was part of Goward Field is a popular park for young children.

In 2001, the Planning Board recommended a Route 27 (Main Street) corridor study to determine how traffic could be improved. The study is complete. Recommended as top priorities are the installation of a light at Hayward Road and the construction of sidewalks.

In addition, in 2001 the town met with a group of war veterans to consider the erection of a new war memorial on the Common.

Reformatory Fields
These large agricultural areas flanking Route 2 near the Concord line provide a vital break from the urbanized section of Route 2 that traverses Concord near the reformatory. Some of the fields have been protected - for instance, one field is town-owned conservation land leased to the state to grow corn and alfalfa for the dairy herd maintained by the Department of Corrections farm. All of the fields are zoned conservation (ARC). If any of these fields become available, the town's highest priority should be to purchase them from the state, as was done with the

Wetherbee parcel, keep them in agriculture and as a scenic overlook.

Quaking Bogs
There are three large quaking bogs, or peat lands, in Acton. They are located at the Arboretum, Grassy Pond and Will's Hole. These areas are home to many bog plants, including sphagnum moss, pitcher plants, sundew, black spruce, and tamarack.

The Arboretum's bog or peat land is entirely owned by the Town and is home to a wide variety of acid-loving plants. While several species of sphagnum blanket the entire bog, leather leaf and northern pitcher plants are also common. This is one of only a few locations in town where poison sumac can be found. A boardwalk traverses the bog and is a favorite stop for school groups and nature lovers.

Grassy Pond exhibits bog-like characteristics, and has been identified by the Massachusetts Natural Heritage Program as being "worthy of protection". Approximately one quarter of the shoreline is town conservation land, and a considerable amount of the watershed for this pond is also town owned. With a pH of 5.5, the water is not extremely acidic, and has a considerable fish population. As adjacent land becomes available, it should be considered a high priority purchase.

Will's Hole looks very much like the classic quaking bog, and it is also totally on town conservation land. However, a portion of the water in the bog is acquired through a small stream, rather than springs; off-site development along Nagog Park should be closely monitored so that the water quality in this feeder stream is not degraded. Thanks to the hard work of the ConsCom at the time, recent development adjacent to this bog area was performed in such a way as to practically eliminate the impact on Wills Hole.

Greenbelts
The town has identified two greenbelts associated with the major watersheds in Acton: Fort Pond Brook and Nashoba Brook. (Refer to Section 4E on Wildlife for a complete description of these two water basins.) These greenbelts extend for the full length of each of these brooks. These areas have been mapped, and this OSRP update includes a priority list of possible areas to protect. Many parcels close to the brooks have high conservation and recreation value, but very little development potential at this time, so they might be acquired in lieu of taxes. In recent years, several parcels of land abutting Fort Pond Brook have been deeded to the town for conservation, including the Cunningham land and Prescott land. In addition, the back section of the Morrison property abuts Nashoba Brook and is an important part of the Nashoba Brook greenbelt. The back of the property, currently classified as general municipal property, should be protected as conservation land.

Ice House Pond
This millpond is an impoundment of Nashoba Brook and part of the Nashoba Brook greenbelt; the town owns the pond bottom and a small portion of the shore. Located in a very high visibility area close to the heavily populated areas of Acton Center and East Acton Village, the pond provides fishing, picnicking, and canoeing opportunities. In 1995, in response to the pond being rapidly overwhelmed with water chestnuts, the town dewatered and dredged the pond, taking

away approximately 25,000 cubic yards of organic sediment. The pond now has a depth of 5-6 feet instead of the 2 feet, prior to dredging. The dam control structure (under private ownership) was also rebuilt by the town in 1995, allowing for periodic drawdowns to control future infestations of nuisance weeds.

In 1997 the town purchased, as general municipal property, the 32-acre Morrison Farm on Concord Road, next to the pond. The town has preliminary plans from the Conway School of Design for trails and ball fields. The town is in the early stages of performing a feasibility study of Acton's portion of the Bruce Freeman Rail Trail that is planned to run along the edge of the pond.

Farms

Acton has a number of farms that are important to preserving the town's remaining rural character. "Prime Farmland" (PF) is land available for agricultural purposes (and not currently in urban use) with a favorable combination of physical and chemical characteristics for producing food, feed, forage, fiber and oil seed crops. "State or locally important farmland" (SLIF) soils are those that fail to meet the requirements of prime farmland but are still important to the production of crops. (See Agricultural Soils Map in Section 13.)

Current active farms include:

- Stonefield Farm in South Acton at the end of Martin Street, a 60-acre working farm that has been in the Simeone family since 1929. (small amount of PF, mostly SLIF)

- Cucurbit Farm, a 17-acre family owned farm at 32 Parker Street, a working farm (PF and SLIF)

- Idylwilde Farm, owned by the Napoli family, includes approximately 100 acres in and around West Acton, but most of it behind the Central Street location near Route 2. A major portion of the farm's acreage is in the Fort Pond Brook flood plain and is too wet to grow spring crops. Abutting the farm are the conservation areas of Guggins Brook to the south and Jenks to the north. (PF and SLIF)

- Butter Brook Farm, an 11.5 acre organic farm on North Main Street

- The Hebert Farm on Prospect Street, a 17-acre farm containing a feeder tributary to Fort Pond Brook and abutting town-owned conservation land on Central Street

- Kennedy Farm, a large Westford pig farm, also has 140-acres of land in Acton. The pig farm is currently being considered for a golf course in Westford, while the Acton portion of the land is classified under Chapter 61(forestry) and contains a gravel operation

- The state Northeastern Correctional Facility's farm fields abutting Route 2, approximately 100 acres of fields that in the past were used to grow corn and alfalfa for

their dairy herd (the herd was sold in 2002)

- The State Police horse barn and fields, a 16-acre parcel abutting Route 2

- Bobby's Ranch, a large horse farm behind Nagog Park, has an Acton address, but the land is in Westford and Littleton. Bobby's usually has over five dozen horses available for trail riding and lessons.

- Horse farms can also be found in the Pope Road/Strawberry Hill Road/Estabrook Road area, on Wetherbee Street/Route 2, on Nagog Hill Road, Concord Road (the Morrison Farm), in West Acton and other sections of town

The DiDuca Farm in East Acton, approximately 15 acres at the corner of Rte 2A and Esterbrook Road and owned since 1940 by the DiDuca family (PF and SLIF), was lost as farmland when the owner died and the family sold the land to a developer. Although this land was classified under Chapter 61A, the Board of Selectman declined to exercise the town's option of right of first refusal, due in large part to the manner in which the deal was structured, as well as the high price. A 74,000 square foot mall is being constructed on the site.

All agricultural activities should use best management practices, such as those developed by the Massachusetts Audubon Society, to prevent pollution of adjacent wetlands.

Historic Sites, Structures and Corridors

In the South Acton Historic District: Parcels H2A 48 and 49 (9 and 13-23 School Street): The former South Acton depot lot (H2A-49) and the lot just west (H2A-49), which was the site of at least two buildings of the Tuttles, Jones, & Wetherbee Company, are both now open. In recent years the depot lot has reverted to the town. Part of this could be reserved for open space.

North Section of Parcel H2A-57: This is an old sawmill lot, owned by the owners of Erikson Grain Mill, which lies on the north bank of Fort Pond Brook and dates from 1728. It is a small grassy space used frequently by walkers, with foot access along a short path remaining from the original main road dating before 1703. It crosses the brook over a stone arch bridge dating from 1906. If Erikson Grain Mill has no use for this relatively inaccessible space, the town or other agent could negotiate the acquisition of at least the sawmill site for conservation or recreation.

The Faulkner Mill Dam, located on Parcel H2A-57: This dam was rebuilt in 1848, as a replacement for the original dam which had stood at the location since 1702. The South Acton Village Plan assigned a high priority to preserving the structural integrity of the dam, which is the only reason the Mill Pond exists. The dam's collapse would eliminate Mill Pond as a scenic and recreational resource.

Isaac Davis Trail: The Trail was listed on the National Register in 1972, and is part of the April 19, 1775 "line of march". It runs along portions of Hayward Road, Musket Drive, Minuteman Road, Woodbury Lane and Main Street, as well as through some open land, into Concord. Vistas,

stone walls and roadside vegetation are a part of this trail's visual meaning.

State Scenic Landscape Inventory

Acton has three areas listed as Distinctive or Notable on the state's Scenic Landscape Inventory. One is Nagog Pond and its shoreline. Another includes portions of Pope, Strawberry Hill and Esterbrook roads. The third area is Grassy Pond, some of which is conservation land, but much of the shoreline is unprotected.

Scenic Road Bylaw

Acton's Scenic Road Bylaw provides in part that any repair, maintenance, reconstruction or paving work done with respect to any road designated as a scenic road shall not involve or include the cutting or removal of trees, or tearing down, or destruction of stone walls, or portions thereof, except with prior written consent of the Planning Board after a public hearing. The bylaw covers all or portions of the following:

Windsor Avenue	Arlington Street	Robbins Street	Stow Street
Liberty Street	Martin Street	High Street	School Street
Piper Road	Hayward Road	Coughlin Street	Taylor Road
Minot Avenue	Forest Road	Newtown Road	Concord Road
Pope Road	Proctor Street	Spring Hill Road	Esterbrook Road
Strawberry Hill Road	Brook Street	Carlisle Road	Fort Pond Road
Nagog Hill Road	Simon Hapgood Lane	Hammond Street	Minuteman Road
Central Street	Quarry Road	Isaac Davis Trail	Wheeler Lane
			Bulette Road

Ecologically Significant Habitats

The Massachusetts Natural Heritage Program has identified the blue spotted salamander, spotted turtle, wood turtle and the Mystic Valley Amphipod as special concern species recorded in Acton. Habitats where any of these species exist in Acton should be preserved from development.

SuAsCo (Sudbury, Assabet, Concord Rivers) Biodiversity Protection and Stewardship Plan

The SuAsCo Biodiversity Protection and Stewardship Plan, a research project on biodiversity within the watershed of the Sudbury, Assabet and Concord Rivers, was released in August 2000. Written by naturalist Francis Clark under the direction of the Massachusetts Riverways Program, and in conjunction with the Massachusetts Watershed Initiative, the plan was undertaken to help the 36 communities of the three river basins "conserve and restore natural biodiversity in the watershed."

The plan highlights biodiversity sites that are critical to the Sudbury, Assabet and Concord Rivers watershed. All of the sites were selected based on current conservation biology science and for their biodiversity value. Scientific evidence has demonstrated that biodiversity drops significantly in areas smaller than 1000 acres, requiring the rich variety of habitat types or natural communities that exist within the areas surveyed in the report. Clark wrote: "It is...clear that healthy ecosystems depend on healthy streams, rivers, and riparian areas.... Large protected upland areas in one part of the watershed need to be connected to other areas so that over the

long term populations of wild animals can intermingle..."

Seven critical biodiversity sites, all part of the Assabet River Watershed, lie within Acton. The report urges them to be considered priorities for conservation. (Portions of these sites are already protected.)

Heath Hen Meadow: On the border between Acton and Stow, this is one of the largest red maple swamp and stream systems in the entire watershed with over three miles of unfragmented stream.

Great Swamp: Shared by Acton, Stow and Maynard, this large red maple swamp in the heart of the SuAsCo watershed serves as an important linkage area for species. Development, as well as road maintenance and repair could impact the future quality of biodiversity within this site.

Long Pond / Fort Pond site: This site contains the headwaters of Fort Pond Brook, two large ponds, a wide diversity of habitats, and is a critical link between Grassy Pond and Nagog Pond. Endangered herps are also found here.

Grassy Pond: This forest of black birch and hop hornbeam is home to species of special concern identified by the Natural Heritage Program.

Will's Hole: One of the few bogs in the watershed. Despite protected upland nearby, questions remain about the hydrology impact as a result of the nearby industrial park.

Nagog Pond and Brook: This great pond is a significant stopover for migratory ducks and waterfowl, including common loon, bald eagle, and osprey. The nearby roads, Nashoba Road and Route 2A, are cause for concern, and may impact the quality of biodiversity on the site.

Spring Hill/Nashoba Brook site: This is one of the last remaining large forest tracts in the eastern part of watershed. It protects over a mile of Nashoba Brook, and serves as a very important wildlife corridor. The imminent development of the Robbins Mill Pond land and increasing traffic on surrounding roads are of significant concern and will likely impact the biodiversity quality in this area.

The SuAsCo Biodiversity Protection and Stewardship Plan is one of several projects in the Commonwealth to determine biologically significant sites, that is, what sites should be priorities for protection because of their biodiversity.

G. Environmental Challenges

Water Supply and Quality

Since the last OSRP, the demand for water in Acton has arguably become the town's most significant environmental problem. Indeed, in 2001 the Acton Water District (AWD) exceeded state limits on water withdrawal from its wells. The Acton Water District's own projections make it clear that Acton's water supply, as it is currently being used, can support only a small number of new developments.

Acton's growing need for water has challenged the Acton Water District with the task of continuing to provide safe, affordable water for all, while preserving existing water resources. In response, the Acton Water District is concentrating its resources on finding ways to manage the demand for water, while also optimizing the existing sources of supply. (See Water Resources Section 4C).

Acton can be seen as a microcosm of many Massachusetts towns. As population grows more rapidly than anticipated, many communities need to withdraw more water from ground and surface supplies. At the same time, many people are becoming concerned about the pressure on our water supplies and resultant impacts on the environment. Regulations that govern public water withdrawals are becoming increasingly restrictive, while policy makers look to water-impoverished states such as New Mexico or Colorado for ideas on how to do more with less.

Despite an economic downturn, the housing market in Acton remains active. It is timely to examine Acton's most recent water usage information to see where we may stand regarding new development and future withdrawals.

In 2001, the Acton Water District was above its allowed withdrawal limit. This is the first time the Water District has exceeded its withdrawal limit. The Massachusetts DEM and DEP are examining new water usage and population growth data from Acton; they are likely to grant Acton a small withdrawal increase. Even with an increase in Acton's withdrawal permit, it is likely that continuing growth and high consumption during the summer months will continue to put the pinch on our groundwater resources.

It is critical that Acton consider future commercial/industrial users when we make water demand projections. Acton's recent Master Plan update recommended that the town moderate the rate of residential growth while encouraging commercial growth, in order to rebalance our valuation base and the commercial/residential split of the tax levy (weighted heavily toward the residential sector.)

A commercial user with usage approximate to the Haartz Corporation may use as much as forty times what a typical residence would use. Completion of the Middle Fort Pond Brook Sewer District now provides a means for high water consumption businesses to dispose of wastewater. Acton should factor water use of these types of businesses into its future planning.

But Acton's present water supply, as we are currently using it, can supply only a limited amount

of new businesses, and certainly not Acton's projected residential build-out. The current debate between commercial or residential development has little meaning when, without water, Acton can support little future development of any kind.

It should be noted that increased water demand has the potential to negatively impact water quality. Wells that are not used currently, because of aesthetic problems, such as color, may need to be used more frequently if water demands becomes excessive.

The Commissioners of the Acton Water District have expressed a desire to stay within permitted withdrawal limits. It is becoming increasingly important for the various entities in town that are involved in growth and development to consider water usage, landscape water use, and the implications of further development.

Impact of Increased Development on Streams and Ponds

Runoff from developed land can carry with it a variety of pollutants including pesticides, herbicides, petroleum products, automobile antifreeze, and other toxins, as well as excess nutrients from lawn fertilizers, pet wastes and failing septic systems. All of these substances find their way to local surface water, if not directly, then through our storm water systems. Due to increased development, buffer areas of native vegetation that normally act as physical and biological filters between pollutants and surface water, can be reduced or eliminated. So not only does development introduce new pollutants into our environment, it also decreases the capability of natural systems to filter out/remediate manmade pollutants, before they threaten our water resources.

The combination of increased development, and current environmental regulations has created an unintended threat to water quantity/flow in local streams. As land is cleared, and forested areas are replaced by pavement, roofs, and other impervious surfaces, infiltration of precipitation, and thus recharge to groundwater and local surface water will decrease, while immediate runoff increases. As this occurs streams that were formerly considered "perennial", (since they contain water year round, except under drought conditions), may now be deprived of critical sources of water. Because groundwater reserves are thus depleted (due to increased water demand from development, and decreased infiltration), formerly "perennial" streams may be reclassified as "intermittent."

A "downward spiral" may then come into play because current environmental regulations allow Conservation Commissions to protect up to 200 feet of land from the edge of a perennial stream, but only up to 100 feet from the edge of an intermittent stream. Thus a stream that is newly considered to be intermittent because it has already suffered decreased flow due to development will now be subject to further development (closer to its banks), and thus will be even more greatly affected by development. A recent example of this is the case of Nagog Brook, a stream that was long considered to be perennial (as indicated on USGS maps) but was reclassified as intermittent by the Conservation Commission after the developer of the Quail Ridge golf course was able to demonstrate that it is not now a perennial stream.

The new sewer system in South Acton will also negatively affect water flow in local streams.

While the Middle Fort Pond Sewer System will eliminate the input of pollutants from failing septic systems in the sewered area, it will also have the unintended effect of decreasing the level of groundwater recharge to local streams. The centralized system will transport water that previously leached back into the ground, (providing recharge to local streams, wetlands etc.), and pipe it offsite.

Acton's Health Department monitors fecal coliform levels in Acton's surface waters on a quarterly basis at 44 different locations. Using a federal clean water standard that identifies as "non-swimmable" any water with fecal coliform levels of over 200 parts per million, the Health Department finds the standard exceeded 20% to 30% of the time. The highest levels are usually found along Fort Pond Brook and Nashoba Brook, the latter being the most contaminated of our two major brooks. The contamination levels are highest in the late summer when water flows are smaller and less diluted, and temperatures are warmer. The levels in Nashoba Brook could be attributed to businesses along Great Road whose septic systems were built before our current setbacks requirements were in force. High fecal coliform levels along Fort Brook occur in South Acton, in the area of town now served by the town sewer system.

Quail Ridge Golf Course

Some in town question the environmental consequences of this otherwise desirable land use. Environmentalists are concerned about the following four issues with respect to this planned golf course:

1. Environmental hazards, including pesticide and fertilizer use
2. Excessive water use and the draw down effect on vernal pools and wetlands
3. The impermanence of golf courses as "open space" in that they can easily become house lots if the course is not profitable. The only permanent protection is a conservation restriction.
4. Loss of woodland and wildlife habitat

W. R. Grace Cleanup

In 1979, the nearly 200-acre W. R. Grace & Company site in Acton was placed on the Environmental Protection Agency's Superfund list. A year earlier, it was discovered that chemicals from Grace's battery-separator plant had seeped into two Acton district wells, which were then immediately closed.

W. R. Grace has now completed the surface remediation of its property in South Acton. The contaminated soils from each lagoon have been excavated, treated and immobilized in concrete. The final material was then placed on an existing landfill on-site. The landfill was capped in accordance with EPA and Massachusetts Department of Environmental Protection regulations, and a fence was put around the entire landfill to limit access.

The most recent development occurred late in 2001, when the company's consultant for the clean up defined the boundaries of a plume of vinylidene chloride and other chemicals which have migrated from the site to an area near Acton's School Street wells. The School Street wells have treatment for VOCs on line. The EPA is currently determining what additional remediation is necessary.

Grace is now in the process of conducting the groundwater remediation necessary due to its past discharges. It may take two to three years before the company obtains the appropriate permits and perhaps another 20 to 25 years before it restores the groundwater resources. The town's goal is to hold Grace responsible for bringing the groundwater to a fully usable condition.

Currently no industrial use is carried out on the property. The land was zoned industrial or technology park in 2000, and the town's new sewer system is accessible to Grace. Grace is objecting to the betterment charges for the sewer, while exploring development plans such as a limited residential area coupled with a golf course. There is no certainty as to how this property will be used in the future.

The Grace settlement with the Water District included transferring rights to the "Grace 3" well to the AWD. The completion of the groundwater clean-up phase is critical to the future permitting and development of the "Grace 3" well as a possible source of public water.

Regional Concern
Eighty acres of the Grace property lies in Concord. In addition, near the Grace site on the other side of the Assabet River in the town of Concord, is another contaminated site recently placed on the Superfund list, that of Starmet Corp. The Starmet site was previously occupied by Nuclear Metals Inc., which produced uranium-tipped bullets for the Army from the 1970's to the early 1990's. The Army is one of the parties responsible for the clean-up of this site. The two contaminated sites concern environmental advocates in both communities; they are continuing to monitor the clean-up efforts.

Salt
Excessive salting of some roadways, especially state highways, has led to the death or decline of roadside vegetation such as white pine and sugar maples, and to the contamination of water resources. During spring months, water from many of the Acton Water District wells has elevated sodium due to road salting.

Sewer System
Acton has a small portion of town (about ten percent) on a public sewer system, and some new developments have package treatment plants. The need for a town-wide wastewater solution to prevent pollution of wetlands and water supplies has been recognized; a consultant has been hired and committee formed to undertake a multi-year effort to develop a Comprehensive Wastewater Treatment Plan.

Point Source Pollution
Clay-lined retention basins are required for all new parking facilities and for storm drain run-off for new residential subdivisions. The first inch of rainfall is retained, allowing any volatile organics present to be released into the atmosphere. There is now a requirement that the Acton Engineering Department review and approve all new retention/detention basins; this effort has significantly reduced point-source pollution. The Town enforces the state's storm water management policy for new development.

The Acton Water District has recently hired a consultant to conduct an analysis of certain point-source pollutants within the five Zone II areas of town, including all portions of the Zone II that extend outside of town.

Non-Point Source Pollution

Controlling non-point source pollution is a significant problem in Acton. Control of pesticide and lawn fertilizers, and the Board of Health's septic system monitoring program, will help reduce non-point source pollution. The implementation of the new town sewers in South Acton, Kelley's corner and the school campus will also reduce some of the septic pollution now occurring, but, as noted above, will have the unintended effect of decreasing the level of groundwater recharge to local streams.

NARA – Integrated Treatment Wetlands

The North Acton Recreation Area will soon have a unique phosphorus removal system in the form of integrated "treatment" wetlands. This project was partially funded with a state non-point pollution grant. These treatment wetlands were designed to intercept runoff, treat water from NARA pond, provide food and cover for wildlife, and serve as an educational model of how treatment wetlands work. This project is described in greater detail below.

During the winter of 2001-2002 work was begun on the installation of the integrated treatment wetlands. Planting of these wetlands will begin in the spring of 2002; many local students will participate in the planting process. These wetlands have been designed to intercept surface runoff from Quarry Road, the abutting residential homes, the NARA parking lot and the nearby playing surfaces. Water from the NARA pond will be recirculated through these wetlands to allow shallow wetlands sediment and plant life to bind with, and/or consume, nitrogen and phosphorus based compounds, thereby delaying eutrophication of the pond.

The wetlands will be planted with native plant species that provide food or cover for wildlife and are effective at nutrient removal. Aesthetics will also be a factor in plant selection as the wetlands system is located in the middle of the park.

The wetlands will serve as an educational model, illustrating how small-scale wetlands can be used for non-point source pollution attenuation and removal. Information stations will be installed along the wetlands to guide interested park visitors through the process of how the wetlands function.

SECTION 5 - INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

In 2001, the state Division of Conservation Services revised the requirements for the organization of this inventory, so the sequence of land descriptions is markedly different from that of the last plan. The lands in this inventory are now split into two major categories, private and public (including non-profit) parcels.

The Land Chart on the next page summarizes all types of property in this inventory. The chart shows we have identified 4,330 acres of significant open space in Acton, or 33% of the town's total acreage. By "significant" open space, we mean those properties whose open space satisfies each of our three goals: the property contributes to the town's character, contains important environmental features and has passive and/or active recreation uses or potential. Privately owned parcels account for slightly over 1,630 of these acres (13% of the town) while public parcels account for the remaining acreage of about 2,700 (21% of the town).

The state requires us to identify which of these lands are legally protected open space. When is property considered to be legally protected open space? Article 97 of the State Constitution, or simply "Article 97", protects certain lands acquired for natural resources purposes, meaning "conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources". Conversion of this land is particularly difficult in that it requires the following actions: 1.) The local conservation commission must vote that the land is surplus to its needs; 2.) The matter must be taken up at Town Meeting and pass by a 2/3 vote; 3.) The town must file an Environmental Notification Form with EOEA's MEPA Unit; and 4.) The matter must pass by a 2/3 vote of the Massachusetts Legislature. Finally, if the property was either acquired or developed with grant assistance from EOEA's Division of Conservation Services (i.e. Self-Help), the converted land must be replaced with land of equal monetary value and recreational or conservation utility. While conversions do occur, the process is purposefully onerous in an attempt to protect these conservation and recreation lands in perpetuity.

Lands purchased for general municipal purposes (recreation lands and the Morrison property) are not protected by Article 97. Private lands can be permanently protected lands if the deed is restricted by a Conservation Restriction (see 5B2), Agricultural Preservation Restriction, Historic Restriction, or Wetlands Restriction.

In Acton, the only protected lands are conservation lands and those parcels with conservation restrictions. These properties account for 1,583 acres (12% of the town). **To put this in perspective – at present about a third of Acton's acreage provides us with open space of significant conservation and/or recreation value and only 37% of that space is legally protected.**

NOTE: This section focuses on what we have in our current inventory of conservation, recreation and other open space, and also includes the many accomplishments made in the last five years. An analysis of what our needs are is presented in Section 7, while the actual plans for the next five years are presented in Section 9.

Land Chart: Parcels of Conservation and Recreation Significance

Description	Plan Section:	Acreage	% of Acton	Protected:
PRIVATE PARCELS	**5A**			
Chapter 61, 61A, 61B	5A1	940		
Other Unprotected Parcels	5A2	695		
Conservation Restrictions	5A3	15		x
	Total Private Parcels	**1,650**	**13%**	
PUBLIC AND NON-PROFIT PARCELS	**5B**			
Conservation Lands:	5B1:			x
Arboretum	1	53		x
Bulette Land	2	39		x
Camp Acton	3	60		x
Community Gardens	4	5		x
Grassy Pond	5	96		x
Great Hill	6	184		x
Guggins Brook	7	56		x
Heath Hen Meadow	8	113		x
Jenks Land	9	30		x
Nagog Hill	10	158		x
Nashoba Brook	11	123		x
Pratts Brook	12	60		x
Spring Hill & Hearthstone Hill	13	216		x
Stoneymeade	14	45		x
Wetherbee	15	73		x
Will's Hole, Town Forest, Capt. Handley Rd.	16	90		x
Total Named Conservation Areas		1,400		x
Other Conservation Lands	5B1(end)	157		x
	Total Conservation Lands	1,557		x
Conservation Restrictions	5B2	11		x
Athletic Fields (including NARA)	5B3	29		
Additional NARA Land	5B3, 5B5	34		
School Dept. Lands	5B4	188		
Acton: Town-owned Lands	5B8, 5A2	44		
Concord: Town-owned Lands	5A2	58		
Acton Water District Lands	5B9	400		
Cemetery Lands	5B10	175		
State-owned Lands	5B11	202		
	Total Public and Non-profit Parcels	**2,697**	**21%**	
	Total Significant Open Space Parcels	**4,347**	**33%**	

Note: Acton's total acreage is 12,990. Protected acreage is 1,583 or 12% of the total town acreage.

Private Parcels

1. Chapter 61, 61A and 61B Lands

In 2001, a total of 940 acres of Acton's open space is listed under these statutes. These state statutes allow for reduced real estate taxes in exchange for a landowner keeping the land "open" for forestry, agricultural or private recreation purposes. Chapter 61 applies to forestlands, Chapter 61A applies to land in agriculture, and Chapter 61B applies to private recreational lands. Developing these lands is fairly easy, but the town is given a 120 day right of first refusal to purchase the land, if it is about to be sold or undergo a change of use (if the developer does not first pay the rollback taxes).

These open spaces, although not publicly owned, have a significant impact upon the environment and aesthetics of the community. Seeing they remain in an undeveloped state is a very important issue for the town. Eight of these parcels are part of the Nashoba Brook or Fort Pond Brook greenbelts.

Since the last OSRP inventory in 1995, the number of acres under these statutes has declined 25%, from 1,255 acres to 940 acres, primarily as a result of the Robbins Mill Pond Land and the DiDuca Farm being taken out of these programs for development purposes. The Robbins Mill Pond Land is slated for a housing development, the DiDuca Farm for a shopping complex. The Palmer property, 129 acres of which is still under Chapter 61, will be developed into the Quail Ridge Golf Course.

Identification and Ranking Process
As described in Section 2 of this OSRP, Tom Tidman, Director of Natural Resources, David Abbt, Engineering Administrator, and Belle Choate, long-time resident, went through all of the town maps and highlighted all open space parcels that were important to preserve for their rural, environmental and/or recreational significance. Mark Hald, the town's IT Director, provided computerized extracts, from the assessor's database, listing these parcels. These extracts were divided into a list for Chapter 61, 61A, 61B parcels and a separate list for non-61 parcels.

Once these automated lists were obtained, the Director of Natural Resources, together with members of the OSRC, assigned each parcel a score between 1 and 10 for each of our three criteria: rural character, environmental significance and recreation potential. Rural character reflects the parcel's value in providing scenic vistas, open land and the charm once common in eastern Massachusetts. Environmental significance was evaluated in light of the parcel's: significant diverse habitat (to promote biodiversity); potential for linking with existing protected open space; greenbelt value; wildlife corridor value; and ability to prevent habitat fragmentation. Recreation potential was evaluated for both passive and active recreation needs, taking into account a parcel's ability to provide: connections to existing trails; future rail trail intra and inter town trail links and future new athletic fields.

Total scores were then used to develop a ranked list, which was then reviewed by assorted groups

and individuals, familiar with the parcels, including the Conservation Commission, LSCom, ACT, David Abbt and Belle Choate. The prioritized lists for Chapter 61 property and non-61 property can be found in the Appendix in Section 12.

The 940 acres of Chapter 61, 61A and 61B program land represents 61 parcels, falling into 22 owner groupings.

2. Other Unprotected Parcels

As described in Section 2 of this OSRP, and in the preceding section on Chapter 61, 61A and 61 B land, the OSR Committee was able to do a comprehensive job of identifying all unprotected open space parcels in Acton which contribute to preserving the town's rural character, protect the environment and/or provide recreation opportunities.

The prioritized list for non-Chapter 61 properties is included in the Appendix in Section 12. There are 925 acres of open space identified as important to protect for their value in preserving Acton's rural character, protecting the environment and providing recreation opportunities. Some of this property is owned by state or town entities. An ownership breakdown is shown below:

Type of Ownership	Acres	Number of Parcels	Reference
Private Acreage	695	102	See Appendix
Town of Concord	58	2	See Section 5B8
Town of Acton	12	2	See Section 5B8
Comm. of Mass.	159	14	See Section 5B11
Acton Water District	1	1	See Appendix for Recreation Plans
Total Acreage	**925**	**121**	

This acreage, although not protected, and not enrolled in a Chapter 61 tax abatement program, provides critical wildlife habitat, rural ambience and has high recreation potential. These lands are spread throughout the entire town. Thirty four of these parcels are part of the Nashoba or Fort Pond Brook greenbelts.

2. Private Conservation Restriction

The Haartz Property

The Acton Conservation Commission holds a conservation restriction on 15-acres of open space owned by the Haartz Corporation. The restriction, placed on the property in March 1998, has been filed with the Executive Office of Environmental Affairs and protects the land in perpetuity. An upland forest of mixed red oak and white pine covers this parcel; it contains no wetlands. It is located on Haartz' main campus and it adjoins an 8-acre parcel of state-owned land alongside Route 2. It is also bounded by residential properties on Charter Road, and Arlington Street near Route 2.

B. Public and Non-Profit Parcels

1. Conservation Land

Of the 1,557 acres of Acton's Conservation and Town Forest lands, 1400 acres are grouped into the 16 conservation areas detailed below. All conservation lands are owned by the Town of Acton and maintained by the Land Stewardship Committee (hereafter 'LSCom') under the direction of the Department of Natural Resources and the Conservation Commission, and in cooperation with other town departments. All lands with a Self-Help number are restricted by state regulations to passive recreation use only. Great Hill is also regulated by the Land and Water grant. Local regulations are listed in the Appendix.

These conservation lands are well protected. The state has authorized the purchase of conservation land as a way to conserve our vanishing natural resources. Transfer is intentionally difficult and requires a majority vote of the Conservation Commission—stipulating that the land in question is no longer needed—plus a two-thirds vote of the Town Meeting and a two-thirds vote of each house of the state legislature.

In the fall of 1996, in fulfillment of one recommendation made in the prior Acton OSRP, LSCom was created by vote of the Acton Conservation Commission. LSCom is a subcommittee of the Conservation Commission, directed by an Associate Commissioner, and, in theory, subject to its approval; in practice, it has functioned largely as an autonomous all-volunteer group under the direction of the Natural Resources Department. This committee is now composed of 14 active stewards (plus secretary), each responsible for one of the town's 14 principal conservation areas. In addition, each steward can exercise his or her own special area of expertise and interest in town-wide projects.

Since its inception, LSCom has completed projects to improve individual conservation areas and town-wide projects to ensure consistency and standardization among the conservation areas. The former are detailed in the individual conservation area write-ups below. The latter include installation of kiosks of standard design and color at all major entrances to all but four of the 14 principal conservation areas. Two of these four are equipped with smaller signboards. Kiosks are sturdily built structures equipped with map boxes, roofs, and a notice-board surface on which standard information including the parcel's map, steward contact, and land use regulations are posted. All entrances to principal conservation areas are now marked with similar 'Conservation Area' signs, including the name of the area, and in some places, prohibitions.

Thirteen principal conservation areas now have complete trail systems, with one or more secondary trails where appropriate, and one or more accesses. Major trails (yellow-blazed) are usually loop trails unless the land configuration prohibits this. Secondary trails (blue-blazed) either bisect the loop or provide access to some more remote portion of the conservation area that is of special interest. All secondary trails leave and rejoin the major trail. Access trails (red-blazed) either provide access to a loop trail through a narrow corridor or easement, or act as connectors between two conservation areas that are either contiguous or closely separated. Over

a three-year period, nearly all trails throughout the town's conservation areas have been blazed using a consistent strategy and a three-color system. Blazing has been done for both directions and for the least intrusion.

All major-trail stream crossings now have bridges, and nearly all perennially wet areas have boardwalks. Other town-wide projects include the installation of nesting boxes for bluebirds and other species, the introduction of blight-resistant elm trees for future shade where appropriate, removal of heavy trash such as autos, bathtubs and appliances, tires, and old farm equipment of no historical interest.

Maintenance of special habitat areas such as meadows, fields, old orchards, and a pine-barrens—all kinds of open land rare in Acton—has been performed at the lowest level deemed necessary to maintain the unique character of these areas. Otherwise, management practices have been limited to keeping trails open while allowing natural succession processes to occur.
LSCom has been assisted in its activities by Boy Scout Eagle candidates, Cub Scout dens and Girl Scout troops, ABRHS Senior Community Service Day participants, the Merriam School Service Learning Project 5th and 6th graders, as well as by other public-spirited citizens.

In the spring of 1996, the Conservation Commission published a handbook titled *A Guide to Acton Conservation Lands*. This Guide, now out of print as well as out of date, is in the process of being completely revised by LSCom to better reflect the current status of each conservation area. The revised Guide features new maps, which not only reflect the work done by LSCom on the individual conservation areas in the past four and a half years, but also employs a somewhat different format. The information on which the maps are based is Differential Global Positioning System (DGPS) data collected by one of the stewards; the maps are now presented in color, to scale, with more detail, and with trails shown both symbol-coded for priority, and color-coded to correspond with the blaze colors of the actual trails. The text for the Guide, describing each conservation area, is being updated to reflect the current status of accesses, trails, amenities, and special features within the area.

The parcels that comprise each of the 16 major conservation lands discussed in this report have been grouped under each land title. Descriptive text of the current status of each conservation area is provided. This includes dates of acquisition, accesses, topography, trail system, specific uses, and special features. Future plans for individual conservation areas are detailed elsewhere in this report. The descriptions included here have been excerpted from narratives intended for inclusion in the new Guide and prepared by the LSCom stewards as part of an in-depth review of the current status of each conservation area.

The Acton Arboretum is maintained by Friends of the Acton Arboretum, a private non-profit organization, with help from town staff. Neither the Community Gardens nor any of the lands listed as "Other Conservation Lands" at the end of this section have as yet been actively taken under LSCom's responsibility. As a matter of course, the town rezones all conservation lands after purchase as ARC (Agriculture, Recreation, and Conservation).

Acton has two areas of Town Forest, both of which are currently stewarded in a similar fashion

to the rest of the conservation lands. Because of the purchase of the Wills Hole parcel adjacent to the Town Forest off Quarry Road, that forestland has been incorporated into the Wills Hole Conservation Area (see description for parcel #16 below). The Bulette Land (see parcel #2 description below) is also designated as Town Forest. The first trail has just recently been completed and some additional trails remain to be developed. If the town were to become involved with timber harvesting in the future, these areas would be the first to be cut, on a selective basis, as timber production was the intended use of the lands when purchased. The Town Forest acreages are shown in the conservation land inventory, but because of their different legal status and allowed uses, they are also listed below.

NAME	PLATE	PARCEL	ACRES	DATE ACQ'D	S.H.	ZONE
Town Forest	B–5	34	49.00	12/31/43	—	ARC
Bulette Land	D–3	12	15.00	3/23/26	—	ARC
	D–3	16	7.00	3/23/26	—	ARC
		Total:	71.00			

PARCEL DESCRIPTIONS

Number 1

NAME	PLATE	PARCEL	ACRES	DATE ACQ'D	S.H. #	ZONE
Acton Arboretum	F–3A	76	14.81	12/27/77	—	ARC
	F–4	28	30.00	11/01/76	31	ARC
	F–4	44	6.42	12/16/76	30	ARC
	F–4	45	2.01	9/28/76	—	ARC
		Total:	53.24			

The Acton Arboretum, in the town's center, consists of 53 acres of woods, meadows, swamp, ponds, old apple orchards, a glacial esker, and a bog. Parking is available at the Arboretum's main entrance, off Taylor Road. Other entrances are at Wood Lane and Minot Avenue. Much of the area adjacent to the parking lot is handicapped-accessible, and is open, with graveled paths, gardens, bridges, and picnic tables. Trails and paths crisscross the entire area.

The land, successively owned and improved by the Craigins, the Reeds, the Tuttles, and the Bridges, was acquired by the town in 1976 and 1977. It was formalized as an Arboretum in 1986 when Town Meeting funded the purchase of plant materials and site improvements, and the original warrant article was amended by John Whittier to specify use of the property for an arboretum.

Since then, the Arboretum has been developed through the efforts of the Friends of the Acton Arboretum, Inc., assisted by many volunteers. The Acton Garden Club planted and maintains the Herb Garden. Boy Scouts completing Eagle Scout projects have worked in the Craigin foundation and swamp areas on plantings, paths, and boardwalks. Girl Scouts working on their Gold Awards have also completed several projects. Local businesses and landscaping firms have donated services and materials. Most of the heavy labor involved in the clearing of the foundation and in the upgrading of the trail system has been performed by town staff.

There are three major trails at the Acton Arboretum, along with a number of interconnecting paths. The main trails are the Orchard Loop, the Wildflower Loop, and the Highland/Bog Loop. An access route that connects to the Arboretum from the Town Center Green runs parallel to Taylor Road. Along this access trail are the Swale Garden, the Daylily Collection, and a grouping of crab apple trees and native shrubs.

The **Orchard Loop** trail is a perimeter loop of the upper, most open, area of the Arboretum together with the old orchard grid to its south. This 1,200-foot trail begins at the Taylor Road parking lot and is handicapped accessible with gentle grades, crushed stone base, and a number of benches along its length. It takes the walker through a number of unique garden areas as well as beside a small pond constructed in 1992. The unique planting areas along this trail include an Herb Garden, designed as a replica of a typical 1700s herb garden with medicinal, culinary, and

strewing herbs, and situated within and around the old foundation area. The Butterfly Garden, the Hosta Garden, the Nursery, and the Nut Tree collection are all situated around the open grassy area. An old, granite watering trough, dated 1878, has been moved into this area also. Picnic tables, drinking fountain, and stone reading circle add to the utility of the open area. Situated along the more southerly reaches of the Orchard Trail are the Rhododendron Garden, groups of Japanese larches with an arbor, and areas of wetlands.

The **Wildflower Loop** trail leaves and rejoins the Orchard Loop Trail on the western and eastern sides of the Arboretum property. It travels through 1,800 feet of swampy lowlands and upland forest. Features along this route, in addition to an extensive Wildflower Garden, include a Fern Garden, a small-brook crossing, several boardwalks and benches, two fair-sized ponds, and an old quarry site with a partially-cut granite boulder with the cutter's drill marks still apparent. In the summertime, the two ponds are solid green with duckweed and host many frogs and turtles. In 2001 funds were allocated to complete the handicapped-accessible trail connecting the orchard trail with the wildflower loop. Work to relocate the existing trail to meet ADA requirements was completed in January 2002. The finished loop trail is more that three quarters of a mile in length; in the spring/summer of 2002 there are plans to incorporate a new trail which will access a rhododendron garden.

The **Highlands/Bog Loop** is a 3,500-foot journey from the highest area in the Arboretum to the lowest. The 30 acres traversed by this trail, in the most southerly portion of the Arboretum, comprise a wide variety of forest types, succession growth, and geological features. It is based on old farm roads, cow paths, and foot trails, and is not handicapped-accessible. A most unusual feature of this area is the display of 'Forest Stones', subtly scattered by the trailside. This collection of twenty two field stones, each inscribed with a single word, was retained by popular demand from the 1995 Environmental Sculpture Exhibit.

Along the southwestern portion, the trail follows a narrow, long hill, or esker, that is a raised gravel streambed left by the melting of a receding glacier. The dryness of the glacial gravel is indicated by the growth of pitch pines and oaks. The esker constitutes a drainage divide between the swamp on the west that drains southwards and the wetlands and bog on the south that drains eastwards. After descending the esker, the trail crosses a quaking bog, with its specific plant community, along a winding boardwalk. In a short distance, the trail leads back towards the main Arboretum and completes the Highlands/Bog Loop. A conservation restriction recently placed on an 11-acre parcel of land abutting the Arboretum will help protect the wetlands habitat.

Number 2

NAME	PLATE	PARCEL	ACRES	DATE ACQ'D	S.H. #	ZONE
Bulette Land	D–2	10	13.33	8/13/65	1	ARC
	D–3	12	15.00	3/23/26	—	ARC
	D–3	16	7.00	3/23/26	—	ARC
	D–3	22–4	3.22	12/21/79	—	ARC
		Total:	38.55			

The Bulette Conservation Area is the first parcel of land the Town of Acton acquired for conservation purposes. Its purchase was authorized at the March 1965 Annual Town Meeting and it abuts Acton's first Town Forest that was purchased in 1926. Together, the two parcels total 38 acres of which much is wetlands. For many years the only access into this area was on a fire road that was annually cleared of vegetation and obstructions to assure passage for fire apparatus.

The first hiking trails were cut in 1974 as an Eagle Scout project. Unfortunately, in the following years the Town neglected the area as development and maintenance resources were focused on the newer and larger conservation tracts the Town acquired. It is only recently that the 0.25-mile access trail has been reopened and an additional portion of trail cut to provide a 0.7-mile (yellow-blazed) loop trail. A 0.1-mile connector (blue-blazed) trail has also been cut along the rim of an escarpment that affords several elevated views of the forest. The area is notable for its plentiful glacial features: a number of large erratics and an esker that may be seen from the trail across a wetlands. An easy bushwhack during dry periods will take the hiker to the top of this esker which has an animal track along its top and provides lovely views of both hemlock forest and additional wetlands beyond.

Access to this property is at a sign and gate on the east side of Bulette Road, which is off the south side of Newtown Road near the Acton/Littleton boundary. Parking is available at the end of Bulette Road beyond the private drives nearby. A renovated kiosk from the earlier Eagle Scout project is located at the end of the access trail and provides maps.

Number 3

NAME	PLATE	PARCEL	ACRES	DATE ACQ'D	S.H. #	ZONE
CAMP ACTON	E–6	7	44.03	3/7/96	34	ARC
	D-5	31	14.95	3/7/96	34	ARC
Barne's Orchard	D-5	31	1.08	3/7/96	34	ARC
		Total:	60.06			

The Camp Acton Conservation Area, a property formerly owned by the Boy Scouts, was acquired by the town in 1996 with the aid of a Self Help grant. This conservation area is a diverse 60 acres that may be accessed either by a gravel woods road (0.2 mile) from Pope Road, in the most easterly corner of Acton, or from two short (red-blazed) connectors from the abutting Spring Hill Conservation Land. All three accesses intersect with a newly redesigned (yellow-blazed) main trail that now provides a circuit of this conservation area.

At the terminus of the woods road, there is a large parking area, internal to the property. The distance from this parking lot to the Spring Hill loop trail, using Camp Acton's straight-through route that passes through the camping area, is 0.8 mile. Please refer to the descriptions for Nashoba Brook and Spring Hill conservation areas, which provide additional information about their entrances and the linked trail systems.

Camp Acton's unique feature is its suitability for a type of passive recreation that is not offered

by any other presently owned town property. Picnicking, as well as individual or group day or overnight camping may be enjoyed with a permit from the Natural Resources Office in the Town Hall. There are six large, primitive campsites, established by the Boy Scouts, maintained free of poison ivy, brambles, and damp or stony ground. Each is equipped with a rustic picnic table and crude stone-ring fireplace, and each is located in a woodsy setting that allows some privacy. The gated internal parking area makes possible easier access with gear to these sites. Close to the parking area is a large-stone masonry fireplace suitable for group gatherings. Further modest enhancements are anticipated.

The most stunning feature of the property is a large grove of 100-year-old white pines that abuts the parking area and extends beyond it for some distance. The high pine canopy allows in just enough light to support a low covering of small evergreen seedlings but little else. Away from the tall pines, a more diverse forest of pine mixed with hardwoods, including large oaks, as well as white birch, maple, and several large yellow birch trees, has developed. Along the northeasterly boundary, which is currently home to a goshawk nest, several wetlands areas support mature vegetation typical of such areas, red maples being the predominant species. Wetlands comprise about twenty percent of the acreage in Camp Acton. Other natural features include two isolated vernal pools and a magnificent little stream, unnamed, which eventually flows into Spencer Brook.

Projects completed by LSCom:

1. Kiosk with map box installed at the parking area.
2. Entrance sign installed at the Pope Road entrance.
3. Boy Scout signage, flagpole, and old notice board removed.
4. Worn-out picnic tables and other debris removed from campsites.
5. Unneeded and damaged bridge removed.
6. Large piles of brush left by former caretaker removed from woods road.
7. Bluebird house installed near parking lot.
8. 0.6-mile trail cut to form a major loop within area.
9. All trails blazed.
10. Trails and stone walls mapped using DGPS (Differential Global Positioning System) technology.

Number 4

NAME	PLATE	PARCEL	ACRES	DATE ACQ'D	S.H. #	ZONE
Community Gardens	C–5	41	0.88	12/23/75	23	ARC
(Formerly Taylor Ct.)	C–5	51	4.50	12/23/75	23	ARC
		Total:	5.38			

This small property provides space for community gardens in the North Acton area on Route 27 just south of Carlisle Road. Flanked by Nashoba Brook's Robbin's Mill Pond, the property is in a fertile lowland. This rich earth is prime farming land and is the major asset of this site. A small picnic area is also located there. Due to its small size, no trails have been developed, but a small parking lot for both the community gardens and the fishing access was built in 1992. No stewarding is currently being done.

Community gardens have been located at this site for over 20 years. The field area is subdivided into 39 plots, all of which were rented in 2001 to both residents and non-residents.

Number 5

NAME	PLATE	PARCEL	ACRES	DATE ACQ'D	S.H.#	ZONE
Grassy Pond	D–3	14	28.95	10/30/68	4	ARC
	D–3	14–5	0.24	10/29/84	—	ARC
	D–3	14–27	16.82	10/29/84	—	ARC
	D–3	14–34	1.05	10/29/84	—	ARC
	D–3	14–41	0.23	10/29/84	—	ARC
	D–3	14–47	0.52	10/29/84	—	ARC
	D–3	23–09	4.20	1/08/71	—	ARC
	D–4	1–2	43.60	6/11/72	22	ARC
		Total:	95.61			

Grassy Pond Conservation Area is one of Acton's larger conservation areas, with 95 acres located between Newtown Road and Nagog Hill Road on the way to Littleton from the town's center. It is also one of the town's most diverse conservation areas because of its varied habitats and ecosystems. These include the Pond, an extensive wetlands at the pond's outlet, two small streams, a boulder field, a large meadow, many stone walls, and dense stands of eastern white pine, and open stands of northern hardwoods such as white ash and red and white oak. Mosses are prolific and they coat many of the stones and tree stumps.

About half the land was acquired by the town in 1968 and 1972 through two Self Help grants, and the remainder was acquired in 1971 and 1984. It was one of Acton's first conservation areas to have a Master Plan. The stated purpose was to maintain the unspoiled serenity of the area while increasing its potential for use and enjoyment. The first trail, designed according to this plan, was built in 1978 as a Boy Scout Eagle project with assistance from the Young Adult Conservation Corps (YACC) and it entered the property from Newtown Road. Gradually, the boardwalk across the wetlands, the pier at the pond's edge, the trail in from the Nagog Hill Road side, and the Willis Holden Drive trail were added. Inmates of the Northeastern Correctional Center, as well as Boy Scouts working on Eagle projects, carried out many of these improvements. In 1998, members of the Land Stewardship Committee modified the main trail into a loop.

There are three entrances to the Grassy Pond Conservation Area, all with parking. The main entrance is on the westerly side of Nagog Hill Road, across from a marked conservation connector to the contiguous Nagog Hill Conservation Area on the road's easterly side. Two other entrances are on Newtown Road and on Willis Holden Drive. Adjacent to the main parking area is a large field that contains several birdhouses suitable for bluebirds. Bluebirds may often be spotted here. This field is kept open by annual mowing.

The trail system consists of a recently redesigned loop trail (yellow-blazed), by which the hiker may make a circuit from the Nagog Hill Road parking area to the pond and return via a different route that terminates in the meadow. The loop trail is 1.1 miles long. A secondary trail (blue-

blazed), an extension of which connects to the Willis Holden Drive entrance, bisects the loop trail. Short connectors (red-blazed) lead from both the Nagog Hill Road entrance and the Willis Holden Drive entrance to the loop trail. On the property's westerly side, however, the access trail in from the Newtown Road entrance is quite long (about 0.4 mile) and first traverses a boardwalk through the muddy area bordering the true wetlands, and then a long, winding, raised boardwalk that takes one through the wetlands itself. This boardwalk and trail access intersects the main loop trail, after crossing one of the property's small streams, near the pond.

Grassy Pond itself is a naturally occurring kettle hole resulting from the glaciers' retreat, and it exhibits bog characteristics around its perimeter. Nowhere is the pond more than 15 feet deep, although the level has fluctuated in recent years due to beaver activity. The gradual invasion of the perimeter areas by species of plants that thrive in very wet and highly acid areas will continue to shrink the open water through an ever-quickening process. Leading this advance are pitcher plants, leatherleaf, highbush blueberries, larches, and red maples. A short side path off the loop trail leads to the pond's edge, and a wooden pier that leads through the wetlands boundary of the pond to an observation deck provides good views and an appreciation of the bog's characteristics.

Projects completed by LSCom:

1. Posts placed at entrance barrier in parking lot on Nagog Hill Rd. to reduce vandalism.
2. Conservation Land signs and kiosks with map boxes installed at Nagog Hill Rd. and Newtown Rd. entrances. All standard color.
3. Surface of main trail improved by rock removal and wood-chipping.
4. New trail cut creating loop walk around parcel.
5. Four 8-foot recycled boardwalk sections placed at seasonal wet areas.
6. 8-foot boardwalk ramp installed leading to pier on pond.
7. Pier raised and leveled.
8. Observation deck added to end of pier over open water by dropping steel pipes fitted with augurs through winter ice and then screwing them into the underlying hard pan.
9. 56-foot boardwalk installed over wet areas on access trail from Newtown Rd.
10. Stringers and planking of main 300-foot boardwalk across wetlands exit from pond periodically repaired or replaced.
11. Metal trash removed.
12. Nagog Hill Road parking area barrier painted standard color.
13. Area at north end of Nagog Hill Road field cleared to improve appearance and emphasize historic uses of field.
14. 5 bluebird nesting-boxes installed.
15. All trails blazed.
16. Trails and natural features mapped using DGPS technology.

Number 6

Name	Plate	Parcel	Acres	Date	S.H. #	Zone
Great Hill	G–2	124	14.71	. /17/72	15	ARC
	G–2	152	16.79	12/22/71	14	ARC
	G–3	111	33.00	2/8/73	18	ARC
	G–3	10–1	38.52	12/18/74	17	ARC
	G–3	68	13.44	1/11/73	19	ARC
	H–3A	1–1	53.62	11/21/72	12	ARC
	H–3	11–1	2.00	8/22/75	27	ARC
	G–3	79	.54	12/29/72	—	ARC
	G–3	83	.49	12/29/72	—	ARC
	G–3	84	.51	12/79/72	—	ARC
	G–3	86	.47	12/79/72	—	ARC
	G–3	87	.52	12/79/72	—	ARC
	G–3	112	.46	12/79/72	—	ARC
	G–3	113	.52	12/79/72	—	ARC
	G–3	115	.46	12/79/72	—	ARC
	G–3	116	.46	12/79/72	—	ARC
	G–3	124	.46	12/79/72	—	ARC
	G–3	125	.46	12/79/72	—	ARC
	G–3	126	.46	12/79/72	—	ARC
	G–3	139	.48	12/79/72	—	ARC
	G–3	140	.49	12/79/72	—	ARC
	G–3	141	.47	12/79/72	—	ARC
	G–3	162	.54	12/79/72	—	ARC
	G–3	163	.48	12/79/72	—	ARC
	G–3	167	.50	12/79/72	—	ARC
	G–3	168	.50	12/79/72	—	ARC
	G–3	191	1.69	12/79/72	—	ARC
	G–3	192	.53	12/79/72	—	ARC
		Total:	183.57			

Great Hill Conservation and Recreation Area, located in a busy section of South Acton, is a large tract, diverse in topography, vegetation, natural features, and uses available to the public. This 184-acre conservation area is bounded on its southerly side by School Street, where there is a major access behind the South Acton Fire Station. Piper Road on the east, with a minor access across from Oakwood Road, Mass. Avenue on the north, and Main Street on the west, provide the property's other boundaries. The Main Street access, located across from the intersection of Prospect Street and Main Street, is a second major access and also provides parking. A second minor access is from Francine Road. The conservation area's only kiosk presently, is positioned at the top of the meadow beyond the fire station playing fields. A second kiosk is planned in the near future for the Main Street entrance.

The town acquired the land with state and federal assistance in two phases between 1971 and 1975 with the purchase of seven contiguous parcels that had no existing structures on them other than the common New England stone walls. Since then, the area just beyond the fire station entrance has been developed for limited recreational uses. These include installation of basketball hoops, soccer fields, and barbecue pits and picnic tables. A former marshy area was dredged and made into a skating pond. A large open meadow beyond the playing fields creates a feeling of spaciousness, and slopes up to the wooded areas where the trail system begins.

The trail system now consists of a main loop trail (yellow-blazed), 2.0 miles in length, and two secondary trails (blue-blazed). The main loop trail makes a circuit of the property and may be accessed not only from the entrances mentioned above, but also from several informal access points. One of the secondary trails traverses the region around the summit of the hill—at an elevation of 350 ft., the highest point in Acton—from which good views of the surrounding area may be had in the winter. The other secondary trail leaves and returns to the main trail on the westerly side so as to give access to the back of the Children's Discovery Museum parking area.

An interesting feature near the Piper Road wetlands area is a bowl-shaped depression in a natural outcrop of bedrock. This stone artifact is thought to have been an Indian grinding stone, a theory that is supported by the presence nearby of an intermittent stream that would have been useful in the preparation of grain for the grinding process. In the uplands, particularly at the top of the hill, one can see what is nearly a climax forest with its mix of ash, hickory, beech, sugar maple, and red and white oak. This portion of Great Hill provides habitat for nesting bird species such as scarlet tanagers, red-eyed vireos, redstarts, ovenbirds and several species of owls.

Projects completed by LSCom:

1. Conservation Land sign installed at top of field at School St. (fire station) entrance.
2. Map box installed on kiosk.
3. Kiosk painted standard color.
4. 28-foot bridge/boardwalk installed replacing log over seasonal stream.
5. 12-foot bridge installed over seasonal stream on side entrance trail near fire station entrance.
6. Eight 8-foot recycled boardwalk sections placed over seasonal wet area at Piper Rd. access.
7. Trail relocated to avoid wet/icy area near Francine Rd.
8. Portion of main trail relocated from Water District property into woods to avoid traverse of jeep road and cell tower presence.
9. New trail with short boardwalk cut leading to the small soccer field from parking lot behind the fire station.
10. 2 bluebird nesting-boxes installed.
11. Short access trail cut from Rt. 27 parking lot to main trail.
12. Rt. 27 entrance sign repainted and relocated for better visibility, parking area brushed out, trash cleaned up, old WW II antenna wires removed from trees, and access to jeep trail closed.
13. All trails blazed.
14. Trails and natural features mapped using DGPS technology.

NUMBER 7 NAME	PLATE	PARCEL	ACRES	DATE ACQ'D	S.H. #	ZONE
Guggins Brook	F–1	1	55.5	12/24/75	28	ARC
		Total:	55.5			

The 55.5-acre Guggins Brook Conservation Area, acquired in 1975 through a Self Help grant, is a predominantly low-lying, frequently wet area through which Guggins Brook and Inch Brook flow. The main access is from a small parking lot on the northerly side of Route 111 (opposite Birch Ridge Road) about 0.5 mile west of West Acton center. Here, the conservation area abuts Water District land that the fairly lengthy access trail traverses over often-muddy ground before crossing Inch Brook on a short boardwalk into the main Guggins property. A secondary access, also lengthy, is from Central Street by way of an easement granted by the Half Moon Hill community. The only safe public parking for this entrance is about 0.3 mile away, in the playing field lot on nearby Elm Street.

The trail system does not conform to the model used for most conservation areas, as it consists of a pair of nearly independent loops of similar length. The main loop (yellow-blazed) can be reached by either of the two access trails. The secondary loop trail (blue-blazed) does leave and rejoin the yellow-blazed trail, but it is a long loop that touches the yellow trail in three places. Traversing the outer portions of both loops, a hiker can make a 1.0-mile walk from the junction near the Inch Brook bridge and back.

Two other short secondary trails bisect two bulges of the main loop. This unusual trail configuration is due to the extensive portions of the conservation area which are wet throughout most of the year except in very dry years. The driest area, and also the most scenic, is traversed by the yellow trail. All trails are appealing because they cross several bridges and boardwalks over different streams and wet areas. Some trail sections have been improved by 'corduroying', a method of placing logs cut to a standard length side by side into a muddy base.

Guggins Brook, flowing east from Boxborough, bounds one side of the conservation area and gives the property its name. The Brook is channeled through culverts under the trails at several points and parallels the main trail below its confluence with Inch Brook which drains a large swamp in the conservation area where there are no trails. The combined waters eventually join Fort Pond Brook, which forms one corner of the property, just beyond the woodlands and outside of the conservation area.

This conservation area is not suitable for either horses or mountain bicycles because of the wetness, but there are some very scenic areas, particularly along the Guggins Brook where it flows through a canal bounded on one bank by a raised dike. Here the water is calm, quietly flowing through a lovely straight streambed. Trees found in the parcel include white pine, red maple, oaks, hemlocks (many of these in a dark quiet grove that the main trail passes through,

near the center of the parcel), quaking aspens, and occasional apple trees (remnants of the orchards that were once common throughout Acton).

Projects completed by LSCom:

1. Conservation Land sign and mini-kiosk installed at Massachusetts Ave. (Route 111) entrance.
2. 40-foot bridge installed over swamp drainage stream on Massachusetts Ave. access trail.
3. 14-foot bridge installed over Inch Brook ditch.
4. 50-foot bridge built over old Inch Brook swamp outlet.
5. Bridge over upper portion of Inch Brook raised.
6. Corduroy and wood chips laid in perennially wet areas at back of parcel and along Massachusetts Ave. access.
7. New access trail from Central Street through Half Moon Hill easement opened and cut.
8. Old truck wheels and other heavy metal trash removed.
9. All trails blazed.
10. Trails and natural features mapped using DGPS technology. Recycled boardwalk sections placed in additional wet areas.

Number 8

Name	Plate	Parcel	Acres	Date Acq'd	S.H. #	Zone
Heath Hen Meadow	H–2	1	84.00	7/19/74	21	ARC
	H–2	36	14.80	5/14/74	16	ARC
Overlook Corridor	**G–2**	**184**	**1.99**	**10/25/95**	—	**ARC**
	G–2	**184–1**	**1.39**	**10/25/95**	—	**ARC**
	G–2	**193–14**	**.07**	**10/25/95**	—	**ARC**
	G–2	**194**	**3.11**	**10/25/95**	—	**ARC**
	G–2	**194–1**	**2.64**	**10/25/95**	—	**ARC**
	G–2	**194–2**	**1.59**	**10/25/95**	—	**ARC**
	G–2	**194–3**	**.61**	**10/25/95**	—	**ARC**
	G–2	**194–4**	**.82**	**10/25/95**	—	**ARC**
	H–2	**7–5**	**.51**	**10/25/95**	—	**ARC**
	H–2	**7–11**	**.70**	**10/25/95**	—	**ARC**
	H–2	**7–16**	**1.14**	**10/25/95**	—	**ARC**
		Total:	113.37			

Heath Hen Meadow Conservation Area in southwest Acton comprises 99 acres of streams, meadows, upland forest, and large tracts of wetlands. Only one-third of this conservation area is upland. This property was purchased using both town and state funds in 1974 and is crisscrossed by several stone walls which serve as reminders of its use as farmland during the 17th and 18th centuries. The conservation area is named for the Heath Hen Meadow Brook which rises in Stow and meanders through the property, picking up the Muddy Brook tributary, and eventually

merging with Fort Pond Brook just beyond the property's border.

There are four access points to the Heath Hen Meadow trail system, which consists of a 0.5-mile straight-through main trail (yellow-blazed) with two secondary trails (blue-blazed). The primary entrance, at the end of the Robbins Street cul-de-sac, is marked by an information kiosk situated on the main trail midway along its length. Two other entrances are at either end of this main trail: one at Billings Street at the trail's southerly terminus and the other at the Heath Hen Meadow Brook, which forms the property's border to the north. The bridge that spans the Heath Hen Meadow Brook, built by LSCom volunteers, leads to the Mt. Hope Cemetery woodland beyond, also owned by the town. There, a 1.1-mile loop trail through the woods also provides views of the wetlands. The fourth access is on the westerly side of Prescott Street, just beyond its intersection with Robbins Street.

One of the secondary trails leaves the main trail at a large vernal pool on the westerly side midway between the kiosk and the Billings Street entrance. This secondary trail winds through moist woodlands to the end of an esker where the trail ends seasonally at wide wetlands. During the winter, however, when frozen, this wetlands can be crossed to a small island, probably originally an extension of the esker, where an unblazed loop trail traverses the island's perimeter. This secondary trail has the potential for providing a connector to Stow Conservation Land, just across the towns' boundary, in the future. When accessible, this island is a wonderful place for viewing wildlife, particularly the marsh birds that inhabit the extensive wetlands surrounding the island and the Heath Hen Meadow Brook. Deer remains, implying a coyote population, have been found on the island.

The other secondary trail leaves the main trail on the high ground at the first meadow north of the kiosk and rejoins the main trail just below the second, or lower, meadow, close to the bridge over the Heath Hen Meadow Brook. One meadow is the remains of what was formerly a Community Gardens area; the lower meadow seems to be a more natural opening, now covered with grasses and wildflowers. The short secondary trail (only 0.25 mile long) circumnavigates the two meadows and passes both through remains of earlier orchards and along portions of an old cart path. The Prescott Road access intersects this secondary trail.

Another trail, the Overlook Trail, is associated with the Heath Hen Meadow Conservation Area and its trail system. A narrow conservation corridor totaling 14.5 acres that runs between the rear of the Meadow View house lots and the extensive wetlands beyond them is connected at both ends to the Heath Hen Meadow Brook Conservation Area. The trail that runs along this corridor overlooks the extensive wetlands formed by the confluence of Heath Hen Meadow Brook and Fort Pond Brook, and offers beautiful views and fine opportunities for marsh-bird viewing. The trail is unblazed because it is not formally finished according to LSCom standards; the surface is very rough throughout its length and in some areas has unstable stones from the stonewall that separates it from the house lots behind. However, it is passable for the hardy. This trail, 0.65 mile in length, connects to the blue trail surrounding the meadows, via the Prescott Street connector, and to the cart path, also on the blue trail, from its other end.

Heath Hen Meadow is home to a variety of wildlife including beaver, skunk, raccoon, opossum,

deer, ducks, partridge, and an occasional blue heron. A stable beaver dam, in place for several years, just above the bridge, keeps the marshland's level constant and is a wonderful scenic attraction easily viewed from the bridge. The meadows and surrounding woods provide habitat for numerous species of songbirds, as well as insects and amphibians.

Projects completed by LSCom:

1. 42-foot bridge with handrails constructed to cross Heath Hen Meadow Brook, with 104 feet of attached boardwalk.
2. Conservation Land sign and map box installed at bridge access point.
3. Kiosk with map box installed at Robbins Street access point.
4. Billings Street entrance brushed out and marked.
5. Kiosks and entrance signs painted standard color.
6. Heavily overgrown trails reopened.
7. Heavy metal trash and kitchen appliances removed and wooden tree structures dismantled.
8. Wooded growth in lower meadow cut to regenerate meadow.
9. Perimeter brush cut in upper meadow.
10. New secondary trail cut on far side of meadows to form a short loop walk.
11. Winter-use trail cut across swamp to an island of high ground where a loop trail was also cut.
12. Trail cut, but ungraded, around Overlook Road development to afford views of Fort Pond Brook wetlands.
13. Connector trail cut from Overlook Trail to the conservation area's main trail system.
14. Several 8-foot bridge sections placed on the Overlook Trail.
15. Vernal pool certified.
16. All trails blazed.
17. Trails and natural features mapped using DGPS technology.

Number 9

NAME	PLATE	PARCEL	ACRES	DATE ACQ'D	S.H. #	ZONE
Jenks Land	E–2	20	23.4	12/02/75	24	ARC
	E–2	60	6.7	12/02/75	—	ARC
		Total:	30.1			

Jenks Conservation Area comprises 30 acres consisting primarily of a broad, sweeping meadow, once part of the apple orchards extensive throughout this area. To the west, however, the property is bisected by the MBTA commuter railroad line. Wedged between this railroad line and the Idylwilde Farm property is a 7-acre extension of the Jenks Land. Persons crossing the rail line to access this extension area should use caution, as trains no longer blow whistles. This conservation area and the nearby Guggins Brook Conservation Area both serve the same immediate area of West Acton, and both lie within the same aquifer protection zone. The land was purchased using town and state funds in 1975.

The main entrance to Jenks is from a small parking area just off Central Street. A barrier gate

with a small notice board and map box maintained by the Land Stewardship Committee separates the parking area from the beginning of the access trail. This access leads slightly downhill through a narrow corridor bordered with tangled shrubs and berry bushes to a concrete and stone culvert through which the Fort Pond Brook flows. The shrubby area along the corridor has been partially brushed out to provide lovely views of two ponds just downstream from the culvert. A second minor entrance to the property comes into the 7-acre parcel on the westerly side of the railroad line, from private property beyond.

The trail system at Jenks is a little unusual in that the main loop trail (yellow-blazed) leaves the access trail (just beyond the culvert) and re-connects to it just before it crosses the railroad line into the 7-acre extension. The loop trail is only 0.5 mile long and traverses the perimeter of the meadow/orchard. A secondary (blue-blazed) trail bisects the meadow area at its highest point, where a few new apple trees have been planted and several birdhouses for songbirds are located. This attractive meadow is a favorite haunt for bird-watchers. A couple of other blue-blazed trails leave the access trail on both sides of the railroad line, and lead down to the brook/pond's edge where ducks, songbirds, particularly red-winged blackbirds, and typical wetland vegetation may be observed. Some of these trails are still quite rough.

The Jenks meadow/orchard is bounded on the northeast by wetlands along Fort Pond Brook, which, after leaving the Jenks property, soon flows through the forward part of the Idylwilde farm field just beyond which it joins Guggins Brook. On the northwest, a high, quite massive stone wall separates the Jenks land from the Boxborough town line, beyond which are additional open farm fields. The 7-acre extension is noteworthy primarily for two vernal pools. A visitor must cross the railroad bed via a narrow path to access this southwesterly portion of the Jenks Conservation Area.

Projects completed by LSCom:

1. Mini-kiosk with map box installed on gate at Central St. access.
2. Gray dogwood and other woody growth cut to maintain grassland and old orchard.
3. Three apple trees planted.
4. Heavy metal trash and rubber tires removed.
5. Access trail brushed out to reveal views of Fort Pond Brook ponds and wildlife habitat.
6. 3 bluebird nesting-boxes installed.
7. Trails and natural features mapped using DGPS technology.

Number 10

Name	Plate	Parcel	Acres	Date Acq'd	S.H. #	Zone
Nagog Hill	D–4	1–3	53.89	2/2/75	29	ARC
	D–4	6	88.14	1/2/80	33	ARC
	D–4	14	6.00	1/2/80	—	ARC
	D–4	15	5.00	1/2/80	—	ARC
	D–4	21	5.00	1/2/80	—	ARC
		Total:	158.03			

Nagog Hill Conservation Area's 158 acres provide trails that are generally wide, well marked, and in good condition. Much of the area was once cleared farmland, and there are many dry-stone walls delineating the boundaries of the former farm fields. The property was acquired by the town in a series of purchases between 1975 and 1980 using both state and town funds.

Two points of access serve this conservation area. The main entrance is from Nagog Hill Road, next to the horse corral, 1 mile from Acton Center. There is a parking lot with kiosk, trail maps, and other information. The second access is via a corridor that leads from the contiguous Grassy Pond Conservation Area, located on Nagog Hill Road's westerly side. A sign, easily seen from the road across from the Grassy Pond Conservation Area parking lot, marks this entrance.

Nagog Hill's trail system consists of a 1.9-mile (yellow-blazed) main loop trail, three secondary (blue-blazed) trails, and a long access corridor between this conservation area and the contiguous Grassy Pond Conservation Area. A long narrow wetlands area in the center of the property is drained by two seasonal streams. The main loop trail circumnavigates these wetlands and the perimeter of the large rectangular portion of the property that extends almost to Nagog Hill Pond. This loop trail traverses a large open meadow, a majestic white pine grove, a mixed forest, as well as crossing the two seasonal streams and several wetlands edges. The land is slightly hilly with mild ups and downs along many portions of the trail.

Two of the secondary trails bisect the main loop near its mid-section, and the third is a short side trail that leaves and rejoins the main trail in the pine grove. The two bisecting trails run roughly parallel to each other and cut the length of the walk around the loop trail down to about half. Each crosses one of the small streams. Several boardwalk/bridges make the crossing of wet areas easily negotiable. The long access corridor (red-blazed) to Grassy Pond is uphill from the main loop trail and passes through remains of an old orchard before entering a mixed forest.

Special features to look for include a large glacial erratic, called Egg Rock, on the south side of the main trail just north of the most easterly stream crossing. A large vernal pool just south of the main trail where it crosses the open field beyond the horse corral is home to many species that breed only in such habitats. At the furthest end of the main trail there is a short spur trail, leading off conservation land, which takes a hiker to the edge of Nagog Pond where there are beautiful views. Nagog Pond is one of the Commonwealth's 'great ponds', as defined under the State Statutes. Rights to this pond, relinquished by Acton in 1886, were given to the Town of Concord which continues to use it as a water supply.

At a junction marked with a wooden sign, the corridor from Grassy Pond intersects the main trail, which then heads in a southerly direction through very different habitat, characterized by low shrubs, berry bushes, small meadows, and an old apple orchard with entwining bittersweet choking several trees. Utilizing the corridor, an ambitious hiker can make a circuit of the two properties that is over 3 miles long. One can either retrace the corridor, or walk along Nagog Hill Road, back to the Nagog Hill Conservation Area parking lot, depending on one's preference. This extended loop through the two conservation areas may be walked starting at either parking lot. See the Grassy Pond write-up.

Projects completed by LSCom:

1. Conservation Land sign installed at main entrance.
2. Map box installed on kiosk.
3. Parking lot brushed out and cleaned up.
4. Woodchips applied to wet section of Grassy Pond corridor near Nagog Hill Rd.
5. Steep trail on hillside relocated to a switchback to prevent soil erosion.
6. New trail cut on easterly side of parcel from an existing trail near bridge as far as the Water District land near Nagog Pond to provide a larger loop trail.
7. Stepping stones placed along wet section of above trail in lieu of boardwalk.
8. Rotted boards on boardwalk/bridge crossing on one small stream replaced.
9. 40-foot ramp added to existing high boardwalk near wet meadow for easier access.
10. Fire rings destroyed and rocks re-placed on stone walls.
11. Metal trash removed.
12. 5 bluebird nesting-boxes installed.
13. All trails blazed.
14. Trails and natural features mapped using DGPS technology.

Number 11

Name	Plate	Parcel	Acres	Date Acq'd	S.H. #	Zone
Nashoba Brook	D–5	6	1.80	11/22/71	—	PCRC
	D–5	11–18	.53	10/27/89	—	PCRC
	D–5	11–33	2.26	9/26/88	—	PCRC
	D–5	22	112.0	11/10/87	—	PCRC
	D–5	25	6.70	11/30/89	—	PCRC
		Total:	123.3			

The Nashoba Brook Conservation Area's 123 acres were donated to the town beginning in 1987 as part of the Arbors cluster development approval process, and as such they are exempt from further development. This conservation area is one of a group of three contiguous conservation lands that now comprise a total of 413 acres. Each of the three conservation areas - Nashoba Brook, Spring Hill, and Camp Acton-has its own yellow-blazed loop trail with separate entrances.

Two short connecters (red-blazed) link Nashoba Brook Conservation Area to the abutting Spring Hill Conservation Area, and, on the more southerly side of the Spring Hill loop trail, two additional connectors, also red-blazed, link Spring Hill to Camp Acton's loop trail. Please refer to the Spring Hill and Camp Acton descriptions for further details of those conservation areas.

The two major entrances to the Nashoba Brook Conservation Area are from Davis Road, off Rt. 2A, and from Wheeler Lane, off Rt. 27. Both have parking. A well-used minor access from Milldam Road across from the Northbriar Road intersection, off Route 27, is marked with an entrance sign and joins the loop trail close to the downstream bridge.

The main loop trail (yellow-blazed) parallels the brook on both its sides, crossing it twice. Although both sides of the loop trail may be accessed from the Wheeler Lane entrance because of the Wheeler Lane bridge, this entrance leads easily into the northwesterly side of the loop. The Davis Road entrance connects to the southeasterly side. The round trip is approximately 2 miles in length. On the Davis Road side of the brook, a secondary (blue-blazed) trail runs close to the water for a short distance and gives access to the Pencil Factory Site and its educational kiosk. Two red-blazed connector trails leave the loop trail a short distance from the Davis Road entrance to link this property with the Spring Hill loop trail.

After leaving the Wheeler Lane parking area beside an old cellar hole, the yellow trail passes

through an avenue with over-arching trees, that is defined by two parallel old dry-stone walls. The trail soon passes beside a wetlands on a 180-foot boardwalk constructed in 1997 by LSCom volunteers with a grant from the state's Department of Environmental Management (DEM). It then crosses the Nashoba Brook on a sturdy footbridge built with the same grant and follows along the southeasterly bank of the brook to the site of a 19th-century pencil factory, where a four-sided kiosk displays information about the history and ecology of the area. 0.4 mile beyond the kiosk, the trail arrives at the Davis Road parking area.

The loop trail, after passing its connection with the Davis Road entrance, follows along the southeasterly side of the brook through a mixed forest, crossing several wet areas on short boardwalks or stepping stones, and passing the two junctions with the connectors to the Spring Hill Conservation Area. The main trail then descends to a wide footbridge across the upper Nashoba Brook, bringing the hiker back to the Wheeler Lane parking lot just beyond.

Across the small meadow at the parking area, another, shorter bridge over a stone sluiceway provides access to the old Robbins Mill site, Robbins Mill Pond, and dam. The stonework in this area is well worth appreciating.

This conservation area is probably the most scenic and varied of all the town's conservation lands, due in large part to the mostly unspoiled Nashoba Brook that runs through the land from north to south. The exceptional stonework, including the foundations of early mills, two earth fill dams, many stone walls, and the enigmatic corbelled stone chamber built into a hillside, together with a variety of riverine and upland habitats, make this conservation area a jewel of its kind.

Projects completed by LSCom:

1. 55-foot bridge constructed across lower Nashoba Book under DEM grant.
2. 180-foot boardwalk constructed along north side of Nashoba Brook on edge of wetlands, under DEM grant.
3. 8-foot boardwalk installed over wet area.
4. Pencil Factory Site kiosk constructed as part of DEM grant.
5. Pencil Factory Site brushed out, cleaned up, and masonry exposed.
6. Mill stone and turbine wheel artifacts retrieved from Brook.
7. Map boxes installed on Davis Rd. and Wheeler Lane kiosks.

8. Kiosks repainted.
9. Wheeler Lane masonry-lined avenue to the Milldam boardwalk trail brushed-out.
10. Thorny overgrowth in small field at Davis Rd. access brushed-out.
11. Ramps installed on an existing boardwalk.
12. Old bridge across Nashoba Brook at Wheeler Lane replaced with one having railings.
13. Bypass trail cut at far end of Wheeler Lane bridge around wet, eroded cart path.
14. Stepping stones placed to cross shallow stream.
15. Drainage ditch installed in area with chronic wetness and spanned with 3-foot bridge.
16. All trails blazed, with connectors to Spring Hill Conservation land in red.
17. Trails and natural and historic features mapped using DGPS technology.

Number 12

Name	Plate	Parcel	Acres	Date Acq'd	S.H. #	Zone
Pratt's Brook	H–3	237	26.54	4/18/80	32	ARC
	I–3	2	31.00	4/18/80	32	ARC
	I–3	5	1.75	10/20/70	—	ARC
	I–3	20	.97	10/20/70	—	ARC
		Total:	60.26			

Pratt's Brook Conservation Area, located in South Acton in the area between Parker Street and High Street, now has three accesses. The most heavily used is the Parker Street entrance, with parking near the railroad crossing. A second access is from the large parking area at the end of Brewster Lane, off High Street. A minor access at the end of Valley Road, also off High Street, has recently been opened.

This conservation area, formerly belonging to Frank and Zillah Averett, was purchased in 1980 for $88,000 through a combination of town and state funds. It comprises 60 acres of wetlands, forested uplands, a 'barrens', unique to this part of Massachusetts, the brook, and a small pond and vernal pool. Pratt's Brook bisects the property, entering it as a briskly flowing stream that soon spreads out into a broad wetlands area with multiple channels before plunging down a rocky slope to join with Fort Pond Brook just beyond the conservation land's southeastern boundary. A smaller stream, the outlet from Tenney Circle Pond, meanders across the southern portion.

The parcel is suitable for hiking and cross-country skiing as well as enjoyment of several different habitats. South of the wetlands an area of uplands, forested with white pine, red oak and pitch pine and characterized by a series of hilly shoulders that reach down to the wetlands, is most suitable for cross-country skiing. Adjacent to the Brewster Lane parking area, a 2-acre park for enjoyment by residents of the contiguous Audubon senior community has recently been established. This area has been enhanced with the help of Boy Scout Eagle projects by the introduction of wild grasses, native wildflowers and ground covers, an elm tree for shade, birdhouses, and rustic benches. An attractive, gently graded, and woodchip covered trail has been cut leading down into the open 'barrens' area.

The parcel is now provided with a 1.4-mile (yellow-blazed) loop trail that roughly follows the

perimeter of the parcel, crossing Pratt's Brook twice. Just south of the 'barrens', a short secondary trail (blue-blazed) bisects the main loop. Another secondary trail, leading past the small pond at the edge of the railroad line, past a vernal pool, and then steeply up through mixed hardwoods, was cut in 1997. The unique barrens area, covered with blueberry bushes and surrounded by pitch pine and red oak, is being managed by LSCom and other volunteers against encroachment of succession growth, primarily gray birch.

There are now kiosks at both major entrances, two boardwalks across wet sections of trail, three small bridges, and a repaired stone-slab crossing of lower Pratt's Brook. Heavy trash, including a bathtub, an automobile in the pond, together with fire rings, have all been removed.

Projects completed by LSCom:

1. New kiosk with map box installed at Parker St. access.
2. Chunks of tarmac and old bridge debris removed from Parker St. access.
3. Map box installed at Brewster Lane access.
4. Brewster Lane kiosk re-painted standard color.
5. Brewster Lane parking area brushed out and debris removed.
6. Portion of loop trail on south side of parcel relocated from lowland to upland to avoid wet areas.
7. Access trail cut from Broadview Ave. to relocated loop trail.
8. Conservation Land sign installed at Broadview Ave. entrance.
9. New secondary trail cut between stone-slab ford, past scenic pond, to rejoin main loop just east of Brewster Lane kiosk.
10. Trail through chronic wet area hardened with corduroy and wood chips.
11. Bridge across upper Pratt's Brook repaired and leveled.
12. At same crossing, trail regraded and secured against erosion from riverbed with large fallen tree trunks.
13. Household trash dump removed and auto winched out of pond. Fire rings destroyed.
14. Blueberry barrens cut over to remove invasive gray birch, and adjacent stand of pitch pine brushed out.
15. Small 1.5 acre park adjacent to Brewster Lane parking area developed for Senior community use by Eagle Scout projects. Brushed out, benches and wildflower garden installed.
16. Old stone lower brook crossing repaired for structural integrity and safety. Downstream debris removed.
17. Two bluebird houses installed.
18. All trails blazed.
19. Trails and natural features mapped using DGPS technology.

Number 13 Name	Plate	Parcel	Acres	Date Acq'd	S.H. #	Zone
Spring Hill	D–5	23	2.43	8/19/71	10	ARC
	D–5	24	7.99	6/10/71	11	ARC
	D–5	29	36.20	11/22/71	—	ARC
	D–5	30	9.67	5/31/67	3	ARC
	D–5	30–1	.45	5/31/67	3	ARC
	D–5	35	49.65	11/22/71	—	ARC
	D–5	36	5.82	12/27/66	—	ARC
	D–5	37	7.94	11/1/71	13	ARC
	D–5	37–1	7.92	11/1/71	13	ARC
	D–5	38	2.34	6/10/71	11	ARC
	E–5	4	13.37	11/22/67	3	ARC
	E–5	45	22.76	9/19/66	2	ARC
	E–5	7	17.65	5/31/67	3	ARC
Hearthstone Hill	E–5	16–2	31.70	5/19/95	—	ARC
		Total:	215.89			

Spring Hill Conservation Area's 184 acres, acquired by the Town of Acton between 1966 and 1995 through a series of purchases and donations, are home to a variety of wildlife, natural features, and recreational opportunities. The major entrance is along a short access from the Spring Hill Road cul-de-sac, off Pope Road. A secondary (red-blazed) access to the Spring Hill loop trail (yellow-blazed) enters through the Hearthstone Hill Land from its entrance on Jay Lane, off Strawberry Hill Road.

Spring Hill's main perimeter trail, used extensively by hikers and cross-country skiers, is 2.5 miles long. In addition to the two accesses already mentioned, there are four (red-blazed) connectors between this loop trail and the two contiguous conservation lands described elsewhere within this section. Two connectors go between Spring Hill and Nashoba Brook's loop trail to the northeast, and two other connectors go between Spring Hill and the Camp Acton loop trail to the south. Please refer to the descriptions for both Nashoba Brook and Camp Acton conservation areas for more information about their entrances and trail systems. Within the Spring Hill loop trail, a secondary (blue-blazed) trail, 0.2-mile long, crosses between inner and outer curves of the main loop trail, thereby allowing for a shorter traverse of the Spring Hill property.

Spring Hill is covered with a deciduous forest of mostly red and white oak, red maple, and black and white birch. A scattering of beech, larch, hemlock, and white pine are found throughout. On the forest floor a distinct community of ground covers and low-story vegetation exists. These include mosses, partridgeberry, princess pine, and several other members of the clubmoss family, all of which are indigenous to wet or heavily shaded areas. The under-story vegetation is dominated by high-bush blueberry and swamp azalea.

The Hearthstone Hill Land, now an integral part of Spring Hill's southeast corner, is a 32-acre parcel extensively covered with a hemlock swamp. The Hearthstone Hill access trail, 1.0 mile in length, leads from the cul-de-sac at the end of Jay Lane, off Strawberry Hill Road, and skirts the swamp along its westerly edge. The trail, which follows a predominantly upland area through a spectacular stand of beech extending down into the hemlock lowlands, crosses a boardwalk in a low area before joining the main Spring Hill loop trail close to its main entrance. The entire Hearthstone Hill Land is contained within a rectilinear stone wall.

Projects completed by LSCom:

1. New kiosk with map box installed at Spring Hill Road cul-de-sac access.
2. Kiosk re-painted standard color.
3. New secondary trail cut to bisect main loop trail and provide a shorter loop hike.
4. Disused trails brushed out to provide wider pathway.
5. Old (inaccurate) mileage signs removed from trees..
6. Portion of loop trail through a perennially wet and eroded area rerouted to drier upland.
7. Trail configuration changed where loop trail intersects with Camp Acton trail to provide connectors to newly designed Camp Acton loop trail.
8. All trails blazed.
9. Trails and natural features mapped using DGPS technology.
10. Separate blazing for the Bay Circuit Trail, which passes through Spring Hill, finished

Number 14

Name	Plate	Parcel	Acres	Date Acq'd	S.H. #	Zone
Stoneymeade	F–5	12–11	44.51	3/24/89	—	ARC
		Total:	44.51			

Stoneymeade Conservation Area was donated to the town in 1989. Located off Pope Road in East Acton, this conservation area borders conservation land in the town of Concord. Stoneymeade's 44.5 acres preserves one of the largest remaining open fields in Acton, but it is also a mix of fields, small streams, and bordering woods. The distant vistas seen from the main field encompass a small pond surrounded by marshy growth, more fields beyond, a horse farm with corrals, and forestland on the far edge. Much of what can be seen here lies in Concord, but the boundary between the two towns is seamless, enabling both towns to enjoy this tranquil open area. On the Acton side, the field is kept open by mowing late each fall to prevent forest succession from occurring.

Stoneymeade's main entrance is from the far side of Stoneymeade Way, off Pope Road, where a prominent sign marks the beginning of an access trail. A short walk along this pleasant, tree-shaded path brings one to the large open field that makes up most of the Stoneymeade Conservation Area. A large, stately oak tree surrounded by ledge stands in the center of the field. The other access is from the town of Concord. The distance from the entrance on Stoneymeade Way to the boundary with Concord is only 0.4 mile.

The trail to the north by the horse farm is the start of 'The Hunt.' This trail crosses the

Stoneymeade field and enters the forest to the east, where it joins Concord's Spencer Brook Trail and eventually enters Estabrook Woods Conservation Land, also in Concord. In the Acton portion the paths are not blazed, as the land is so open,. The footpath is easily seen and followed through the meadow vegetation. Except for the access in to the field, there are no trails through the woods on the Acton side.

Stoneymeade Conservation Area is home to many species of birds. Among those that can be observed raising their young here are scarlet tanagers, red-winged blackbirds down beside the marshy margin of the pond, and tree swallows. Year-round resident species such as chickadees, robins, and titmice also make Stoneymeade their summer home. The Acton Bluebird Recovery Group's concerted efforts to encourage bluebirds to reestablish after years of decline resulted in a successful nesting pair at Stoneymeade in 1999. Several pairs of bluebirds now nest here annually, as well as a pair of bobolinks.

Projects completed by LSCom:

1. 4 bluebird nesting-boxes installed.
2. Old automobile and other heavy refuse removed.
3. Access trail brushed out and neighborhood trash removed.
4. Brushing out of field's perimeter to hold back the creeping succession growth
5. Area mapped using DGPS equipment

Number 15

Name	Plate	Parcel	Acres	Date Acq'd	S.H. #	Zone
Wetherbee Land	G–4	173	72.68	2/8/82	—	ARC
		Total:	72.68			

The Wetherbee Conservation Land, located in East Acton, totals just over 72 acres. The property is bounded by Wetherbee Street to the east, Route 2 to the south, state property/Berry Lane to the west and Alcott Street/Moritz Land to the north. It currently has a single entrance, which is on Wetherbee Street where it runs beside the farm field. Parking is available along the western edge of this road.

This conservation land was purchased from the state in 1982 for $108,000. The state acquired it in 1898 from the Heywood/Sellors family; before this, it had been part of the Wetherbee Farm. Wetherbee Land's eastern section is the only actively farmed agricultural field that belongs to the town of Acton. This gently rolling terrain is used by the state for rotating silage crops and by the State Police for the exercise of the horses stabled across Wetherbee Street. Just northwest of the farm field is a small, sloping, short-grass meadow, accented with crab apple trees. South and below this meadow lies a marshy habitat that in turn feeds a tiny north/south stream and collection-pool that separate the woods from the field's edge. The property's back section, to the west, is wooded and typical of New England upland secondary growth. It features red maple, black and red oak, and white pine, with a scattering of ash, sassafras, and hawthorn. In the woods, old stone walls still define early boundaries, one of these, running north/south, is ancient, the others more recent.

There is no improved trail system in this conservation area at present, and hence, no blazing has yet been done. However, a bumpy cart trail skirts one side of the agricultural field in a westerly direction which leads to the wooded area. The wooded remainder is usable if one is willing to walk along a disused path that leads through several different habitats, including a stand of poplar, or eastern aspen. This former trail eventually reaches a Route 2 overlook, where the four corners farm fields provide a wide pastoral vista. Improvements to the trail remainders are in progress.

The area generally is suitable for cross-country skiing, as well as walking, horseback riding, snow shoeing, and tracking/birding. After harvest, the fields themselves are used for a variety of activities, including Boy Scout meets, dog obedience training, rocketry contests, kite-flying, sky-watching/photography, and star-gazing during unusual celestial events.

Projects completed by LSCom:

1. Woods trail discovery/reclamation begun
2. Back-meadow reclamation underway; encroaching oak and white pine removed.
3. Wildlife-cover brush piles created.
4. Broken signage discarded; one sign repaired and repainted.
5. 2 bluebird nesting-boxes installed. Nine eastern bluebirds fledged to date.
6. New trail system flagged.
7. Area mapped using DGPS equipment

Number 16

Name	Plate	Parcel	Acres	Date Acq'd	S.H. #	Zone
Will's Hole/Town Forest	B–5	34	49.00	12/31/43	—	ARC
	B–5	33	20.80	10/08/69	5	ARC
	C–5	10–1	3.25	8/03/71	8	ARC
Capt. Handley Road	**C–5**	**10**	**15.07**	**1/01/99**	**—**	**ARC**
	C–5	**10–18**	**2.03**	**1/01/99**	**—**	**ARC**
		Total:	90.15			ARC

The Wills Hole Conservation Area and the contiguous Town Forest, located in North Acton near NARA Park, have been combined into one conservation area that comprises 90 acres. The 49 acres of the Town Forest was purchased in 1943 for $490 and was intended for the harvesting of timber and firewood by Acton residents. Covered with stands of red oak, white oak, red maple, and white pine, the Forest's only unusual features are its outcrops of rock that seem to underlie much of the local region. Abutting properties contain former quarries. The remaining property includes 24 acres assembled from two land parcels purchased in 1969 and 1971 for conservation purposes. In 1999, the Captain Handley Road subdivision granted another 17 acres along its perimeter which provides a conservation corridor from Harris Road in to the Wills Hole area.

In addition to the Captain Handley Road entrance, there are two other major entrances, one from Quarry Road, off Route 27, and the other from the Nagog Park Drive cul-de-sac, off Route 2A. The 1.9-mile main loop (yellow-blazed) trail is easily accessible from this cul-de-sac and provides a direct and interesting route to Wills Hole pond and quaking bog, an area characterized by unusual landforms and flora. The approach trail to the bog traverses the top of a glacial esker, a sand and gravel ridge deposited by the melt water stream that flowed beneath a melting Ice Age glacier. The trail along this narrow, raised landform might be mistaken for an abandoned roadway or railroad bed, but its curved path signifies its glacial origin.

The esker is also a drainage divide—water on its northerly side flows eastward to Nonset Brook; water to its south flows southward to Wills Hole Brook. Both brooks empty eventually into Nashoba Brook. The esker terminates at a small hill covered with eastern white pine. Immediately to the west, is a 170-foot boardwalk, completed in the summer of 2000 by LSCom volunteers, that leads to the edge of the open water of Wills Hole bog.

Wills Hole is a classic quaking bog. At its center, it is an open pond, but ringing the open water is a mat of floating sphagnum moss. The sphagnum mat is in turn ringed by a more upland zone of dense shrubs and trees. A quaking bog is an unusual environment that supports unique plant life. The bog waters typically are acidic and poor in the nutrients most plants need. The lack of nutrients fosters the growth of carnivorous plants that trap and digest insects and small animals to obtain nutrients they require for growth. Plants of this type found at Wills Hole bog include pitcher plant and sundew. Other non-carnivorous plants on the sphagnum mat include American cranberry, leatherleaf, sheep laurel, and swamp loosestrife. Just a short distance upland from the sphagnum mat, shrubs and small trees, including black spruce, North American tamarack, and swamp azalea, are found. All these plants may be seen from the boardwalk.

Beyond the white pine grove adjoining the bog's boardwalk, the loop trail continues its circuit of the combined conservation areas, passing for a short distance along a paved trail at the perimeter of a new subdivision. Eventually the trail passes close to Quarry Road on the other side of which is NARA Park. At the Quarry Road entrance, a woods road transects the property directly to the Nagog Park Drive entrance, where overflow parking is available for large events at NARA Park. The loop trail does continue, however, on its roughly circular route beyond the woods road and eventually brings the hiker back to the Nagog Park Drive entrance. One secondary (blue-blazed) trail through the interior of the property bisects the loop trail for a shorter walk which follows along the edge of the wetlands that make up a goodly portion of the interior.

Projects completed by LSCom:

1. 170-foot boardwalk constructed into the Will's Hole bog.
2. Old boardwalk sections removed and recycled where their condition permitted reuse.
3. Corridor on either side of boardwalk brushed out and cleaned up.
4. Conservation Land sign and kiosk with map box installed at Quarry Rd. access.
5. Nagog Park Rd. kiosk repainted standard color and supplied with map box.
6. New trails cut in two places to form perimeter loop trail around the two parcels.
7. All trails blazed.
8. Trails and natural features mapped using DGPS technology.

Other Conservation Lands

The following lands were either purchased primarily for wetlands protection or given as gifts for open space enhancement. In the last five years the town has received 13 acres of open space in this category from Marshall Crossing, a cluster development in the north section of town. Eventually, some of these parcels may become connected to one another or to existing conservation areas as other lands are acquired. This will be the case in the next few years as donations are formalized in the Great Meadow Area, located off Massachusetts Avenue, around Fort Pond Brook.

Name	Plate	Parcel	Acres	Date Acq'd	S.H. #	Zone
915 Main Street	C–5	9	.65	10/20/70	6	ARC
Marshall Crossing	**C–6**	**9**	**12.86**	**5/15/97**	**—**	**ARC**
65-67 Newtown Road	E–3	80	15.30	1/21/76	25	ARC
36 Washington Drive	E–3	87–54	.56	4/8/74	—	ARC
22 Musket Drive (rear)	E–3	87–64	5.50	4/8/74	—	ARC
39 Flint Road (rear)	F–2	149	3.00	4/4/89	—	ARC
492-496R Mass. Avenue	F–2	122	4.50	6/8/93	—	ARC
488-492R Mass. Avenue	F–2	128	6.00	10/2/87	—	ARC
482-500R Mass. Avenue	F–2	149	3.00	10/27/89	—	ARC
494-500R Mass. Avenue	F–2	150	1.50	6/8/93	—	ARC
482-500R Mass. Avenue	F–2	151	8.00	10/2/87	—	ARC
2R Minot Avenue	F–4	47–1	.69	3/28/84	—	ARC
36 Tuttle Drive	G–2	123–37	.25	1/23/79	—	ARC
41 Tuttle Drive	G–2	123–125	.91	1/23/79	—	ARC
86–104 Central Street	G–2	178	9.76	6/7/71	7	ARC
Phinney Meadow	G–2	195	3.00	2/14/80	—	ARC
43 Central Street	G–2A	17–1	1.13	12/23/75	26	ARC
55 Central Street	G–2A	17	30.30	12/23/75	26	ARC
53-73 Stow Street	H–2	41	4.7	5/7/92	—	R–2
46-54 Martin Street	H–2A	41–3	.0.5	8/31/93	—	R–2
Robinwood Road (end)	H–3	38	1.57	12/6/85	—	ARC
11 Sandy Drive	H–3	80–6	7.21	12/6/85	—	ARC
66 Conant Street	I–2	71	17.76	12/28/78	—	ARC
14R Conant Street	I–3	148	10.00	12/27/67	—	ARC
209 Parker Street (rear)	I–3	132–1	8.63	7/21/70	—	ARC
14R Robert Road	I–3	132–29	.10	2/25/82	—	ARC
		TOTAL	**156.88**			

2. The Acton Conservation Trust and Public Land Conservation Restrictions

History and Activities of the Acton Conservation Trust

The Acton Conservation Trust (ACT) was established in 1962 to protect Acton's natural resources and to foster public involvement in environmental issues. In 1998, ACT redirected its focus towards land protection in Acton; the Trust became a member of the Massachusetts Land Trust Alliance and has been managed as a land trust for the past three years. Since 1998, Trust activities have been focused on three areas: Land acquisition, Land Preservation and Education. .

Land Acquisition

Beginning in December 1998, the Trust spearheaded an effort to protect a tract of 230 plus acres abutting Robbins Mill Pond. This land, known as the Robbins Mill Pond land, was listed as a high priority for protection in the last OSRP, as it abuts approximately 400 acres of existing town conservation land, including the Nashoba Brook, Spring Hill, Camp Acton and Hearthstone Hill conservation areas. At the request of the landowner, ACT partnered with Sudbury Valley Trustees (SVT) and Trust for Public Lands to present a proposal to the town. The proposal included recreation fields as well as conservation areas, and although overwhelmingly approved by Town Meeting, was defeated by a town-wide debt-exclusion ballot vote in May 2000.

The Trust continues to talk with other landowners about various methods of land protection and looks for opportunities to purchase land for conservation.

Land Preservation

The most reliable and permanent method for protecting land from future development is to create a Conservation Restriction (CR) on the land. Unlike deeds, a conservation restriction stays with the property forever and cannot be modified by future owners. Conservation restrictions are in wide use in our neighboring towns, with Westford, Carlisle and Concord all having over 200 acres permanently protected this way. In the past, Acton has not used CR's , but the Trust is actively pursuing opportunities in this area. In 2001, ACT and SVT received a gift of a conservation restriction from Mary and Jim Donald. The land protected abuts the Arboretum and will benefit the adjacent conservation area by providing protected wildlife access to the perennial and intermittent streams and their adjacent wetlands, buffering the quaking bog and peat land ecosystems from development.

In addition, ACT has been working with various neighborhood groups in town on preserving specific parcels. ACT's Neighborhood Advocacy checklist provides a proven list of tasks to protect land. Neighborhood Advocacy is meant to empower individuals to proactively learn about open land in their neighborhood and get neighbors involved in preserving such land.

Education

ACT has been working hard in the past four years to provide educational forums on open space issues. Forums have been held on the following topics:

- Cluster Zoning - Perspectives from town boards and staff, including Conservation, Planning,

Health, and Water. Held in 1999.

- Conservation Restrictions - How do they work? Presented by David Hardt in Oct. 2000.

- Community Preservation Act - Will it work in Acton? Panel presentation in Oct. 2001.

Additional educational activities include regular participation in Earth Day and OctoberFest, where members of the Trust talk with townspeople about the Neighborhood Advocacy process and other conservation related issues. The Trust also sponsors the state-wide Biodiversity Program held each June. With the Conservation Commission, ACT sponsored a series of walks and biological surveys throughout town. Finally, the Trust maintains a website and an email distribution list to inform conservation minded citizens of environmental meetings, seminars and other events which may be of interest.

Public Land Conservation Restrictions

The Donald Land

James and Mary Donald granted a CR to SVT and ACT on an 11 acre parcel which abuts the 55 acre, town-owned Arboretum and conservation land. This CR was recorded at the Middlesex South Registry of Deeds on December 28th, 2001. The land was donated to the Town of Acton; this gift was accepted at the 2002 town meeting.

The parcel contains diverse upland and wetland wildlife habitat with a varied topography and glacial features, including an esker. The parcel also provides a naturally vegetated watershed containing intermittent and perennial tributaries to Fort Pond Brook, allowing for natural flood control and groundwater recharge.

3. Athletic Fields and Town Playgrounds

Athletic Fields

The Town of Acton provides approximately 29 acres of town-owned athletic fields, in addition to the facilities provided by the local and regional schools that are frequently used for non-school activities. The location, sizes, and most common uses of these fields are shown below. Most areas are suited for a variety of athletic uses, with some areas capable of supporting multiple simultaneous uses. Recreation needs for more athletic fields are discussed in detail in Section 7B. The Recreation Department's comprehensive five-year plan is presented in Section 9.

Ref. #	Field Name	Acreage	Playground	Field Uses
1.	Jones Field	3	Yes	Baseball/Soccer
2.	Woodlawn Field	2	No	Soccer
3.	Hart Field	2	No	Baseball
4.	MacPherson	1	No	Baseball
5.	Great Hill	2.5	Yes	Soccer
6.	Elm Street Field	2	Yes	Softball/Football/Tennis/Soccer
7.	2A/27	2	Yes	2 Baseball
8.	School Street	4	No	3 Soccer
9.	Little Great Hill Field	.5	No	Soccer
10.	Goward Field (behind the Library)	1.69	Yes	None
11.	Gardner Field	1.6	Yes	Field closed in 2000 due to lack of parking
12.	NARA	6.5	No	Softball/3 Soccer
	Total Acreage	**28.79**		

Maintenance of the town athletic fields is the responsibility of the Recreation/Natural Resources Department. Field scheduling is the responsibility of the Recreation Department. In 1999, the town reinstated routine trash removal at the fields. The town provides weekly mowing for the athletic fields and annual aeration. Fields are fertilized using funds accumulated from field reservations or donations from the leagues.

In addition to the athletic league use of fields, many community groups and companies reserve the athletic areas for games and picnics. Athletic fields, and their associated picnic and playground areas, are also intensively used by families and groups of children.

Overview of Field Problems

Jones Field and Great Hill Field are often too wet in the spring to be playable. In 2000 Gardner field was taken offline due to parking issues Goward, Hart, MacPherson and Little Great Hill

fields are all limited in their utility due to their size and geometry. In each case, only certain levels of play are possible. The difficulty of parking near some of the fields makes them less desirable for their targeted age groups as the very young players are required to walk on the side of, or across, busy town streets.

Due to budget restraints, maintenance of athletic fields has become a problem. The town has limited lining of athletic fields, and in recent years the leagues have had to provide their own silt or stone mix and amenities. Youth Soccer also frequently re-sods worn areas of fields. The leagues that use our illuminated fields at Elm Street and 2A/27 provide their own funding for lights.

Field Descriptions

1. JONES FIELD

The focus on Jones Field during the past five years has been to address safety issues. To that end, in 1999, the Recreation Department placed a large safety net between the ball field and playground area to prevent balls hitting children while they are using the play structures. In addition, infield improvements have been made and new bleachers installed to replace the ones that did not meet safety codes.

2. WOODLAWN FIELD

Woodlawn Field is leased under a ten-year agreement (due to expire in 2002) from the Cemetery Commission, and eventually will be used for burial purposes.

This field has undergone some turf maintenance over the past five years in an effort to produce a more stable playing surface. Installation of an irrigation system and resodding of high traffic areas has produced a field that can withstand the daily demands placed upon it. In recent winters the Recreation Department has created two large skating rinks on the field.

3. HART FIELD

During the past five years routine maintenance has taken place at Hart Field.

4. MACPHERSON FIELD

Routine maintenance has been the focus at this field during the past 5 years. In 2001 an emergency call box was placed at this field and major improvements to the roadway leading to the field have been completed. This has allowed for better access to the field for vehicles and pedestrian traffic.

5. GREAT HILL FIELD AND #9. LITTLE GREAT HILL FIELD

In the past five years the Recreation Department has brought Little Great Hill online and completed a boardwalk connecting this field to the parking lot. Field use was studied and a determination was made to eliminate the Little League field and increase the soccer field area at the Great Hill site. In addition the parking lot was resurfaced.

6. ELM STREET FIELD

Elm Street Field has undergone a major renovation project during the past five years. The playground has been repaired, wood safety fiber surfacing has been added and dangerous equipment has either been replaced or removed. The playground was also reoriented to the site to accommodate the addition of a small size soccer field. The tennis court area has been completely redone, including new fencing, court surfacing, new nets and a new practice backboard. The softball field has seen the replacement of backstop and player fencing areas. In addition new bleachers were provided as well as permanent team benches. Some electrical work was also done at this site to ensure the safe use of the field lights.

7. 2A/27 – VETERANS MEMORIAL FIELD

During the past five years the field at 2A/27 has undergone a dramatic renovation process. What once was a soccer/little league field has now turned into a fabulous double Little League complex complete with our own "Green Monster". The renovation of this field included the addition of two Little League fields, lighting, scoreboards, fencing, starting up the irrigation system, seating areas and handicapped access. The space is now a highly utilized area.

8. SCHOOL STREET

This site contains a heavily used soccer field, although in the past five years little has been done to maintain the field, as the site is under the jurisdiction of the Commonwealth of Massachusetts Corrections System. This field is on a ten-year lease from the Department of Corrections, in return for that agency's use of 25 acres of the Wetherbee Conservation Land. These fields are difficult to keep in playable condition because the soil is sandy with a gravel base and does not retain water. The proximity of the fields to Acton Water District wells (at 315 School Street and Lawsbrook Road) and an aeration tower restricts the Town or the sports leagues from irrigating the fields. The fields must be "rested" as much as field demand allows in order to retain a minimum amount of vegetation.

10. GOWARD PLAYGROUND

In 1993 the Acton Children's Playground Committee, Inc., a citizen's group, successfully raised funds and used town and citizen labor to create a playground geared for ages 1-6 at Goward Field. This was a preliminary response to the Master Plan objective to "provide recreational opportunities for young children." In 1999, surfacing upgrades were made at this playground to improve handicapped access and increase safety.

In the last five years, many renovations have been made to the playground at Goward Field, due in large part, to the library renovation project. In the past five years attempts have been made to provide better handicap access to the play equipment. In addition safety issues concerning outdated equipment and fall zones have been addressed and resolved. The basketball court has also been improved to provide a small play area.

11. GARDNER PLAYGROUND

Over the past five years attempts have been made to improve the access to this neighborhood playground. Due to the popularity of this playground, access issues have become paramount. To address some of the parking concerns, all soccer games and practices were restricted from this

field two years ago. In 2001 two new play structures were installed complete with handicapped accessible wood safety fiber surfacing.

12. NARA FIELDS

Refer to Section 5B5 for a detailed description of all of the amenities at NARA Park. In 1999 the NARA Park fields were brought online. The 6.5 acres of fields contain one softball diamond and two full size soccer fields. Two 500-foot deep bedrock wells were drilled to provide field irrigation. A controlled fertilizer program is used to mitigate fertilizer contamination of the pond and wetlands.

The NARA fields are used quite extensively. On any given Saturday, the two soccer fields are broken down into five or six play areas in order to allow multiple teams to practice simultaneously. The Acton Boxborough Regional High School cross country program also uses the fields in the fall of each year.

4. School Department Land

The Acton-Boxborough Regional School District owns 66.6 acres of land, and the Acton School District controls (the land is under town ownership) 121.77 acres of land. Although there are buildings on almost all of these properties, the school campuses and grounds provide valuable open space.

One parcel of School Department land is not associated with an actual school building and holds value as open space. This parcel is located on Arlington Street, north of Route 2, and is 24.92 acres in size (Town Atlas E-3, Parcel 8). This land was acquired in 1962 as a potential school site, although the soils were unsuitable for construction.

SCHOOL PLAYGROUNDS	LOCATIONS
Conant School	Taylor Road
Gates School	Spruce Street
Douglas School	Elm Street
McCarthy-Towne School	Massachusetts Avenue
Merriam School	Charter Road

5. Water Based Recreation

This section provides a review of the water-based recreation areas in Acton. In the last five years, the major accomplishment in improving water-based recreation was the opening of NARA Park, which includes a 9-acre pond and beach, further described below. Other small water-based recreation areas exist in town.

NARA PARK

NARA Park opened to the public in the spring of 2000. This 40-acre outdoor recreation area is home to 6.5 acres of softball/soccer fields, a 2,000-seat amphitheater, a playground, walking trails, a 500 foot long bathing beach with a swimming area, and a bathhouse complete with snack bar. This area is a hot bed of activity during the summer months. Programs include beach operations, the NARA Youth Summer Program, free outdoor summer concert series, recreation and league sponsored athletic events, and the annual July 4th celebration. NARA Park beach provides the only public swimming area in town and serves over 600 resident families each season. NARA is also home to many special events each year; annual Halloween Costume Contest, Winterfest, Acton Day and Spring Treasure Hunt; sponsored by the Acton Recreation Department. Many individuals and companies also use NARA for large functions and field rentals.

GREAT HILL RECREATION AREA SKATING POND

The pond is a 3/4 acre impoundment created by excavating an old, silted-up farm pond that was reverting into a red maple swamp. Completed in 1986, the pond is used for skating, fishing and wildlife viewing.

MILL POND RECREATION AREA

This half-acre site is located between Main Street and the Fort Pond Brook Mill Pond, above the 1848 stone dam near the site of Faulkner Mills. The site has a half-acre of grass, and is open to the water for fishing and related activities. This area's use is somewhat limited by lack of on-site parking. Also the condition of the privately owned stone dam is an issue. Eventual completion of the ARRT near this site will improve access. This location also houses a pumping facility for Acton's new wastewater treatment system.

ROBBINS MILL POND

This is a man-made impoundment in the Nashoba Brook Conservation Area. The pond, approximately three acres in size, is the site of mill foundations and an earth fill dam that dates back to pre-Colonial times. In 1990, the town, using funds for materials donated by the Acton Conservation Trust, rebuilt the dam extensively. The restored impoundment is suitable for fishing, canoeing, and wildlife study. Additional reconstruction was undertaken in 1995, utilizing an eight-man crew from the Northeastern Correctional Facility in Concord.

GRASSY POND

The boardwalks and trails leading to Grassy Pond, in the Grassy Pond Conservation Area, provide access into the pond for fishing, canoeing and wildlife study. This large pond covers about 20 acres.

ARBORETUM POND

A 4,000 square foot pond was excavated at the Arboretum in 1991. This small pond provides an open water habitat for birds and other wildlife that reside in, or migrate through, the Arboretum.

ARBORETUM BOG BOARDWALK

There is a 100 yard long boardwalk across the quaking bog located at the Arboretum. This boardwalk, which includes an observation bench, allows close study of bog plants and related wildlife. Many elementary classes study the bog and its inhabitants each year during outings hosted by the Natural Resources Department.

WILL'S HOLE BOG BOARDWALK

The boardwalk into Will's Hole, a kettle hole pond and associated quaking bog, provides safe access to the pond for wildlife and plant observation.

ICE HOUSE POND

This is a four-acre impoundment of Nashoba Brook, located on town-owned land at the intersection of Concord Road and Great Road. Since management activities (including yearly draining) related to ice harvesting stopped in the 1950s, the pond was very rapidly filling with floating and emergent vegetation that cut into the recreational potential of the site. In 1995 the pond was de-watered and dredged to restore its value as a boating and fishing area. Because of the proximity of the parking area to the water's edge, this site has the potential for handicapped access for water recreation.

SANDY POND

In 1988, a contractor dredged a two-acre pond located near Sandy Drive (off of School Street) that is located on town conservation land. This impoundment is publicly accessible for fishing and nature study.

6. Planned Bike Trails

Assabet River Rail Trail (ARRT)

OVERVIEW

The ARRT is planned as a multi-use recreational rail trail that will pass through the communities of Marlborough, Hudson, Stow, Maynard and Acton. The trail will be built along the abandoned rail bed of the former Marlborough Branch RR, which was active between 1850 and 1980. As of July 20, 2001, a 3/4 mile section of the trail in Marlborough is paved and open to the public.

In October 2001, the MBTA Executive Board voted to transfer the 0.7 mile MBTA right of way to the town of Acton at no cost. Also that month, the Acton Board of Selectman indicated its support for the Assabet River Rail Trail. At Acton's annual Town Meeting in April 2003, an article may be brought forward to fund Acton's 1.1 mile portion of the trail. The total estimated cost of Acton's portion of the $12 to $13 million dollar trail is $1.3 million, most of which will be supplied by federal funds and grants. The local appropriation for the trail is expected to be between $200,000 and $230,000.

TRAIL DESCRIPTION

Approximately 1.1 miles of the trail will run through Acton. The trail's alignment will follow the railroad track from the Maynard Town Line on Route 27, run behind the Wedgewood Realty building, next to the Saab dealership on Route 27, and behind Sylvia Street. After it crosses Mill Pond on an existing timber railroad trestle, the trail will emerge from the woods at the foot of the Maple Street embankment. It will climb about 10-15 feet between Main Street and the Mill Pond Bridge headwall, reaching the elevation of the Main Street sidewalk across from High Street. This will be the limit of the formal ARRT in South Acton Village.

Trail users can take the sidewalk to cross the Main Street Bridge and continue down Railroad Street to the South Acton Commuter Rail Station where bike lockers exist. The trail's terminus is relatively close to the Acton and Acton-Boxborough school campus at Kelley's Corner, Great Hill Recreation Area, the Acton Children's Museum and Science Discovery Museum. Historic buildings are close by in South Acton Village--Exchange Hall, Jones Tavern and the Faulkner Homestead.

The southernmost portion of the ARRT in Acton is flanked on each side by a red maple swamp. These wooded wetlands give rise to a brook that flows under the trail, under Route 27, and eventually joins Pratt's Brook. This section of the ARRT is within a Groundwater Protection District Zone 3, and the 100-year flood plain.

In the vicinity of Sylvia Street the trail runs east of Stonefield Farm, classified by the state as "Prime Farmland". The trail runs through wetlands once again as it nears Mill Pond, which was created by damming Fort Pond Brook. The Mill Pond and its surroundings are strikingly beautiful. The trestle crossing the pond will offer a pleasant resting point. Waterfowl at the pond include great blue heron, wood duck, osprey, and mallards. Fort Pond Brook is an important wildlife corridor and is part of one of the two greenbelts in town. White-tailed deer and eastern coyote travel along such corridors. The area around the Pond, with its wetlands and floodplain, is

part of the Groundwater Protection District Zone 3. Fort Pond Brook ultimately provides water which enters the aquifer that supplies the Lawsbrook well field a few miles to the east.

The following design issues must be addressed for this trail:

- The rail crossing at the Pratt's Brook Culvert must be reviewed.

- Because the trail will run through a wetland, 800 feet of the trail will actually be a timber boardwalk. This idea was approved in concept by the Acton Conservation Commission in May 2001.

- The existing timber trestle crossing Mill Pond must be reviewed. A new deck and timber panels instead of ties are proposed in order to support maintenance/emergency vehicle design load.

- For the trail to reach the sidewalk at Route 27, the existing headwall of Mill Pond will have to be extended vertically to support the trail. At the narrowest point, about six to seven feet exists between the headwall and the back of the existing sidewalk.

- The final connection to the South Acton Commuter Rail Station will likely be by way of existing sidewalks and roadways. Extensive signage and pavement markings will be required.

Bruce N. Freeman Memorial Bicycle Path (BFBP)

OVERVIEW

This planned bike path will provide access by bike or foot, over a distance of 4.5 miles, to the following areas of interest in Acton:

- East Acton Village District
- Morrison Farm and Ice House Pond
- A section of the Isaac Davis Trail
- Route 2A/27 Little League complex
- Nashoba Brook Conservation Area
- North Acton Village District
- NARA Park

The BFBP is planned as a multi-use rail trail running from Sudbury to Lowell via the decommissioned Penn Central Railroad, now owned by the Commonwealth of Massachusetts, Executive Office of Transportation and Construction (EOTC).

Acton's current five-year plan includes a feasibility study, trail survey, and grant research to position Acton for available funding for construction of the trail. Throughout the five-year planning period, a high priority will be placed on public outreach and obtaining access to publicly owned lands.

The Recreation Commission plans to work jointly with an ad-hoc study committee and town staff to develop the trail through Acton. Work on the feasibility study will begin shortly..

TRAIL DESCRIPTION

Approximately 4.59 miles of the BFBP will be located in Acton. Starting in the southeast quadrant, near the Concord town line/Route 2/Nashoba Brook intersection, the tracks run north, parallel to Nashoba Brook. Throughout its route in Acton, the BFBP crosses Nashoba Brook a total of four times, with wood and steel bed and granite abutment bridges. In addition to crossing Nashoba Brook, the trail also crosses Wetherbee Street, Concord Road, Brook Street, Route 2A and Route 27 (twice) in North Acton.

The future rail-trail passes close to many public lands, offering a safe alternative to driving. Specifically, the trail passes along the east side of Ice House Pond providing easy access to the Morrison Farm. The trail is situated such that individuals in the East Acton Village District could access the trail from a planned landscaped area to be constructed in the future at the intersection of Concord Road and Route 2A From there, the BFBP runs north along the Nashoba Brook corridor over Brook Street. Before reaching Brook Street, the trail bisects the Isaac Davis trail. (The Isaac Davis trail easement granted to the town allows for passage by foot only, and only on Patriots Day and July 4$^{th.}$)

A key design concern for the future trail is at the intersection with Route 2A. This very busy intersection will require detailed study and design. Once the trail crosses Route 2A it is within walking distance of the Little League facility at 2A/27. The trail then parallels Nashoba Brook through the Nashoba Brook Conservation Area. Long-term plans include improved access to the Nashoba Brook Conservation Area at the Pencil Factory Dam site. This project will involve the construction of a 25-foot long access bridge. In conjunction with the trail system currently used at Nashoba Brook, the BFBP will provide an additional corridor at the Pencil Factory Dam site to access the Bay Circuit Trail.

The bike trail continues along the Nashoba Brook valley to a point 0.27 miles south of the intersection with Route 27, where the trail heads in a northwesterly direction, eventually crossing Route 27 near Ledge Rock Way. At this point, people biking or walking the trail can take Ledge Rock Way to the North Acton Recreation Area.

Plans will need to be drafted to find an amicable solution to the right-of-way as the trail passes through the Rex Lumber site. Currently there are gates at each end of the Rex site preventing access through the lumberyard. Once past the Rex Lumber site, the trail runs straight for 1.2 miles with potential access at the end of Eastern Road. Access to the BFBP in the northern part of Acton must be considered as development consumes the remaining open space parcels in this part of town.

7. Regional Hiking Trail

BAY CIRCUIT TRAIL

The Bay Circuit Trail (BCT) is a two hundred mile long corridor of connected publicly accessible open spaces running between the north shore and the south shore of Massachusetts Bay, touching fifty Massachusetts towns. The concept behind this "Outer Emerald Necklace" dates back to 1929. At present almost three quarters of the total route has been dedicated, mapped, and marked.

Acton has been a part of the Bay Circuit Trail for almost ten years, and both the Conservation Commission and the Board of Selectmen have dedicated our portion of the trail corridor. The Municipal Properties Director serves as the local liaison on the Board of Directors of the Bay Circuit Alliance.

The Bay Circuit Trail enters Acton from the Annursnac Hill Conservation Area in Concord, and runs through the Stoneymeade, Hearthstone Hill, Spring Hill, and Nashoba Brook conservation areas. There will be an eventual trail connection from the area around Robbins Mill Pond to the unused railroad track that is slated to become the Bruce Freeman Bike Path. The BCT enters Westford at Route 225 and proceeds northward. Detailed maps are available from the Bay Circuit Alliance, and through-hikers can obtain camping permits for Camp Acton, which abuts the Trail, from the Conservation Commission. In recent years, members of the Acton Land Stewardship Committee have built bridges and boardwalks to improve the Trail, using both local and state funds for materials.

8. Town-Owned Lands

ACTON

Of the various parcels owned by the town, three parcels totaling 44 acres hold value as open space.

The town purchased the 32-acre Morrison Farm in 1997 (funded in large part by a $1.3 million debt-exclusion override), as General Municipal Property, with plans for turning the open areas into ball fields and placing trails (some of which already exist) in the forested area. This farm was listed in the previous OSRP as one of our top parcels for protection. Refer to Section 9 for a description of the Town's plans to install fields on this property and connect the trail system to the future BFBP.

The Town also owns a two acre parcel and a ten acre parcel, both on Stow Street, that are important to preserve as open space. The smaller parcel would provide a connection to the Town of Stow's conservation land. The larger Stow street parcel is part of the Fort Pond Brook greenbelt and contains much floodplain and wetlands.

CONCORD

The Town of Concord owns 58 acres in Acton; this land abuts Nagog Pond, one of Concord's principal water supplies. This land provides a significant wildlife corridor, greatly contributes to the rural character of that part of Town, and has both active and passive recreation potential. If Concord should ever change its use of this property, Acton should seek to protect this land from development.

9. Water District Lands

The Acton Water District, a separate political unit from the Town of Acton, owns a total of 399.5 acres of land. These parcels protect the groundwater wells, Acton's only source of public water. Some of these parcels were purchased for future well sites or storage reservoirs.

No recreational use of these lands is permitted, but they hold value for wildlife and open space. It appears that most potential well sites have been identified, so the Water District probably will not purchase a great deal of additional land. These lands do not generate any tax revenues, but they are protected from development.

LAND OWNED BY THE ACTON WATER DISTRICT

PLATE	PARCEL	LOCATION	BOOK/PAGE	ACQUISITION	ACRES
B-5	035-01	924R Main Street	8548/226	1987	12.10
B-6	001	960-962R Main Street	19375/003	1988	33.33
	001-01	960-962 Main Street	15833/313	1984	24.37
	011	954-956 Main Street	19375/003	1988	.42
	012-01	941-959 Main Street	LC997/172	1985	10.92
C-3	008	283-295 Nagog Hill Road	12582/076	1974	26.50
D-4	030	629-639 Main Street	14500/437	1981	1.48
	034	619-627 Main Street	14500/437	1981	2.98
D-5	013	013 Wyndcliff Drive	14044/050	1980	7.29
E-1	002	693-699 Mass Ave.	LC652/167	1961	10.58
	003	677-683 Mass Ave.	LC654/074	1961	10.34
	004	687-689 Mass Ave.	unknown	unknown	5.00
E-4	004	599-615 Main Street	8681/282	1956	
	004	599-615 Main Street	3737/531	1956	
	004	599-615 Main Street	8619/590	1955	13.67
	004	599-615 Main Street	8681/230	1956	
	47-1	Behind Post Office Square	25911/36	1995	24.25
F-1	001	693 Mass Ave.	LC652/167	1961	.50
	004	680-700 Mass Ave.	12621/663	1974	40.44
	007	001 Birch Ridge Rd.	12621/663	1974	.75
	011	005 Birch Ridge Rd.	12621/663	1974	.46
	019	007 Birch Ridge Rd.	12621/663	1974	.47
	027	009 Birch Ridge Rd.	12621/663	1974	.53
	039	011 Birch Ridge Rd.	12621/663	1974	.48
F-2	121	500R Mass Ave.	19703/504	1989	5.29

PLATE	PARCEL	LOCATION	BOOK/PAGE	ACQUISITION	ACRES
F-2B	031	504 Mass Ave.	15915/301	1984	5.50
	031-10	514 Mass Ave.	15915/301	1984	1.45
G-1	102	009R Ticonderoga	13226/656	1977	11.38
	141	051R Ethan Allen	10384/195	1963	2.03
G-2	139	211 Main Street	unknown	unknown	5.00
H-4	076	315 School Street	11816/511	1970	29.12
	113	028 Lawsbrook Road	11828/413	1970	13.90
	114	064R Lawsbrook Road	11828/413	1970	9.40
	119	056R Lawsbrook Road	11803/226	1970	13.30
	126	064 Lawsbrook Road	11828/413	1970	5.00
	130	044 Lawsbrook Road	11828/413	1970	5.30
	134	052R Lawsbrook Road	LC791/049	1970	.85
	135	052R Lawsbrook Road	11824/156	1970	1.51
	139-01	060R Lawsbrook Road	11280/135	1967	.96
I-3	135-01	39-41R Independence	19427/393	1988	.45
	136-01	104-106R Powder Mill Rd.	18980/054	1988	4.78
	145	25-27R Independence Rd.	19427/393	1988	1.83
J-3	021	082R Powder Mill Rd.	LC831/084	1973	9.60
	034	284-290 High Street	11919/434	1970	56.00
				Total Acres	399.51

10. Cemetery Lands

There are three cemeteries in Acton. Woodlawn, located on Concord Road in Acton Center, was established in 1738, and comprises 80 acres, of which 31 are developed. Mount Hope, located on Central Street in West Acton, was established in 1848, with 94 acres, 11 of which are developed. Forest Cemetery, a half acre in size, and located on Carlisle Road in North Acton, was established in 1750. It is now fully developed and retired.

These three municipal cemeteries have value as open space, both in their undeveloped, and developed conditions. The undeveloped land provides wildlife habitat, and is useful for the sorts of passive recreation that commonly occurs on conservation lands. The developed areas of the cemeteries provide beautifully landscaped grounds and wide, paved roadways that are commonly used for walking and bird watching. Finally, the cemeteries provide an aesthetically pleasing, peaceful setting for quiet contemplation and study of the social and cultural history of the town.

The Recreation Department has an agreement with the Cemetery Department to use a portion of Woodlawn as a soccer field. Originally set to expire in 1998, the agreement was extended to 2002 to allow the Recreation Department time to develop an alternative site. The Conway School of Design has made preliminary designs for fields on the adjacent Morrison Property that was purchased as municipal property in 1997. The cost of developing several fields on this site is estimated at $350,000.

At the present rate of use, the two active cemeteries will provide sufficient room for at least 100 years. Even when fully developed, areas will be left untouched, such as wetlands and flood plains that have value as conservation land. The value of the developed cemeteries will only increase in the years to come.

Acton's Land Stewardship Committee, with support from the Cemetery Commission, has improved undeveloped land behind Mt. Hope Cemetery in West Acton. Since the last OSRP, the LSCom has built a footbridge spanning Heath Hen Meadow Brook, and linking the Heath Hen Meadow Conservation Land to the Mt. Hope Property. This provides a connection between West Acton and the Acton-Stow border. In addition, the Land Stewards have developed a new 1.1 mile trail through the woods near the wetlands (see Heath Hen Meadow in Conservation Lands for more information – Section 5B1).

11. State-Owned Lands

The state owns 202 acres of land in Acton, 159 acres of which has been identified as land having high conservation and/or recreation value (see Appendix J). The state-owned land falls into four major categories of open space: land that is part of the Department of Corrections Farm (about 100 acres containing active farm fields), a 16 acre parcel containing the State Police horse barn and fields, parcels that were taken when Route 2 was built but that lie outside of the actual right-of-way, and the Whittier land (25 acres) under the Department of Fisheries and Wildlife.

The Correction Department land is very significant to the town, due to the fact that the open fields abutting Route 2 add a great deal to Acton's rural image. If these lands ever were to be disposed of, the town would consider them as a high priority purchase, as it did when given the opportunity to buy the Route 2 Conservation Area (now the Wetherbee Conservation Area – see Section 5B1 #15) from the state in the early eighties. Part of that parcel is now leased back to the state for agricultural purposes.

The town is now in the process of trying to secure surplus state highway land near Route 2 to develop it into a skateboard park (see Section 5A2).

LAND OWNED BY THE COMMONWEALTH OF MASSACHUSETTS

PLATE	PARCEL	LOCATION	TITLE	ACQUISITION	ACRES
C-5	089	066-070 Harris Street	8181/354	1953	1.40
	090-02	066R Harris Street	10928/156	1965	.50
E-3	081	060R Washington Drive	7866/367	1952	3.98
	085	083R Charter Road	7866/367	1950	3.00
	093	065R Hayward Road	7650/311	1950	4.90
E-4	003	Whittier land - Main Street		1995	25.0
F-3	016	068 Hayward Road	7653/328	1950	1.00
	016-01	068 Hayward Road	7653/328	1950	.33
	090	349R Main Street	unknown	unknown	2.50
G-3	012	332-338 Mass Ave.	12449/652	1973	1.00
G-4	176	099 Mass Ave.	11703/603	1969	2.22
	184	060 Hosmer Street	12717/213	1974	.92
	185	135-139 Mass Ave.	12731/213	1974	.78
	187	105-125 Mass Ave.	unknown	unknown	4.00
	197	070-088 Hosmer Street	7751/053	1951	13.00
	198	092-126 Mass Ave.	unknown	unknown	21.00
	209	058-076 Wetherbee Street	unknown	unknown	16.00
G-5	095	066R Wetherbee Street	unknown	unknown	4.60
	096	end Keefe Road	unknown	unknown	1.10
H-3	A38	5 River St. and rear	unknown	unknown	3.00
H-4	005	320-346 School Street	unknown	unknown	42.00
	006	323-347 School Street	unknown	unknown	50.00
				Total Acres	202.23

SECTION 6 - COMMUNITY VISION

A. Description of Process

The purpose of Section 6 is to set forth the open space and recreation values of Acton's citizens. In the prior plan much information was gathered from the original 1989 Master Plan, together with the three completed area plans (Kelley's Corner, West Acton and South Acton) and the 1993 Community Acton Statement. Each of those undertakings included significant input from Actonians about their open space and recreation needs.

In this current plan, we used information from three primary sources to gather public input:

1. The May 2001 Open Space and Recreation survey (described in Section 2)
2. A 2001 survey of the needs of the four Acton Youth Leagues (see Section 7)
3. The 1998 Master Plan Update (described in Section 2)

We also obtained much information on goals and visions from the following individuals, who have ongoing contact with the public and/or groups of volunteers:

- Natural Resources Director Tom Tidman
- Acton Water District Environmental Manager Jane Ceraso
- Acton Recreation Department Director Nancy McShea
- Acton Land Stewardship Committee Chair Linda McElroy
- Acton Stream Teams Coordinator Mary Michelman
- Board members of the Acton Conservation Trust

The OSR Committee utilized this information to set the goals for this plan.

B. Statement of Open Space and Recreation Goals

Although the town has continued to experience tremendous residential development in the last five years, Acton remains a community with abundant natural and scenic resources including wetlands, diverse wildlife, conservation areas, ponds, rivers and open space. These resources contribute to making the town a desirable place to live, which has fueled our continuing growth. We are at a crossroads, however, where many of these resources are threatened.

In the prior plan, residents identified three key issues relevant to open space and recreation goals:

1. Preserve the remaining elements of Acton's rural character
2. Environmental protection
3. Improve recreational opportunities

In this plan we retain these three broad goals, but change our focus in response to the accomplishments over the last five years, the problems we now face, and the needs expressed by Acton's citizens.

1. Preserve the Remaining Elements of Acton's Rural Character

Acton residents were asked in the OSR survey to rank how important it was to preserve historic buildings, historical places, farmlands, open space for water and conservation needs, and open space for recreation. (Note: The survey was sent to 6,700 households and here were slightly over 1,400 responses). Open space for water and conservation needs was given the highest ranking of importance. The acquisition and preservation of conservation land was ranked as either very important, or important, by 87% of the respondents.

In the OSR survey, 81% of the respondents said that they would vote for a town supported land purchase, while 77% said they would support adding a line item to the town budget to set aside money for open space acquisition. Passage of the Community Preservation Act was favored by 69% of the respondents and was passed at the Spring 2002 Town Meeting. Final approval of Acton's CPA bylaw will be presented as a ballot question at the November 5, 2002 election.

Residents favored a residential growth policy that would provide for (in order of preference):

- No more growth
- Increased lot sizes through down zoning
- A subtraction of wetlands from the definition of a lot
- An annual building cap

Regarding commercial growth, the survey respondents were overwhelmingly in favor of limiting growth to those areas already zoned commercial.

The 1998 Master Plan Update, which included a town-wide survey and several public forums

where data was gathered pertaining to open space and recreation needs, acknowledged a similar public desire for limiting growth. After reviewing the various options for controlling the rate of residential growth in Acton, as well as their unintended consequences, the Master Plan Update recommended purchasing open space to provide long term fiscal benefits to the town "as an option for environmental protection, recreation, and strategic growth management..."

In 1998, The Acton Conservation Trust, a group founded in 1962 to promote recycling, redirected its efforts towards land protection and became a land trust. Over the last three years membership has risen from approximately 40 members to over 280 households.

Clearly, Acton residents remain committed to preserving the remaining rural character of the town. Thus, the open space planning process must come up with ways to better meet this goal, in light of the escalating cost of preserving land and funding constraints.

2. Environmental Protection

Acton has a long history of being an environmentally proactive town, as evidenced by:

- The founding of the Acton Conservation Trust (in the sixties) to initially promote recycling efforts (recycling was eventually taken over by the town). In 1998, this organization redirected its efforts towards land preservation and became a land trust.

- The founding of Acton Citizens for Environmental Safety (in the seventies) in response to the W. R. Grace contamination of town water. While ACES continues to monitor the W. R. Grace clean-up, it is also active in investigating other environmental issues and increasing public awareness about potential problems.

- The passage of our local wetlands protection bylaw (in the 80s).

- The amendment of our local wetlands protection bylaw in 1996 to afford isolated or upland vernal pools the same protection provided to wetlands.

- The installation of a public wastewater collection and treatment system in South Acton and at the school campus to address public health and pollution problems caused by failing septic systems.

- The creation of the Acton Stream Teams in 1998 to identify sources of pollution and excessive nutrients for Acton waterways, and to raise awareness of the wildlife habitat and recreational opportunities provided by Acton's local streams.

- The hiring of Jane Ceraso by the Acton Water District, in 1998, for the newly created position of Environmental Manager.

The OSR survey showed that Acton residents place great importance on preserving open space for water and conservation needs. The presence of remaining open space for wetlands and wildlife preservation; for groundwater and surface water protection; and for its buffering effect on the man-made environmental problems of air, noise and water pollution, is a recognized benefit to all Acton residents.

3. Improve Recreational Opportunities

Clearly, when evaluating the progress made for our three OSR goals from the last plan, the actions taken towards the goal of improving recreation opportunities have met with the most success.

During the last five years, the Land Stewardship Committee, an all-volunteer sub-committee of the Conscom, has completed over 145 projects on the town's conservation lands, resulting in vastly enhanced access to these lands. The LSCom work is described in Section 5.

With respect to active recreation, the Recreation Commission was reactivated in 1996, as was the Recreation Department, headed by Nancy McShea and under the direction of Tom Tidman, Director of Natural Resources. The most dramatic development in this area has been the 1999 opening of NARA Park, a 40-acre community park, located in North Acton. This park, run by the Recreation Department, has been a tremendous success. A complete description is provided in Section 5.

The Recreation Department, over the past five years, has done much more than bring NARA on-line. As reviewed in detail in Section 5, much work has been done in field enhancement at other sites in town and two fields have undergone major renovations.

In the OSR survey, residents were asked to cite the top five recreational facilities most needed in Acton. Bike trails were the overwhelming top preference, followed by conservation areas and hiking/skiing trails. Although athletic fields were not identified as a top priority in the survey, the Recreation Department and the four youth leagues have identified a strong need, discussed in Section 7, for more playing fields.

SECTION 7 - ANALYSIS OF NEEDS

A. Summary of Resource Protection Needs

Section 7A looks at the needs identified in Section 4 and 5 with respect to environmental issues and the protection of the town's ecological network. There are two resource protection needs:

- Protection of our water resources – both quantity and quality
- Protection of wildlife habitat and corridors

Water Resources
Today, water supply is perhaps Acton's most significant environmental problem. Acton's water district has been managing the town's water supply aggressively, exploring suitable land for well fields, regulating nearby uses to prevent contamination, and implementing a program of conservation and environmental protection. Still, Acton's water shortage could substantially impact residential and commercial development in the near future. It will not support the build-out predicted in the town's Master Plan Update.

The Acton Water District has actively promoted voluntary conservation methods and has in place summer lawn watering restrictions that go into effect every year, regardless of weather. Nevertheless, outdoor summer water use has created Acton's water crisis. Already, the Water District is in the process of implementing its own plan to address the problem. (See previous sections on water resources.) The Water District has the regulatory authority to restrict summer water use, as necessary. Given the dry winter of 2001-2002, more stringent restrictions may be implemented by the summer of 2002.

The Master Plan focused on the community's concern that recent, rapid residential development has been damaging Acton's tax base, and that the town should be more "proactive" towards business development. To that end, the town has created an EDIC to help encourage development in line with the town's goals, rather than leaving it to market forces.

How Acton wants to "spend" its water supply is an important question for the town to consider, the sooner the better. Although an extraordinary step, a limit on residential permits, or perhaps a temporary development moratorium, might allow town planners an opportunity to better shape Acton's near-future growth according to Master Plan objectives. One alternative is to eliminate the use of potable water for lawn watering. Another option would be to put in place zoning controls that encourage water-conserving development. Limits on lawn size, and requiring that good topsoil and mature vegetation be retained on all new development sites would help conserve water during the critical summer months.

Wildlife Habitat and Corridors
NASHOBA BROOK BASIN: There is a large tract of land, (Town Atlas E-4, Parcel 47) with rich habitat value containing a tapestry of forested uplands, open pastureland and floodplain/marsh. This important unprotected open space (currently in Chapter 61) provides a

critical connection to the properties in the Nagog Brook drainage basin.

ICE HOUSE POND BASIN: This basin, together with the Morrison Farm and Woodlawn Cemetery property, represents an uninterrupted wildlife corridor through to the Acton Arboretum. Since the 1995 dredging of Ice House Pond to control the infestation of water chestnut, this area has again become a favorite fishing spot for Acton residents. A long-term management plan for water chestnut removal should be considered.

SOUTHERN NASHOBA BROOK BASIN – ICE HOUSE POND TO ROUTE 2: The southern extent of Nashoba Brook in Acton is an area encompassing the farm fields owned by the Commonwealth of Massachusetts, the Wetherbee Conservation Area and an unprotected 28 acre parcel, (Town Atlas Plate G-4, parcel 174); the combined area represents more than 100 acres of open space with high wildlife value. The unprotected 28-acre parcel is forested and provides valuable wildlife habitat, especially given its proximity to Nashoba Brook, Ice House Pond, the Morrison Farm, the Wetherbee Conservation Area and the Route 2 farm fields. This parcel also serves an essential aesthetic role in providing a visual separation between Route 2 and Route 2A, greatly enhancing the East Acton Village's character and sense of place.

FORT POND BROOK BASIN – SOUTH ACTON/STOW: The Heath Hen Meadow riverine ecosystem contains extensive wetlands habitat, much of which is protected open space, however, there are several critically important unprotected parcels near the Stow line. A particularly important 16 acre parcel (Town Atlas G-1, parcel 319) exhibits habitat ranging from red maple swamp to uplands hardwood forest. This parcel along with several abutting unprotected parcels make possible an unbroken wildlife corridor connecting conservation land in Acton to protected conservation land in Stow.

FORT POND BROOK BASIN – ACTON CENTER – GRASSY POND: Grassy Pond exhibits peat land characteristics with many associated bog species; the pond and connected wetlands provide important wildlife habitat. There are two unprotected parcels in this area that are very important to protect for their wildlife habitat and corridor benefits. The first parcel (Town Atlas D-3, parcel 11) is a 14 acre forested property on Newtown Road, abutting Grassy Pond and the Grassy Pond Conservation Area. It contains significant wetlands and provides habitats for important species of birds and warblers. The second parcel, (town atlas D-3, parcel 10) is a 39 acre property abutting Bulette Road and the Town Forest. Preserving this property would safeguard a wildlife corridor running from Grassy Pond to Route 2.

FORT POND BROOK BASIN – BEAVER MANAGEMENT: Throughout the Fort Pond Brook watershed beaver activity is extensive and will require management monitoring in the next five years. Evidence of flooding and groundwater infiltration into septic systems (resulting from beaver activity) has occurred in the Flint Road area south of Massachusetts Avenue. Beaver activity along the Heath Hen Meadow Brook and Muddy Brook tributaries will be monitored, but do not now pose a health or safety concern to West Acton residents. In fact, in both locations impoundments caused by beaver dams have greatly diversified wetlands ecosystems by killing off large stands of red maple.

B. Summary of Community's Needs

Section 7B addresses the needs of the community with respect to preservation of open space, focusing on passive and active recreation needs.

Open Space and Recreation "Measurement" Standards
Although we used national standards in the last plan, we feel it is more relevant to measure our "progress" over time by calculating the current ratio of conservation and recreation land to Acton's population and comparing it to the same ratio for 1996.

As shown in the land chart found at the beginning of Section 5, Acton currently has 1,583 acres of legally protected open space and 63 acres of town-owned recreation land (not protected but containing athletic fields and other infrastructure). In 1995, we had 1,512.5 acres of legally protected open space and 63 acres of recreation land. The increase of 70.5 acres comes from two CRs and three grants or gifts of conservation land made in connection with cluster or subdivision developments. Based on the 2000 census showing our population to be 20,331, Acton's protected open space ratio is 81 acres per 1,000 residents. In 1996 this ratio would have been 85 acres per 1,000 residents. The decline is due to population increases which have outpaced our ability to preserve a commensurate amount of open space for both conservation and recreation purposes.

In 1995, we had 3.4 acres of recreation space per 1,000 residents. Currently, we have 3.1 acres of recreation space per 1,000 residents. This decline is due to the increased population for the same amount of recreation land (although NARA was not on-line in 1995, that land was part of the recreation land total). The National Recreation and Park Association (NRPA) standard of 10.5 acres of developed recreation land per 1,000 population, means that Acton should currently have 214 acres of active recreation land in use; as stated previously, this is not a realistic measure for us, as it is unlikely we will ever be able to meet this standard.

The Master Plan Update estimates a "most likely" residential build-out of 10,200 units and a total population at build-out of about 29,000 (an increase of about 45% over the latest 2000 figures, although the final build-out is more likely to be 25,000-26,000). In order to preserve our current open space ratio of 81 acres per 1,000 residents, we would need to preserve an additional 702 acres of open space at a build-out population of 29,000. It should be noted that the Morrison Farm, currently in the unprotected category of general municipal property, could be counted towards this goal, if the property was protected and used for conservation and recreation activities. In addition, the 12 acres of town-owned property on Stow Street, discussed in Sections 5A2 and 5B8, could also be counted towards this goal if it is rezoned as conservation land (ARC).

Community needs are discussed below for both passive and active recreation, as well as for handicapped accessibility.

Conservation Needs – Preservation and Passive Recreation
The 1998 Master Plan Update reiterated citizens' desire to maintain the character of the

community. The Plan noted that with increasing development activity, the future of our open fields, forested lands, and scenic country roads depends on active preservation efforts. A balanced mixture of homes and businesses clustered in villages and separated by open spaces helps define distinct areas in a community and more efficiently utilizes town resources.

The Master Plan Update conveyed residents' growing concern regarding the rate of residential growth in town and the impact such growth has in the future on the character of the town and the demand for town services (including schools). One goal of the update is to "preserve those elements or features which contribute to Acton's New England town character as a suburban residential community with strong rural and historic roots".

The OSR survey supported the sentiments expressed in the Master Plan Update. Acton's citizens want to preserve open space for conservation needs. In addition, with regards to passive recreation, survey respondents ranked the need for more hiking and skiing trails only second behind their desire for bike paths. Although there is a general sentiment towards preserving more land for conservation, the Town needs to disseminate more information and conduct public outreach about our existing lands.

As can be seen on the Open Space Inventory map in Section 13, conservation lands are located in nearly all sections of town. Our centrally located Acton Arboretum is maintained by the town and Friends of the Acton Arboretum, Inc. which makes it our most "polished" conservation area. The paths are well maintained and marked. There is an adequate parking lot and plenty of benches and picnic tables. As discussed in the Section 504 Self-Evaluation, in the Appendix, the Arboretum has handicapped accessible trails.

We are fortunate to have the LSCom whose members have been working so diligently over the past five years to improve public access to our other conservation lands. The first five years of LSCom activity has been primarily focused on infrastructure issues, so that each of the thirteen conservation areas now actively managed has been improved to the same standard. This includes kiosks with map boxes and entrance signs at all major entrances; a rational trail system within each parcel, usually comprising a loop trail with one or more accesses and secondary trails; upgraded maps, based on DGPS data; and blazes on the trails consistently applied throughout the various conservation areas. Trails have been improved, cut, cleared, and provided with boardwalks, bridges, and wood chips, where needed.

A few details of this first five-year program must still be finished, but the next five-year program is already underway. Its primary focus will be outreach. This will include further work on the LSCom website, publication of a greatly improved Field Guide, increased publicity concerning LSCom activities, introduction of educational programs into the schools, town wide projects such as vernal pool certification, and both intra-town connectors between parcels where possible and inter-town connectors to conservation lands in several of the contiguous towns where these lie just across the boundary.

Recreation Needs – Active Recreation

NEED FOR BIKE PATHS – SURVEY RESPONDENTS' TOP PRIORITY

The OSR survey respondents chose bike paths as their top recreation priority. Although Acton is participating in the development of two regional bike paths, the Town currently has no bike paths.

RECREATION DEPARTMENT OVERVIEW OF NEEDS

The development of NARA has fulfilled many active recreation needs and the Recreation Department has made much headway in improving our other existing fields, however, there is still a considerable need for more athletic fields and a need for a source of funds to adequately maintain existing fields (refer to Section 5B3 for a detailed discussion of field problems).

Recreational opportunities need to be broadened to include all age groups and interests as well as meet the demanding growth needs of the youth sport organizations. As the population of Acton increases so does the need for new recreational facilities – currently we are unable to meet these demands. We must plan now for both short term and long term solutions to this growth spurt. Fields are being eliminated at the high school, resulting in overloading of fields that currently get no rest periods. It is inevitable that we will outgrow current resources within the next 1-2 years.

Of highest priority is the need to construct a new lighted football field, a full–size baseball field, and two softball fields. This would help meet the current use needs of Youth Football, Youth Baseball, Youth Softball and Adult Softball Leagues. In addition, fields are needed to meet the ever increasing demands of Youth Soccer and Youth Little League. Additional fields would allow the Recreation Department to rest fields and keep safe playable surfaces on existing fields.

Attention must be given to increasing recreational opportunities for all. Paving walking trails at NARA Park, removing pea stone surfacing at playgrounds, replacing outdated play structures at Great Hill, improving access to Ice House Pond for fishing and improving walking paths at the Morrison Farm would enhance handicapped access to these areas. Adult, senior and toddler recreation need to be addressed in the future. Dedicated space should be provided for activities specific to these unique groups. Care must also be given to meet the increasing needs of the non-league recreation groups; this would include development of a hockey facility, ice hockey rink, figure skating area, lighted basketball courts, and some dedicated indoor space or facility. Serious consideration should also be given to developing a teen center to meet the recreational needs of this often-overlooked population.

On a final note, with growth and development also comes the need to provide more natural surroundings and environments. With this in mind future recreational plans should include adequate landscaping and shade structures to ensure both participant and spectator comfort, protection and aesthetic beauty.

ATHLETIC LEAGUE NEEDS

Comments were solicited in 1998 from the major athletic leagues, which represent upwards of 1,200 Acton households, regarding their concerns about the future of the fields. All four leagues expressed a concern that there were only marginally sufficient areas to use presently, and that

there would be a need for additional fields in the not too distant future.

In 2001, the Recreation Department asked leagues to submit a statement indicating and justifying the need for more field space in the next five years. Their responses are summarized below.

Acton-Boxborough Youth Soccer - submitted by league president Dave Wilson
"Numbers don't tell the entire story here. Our registrations are basically flat and have been for a few years in the 1500 to 1700 range, but we still face huge problems for fields. The problems relate to: increasing pressure of adult and club leagues for field requests, the booming lacrosse program, loss of high school fields in the coming 5 years, possible loss of Concord Road in the next 5 years. The School Street lease extension remains a mess/quandary and currently has no standing agreement."

Acton-Boxborough Youth Softball - submitted by league president Rich Delaney.
"The AB Youth Softball league will have 220 girls and 18 teams this spring (2002). The four softball fields in town (the two Gates fields, Elm Street and NARA) are adequate to meet our needs this spring even when considering that the fields are also used by the school softball teams and the adult recreational softball league. Assuming our program enrollment increases a conservative 5% per year over the next five years, AB Youth Softball will have 280 players and 24 teams five years from now. At that level of enrollment and given the current demand for softball field space from the schools and the adult recreational league, the town would need a fifth softball field to accommodate our peak scheduling needs in the spring season of 2006. The league also makes use of these fields to a lesser extent during our summer and fall seasons."

Acton-Boxborough Pop Warner Football - submitted by league president Matt Lundberg.
"AB Pop Warner Football supports about 250 kids each season – 170 football players and 80 cheerleaders. Supporting anymore participation than this would require additional fields. We've held registration static for three years now, with a growing waiting list each year. We are pretty much restricted to 1 team per age group (5 total) given the field limitations in town. We'd like to expand to 7 teams – 1 each for the three older groups, 2 each for the two youngest. To do this we'd need more space, which I've discussed with the Recreation Department in the past. My goal: identify and develop a multi-use field whose primary purpose is to support Youth Lacrosse in the spring and Pop Warner Football in the fall. Seasons are complementary, both programs are growing, and the field requirements are similar."

Acton- Boxborough Youth Baseball - submitted by league president Mike Coppolino.
"Enrollment in AB Youth Baseball continues to grow. Over the past three years we've seen roughly an 8% increase per annum. Thanks to the Selectmen and Recreation Department the two new-lit fields at 2A/27 have helped considerably. With the addition of one Little League field in Boxborough coming on-line in 2003, we foresee the need for at most 2 additional Little League diamonds to satisfy our needs for the next 3-5 years. This would allow us to increase practice time and occasionally "rest" a field. Our needs are more urgent for a large ball field (90' base paths) in that over the next 5 years, with construction at the high school and the consistent spring wetness at Jones field, we need at least one additional field as soon as possible, for those 13 and older."

Handicapped Accessibility
The Section 504 Self-Evaluation, included in the Appendix, details our progress and plans with respect to making more of our conservation and recreation areas handicapped accessible. As an added benefit, handicapped accessible trails also improve accessibility for senior citizens and parents with very young children.

C. Management Needs, Potential Changes of Use

Background: Infrastructure Gains over the Last Five Years
Over the past five years much progress has been made in establishing structures to improve the management of our conservation and recreation spaces, as well as to protect our environment's resources. The last OSRP recommended establishing the Land Stewardship Committee, which has done a remarkable job of improving access to and enjoyment of our conservation lands. The last plan also recommended the reactivation of the Recreation Commission and the Recreation Department, setting in place an infrastructure to appropriately manage Acton's growing recreation needs.

The Acton Water District, an entity independent from town government, has hired an environmental manager to deal with problems relating to water flow and quality.

In addition to these town-sponsored activities, two private volunteer groups have taken a lead in land preservation and environmental protection. The Acton Conservation Trust's mission is to preserve Acton's remaining open space, including the promotion of conservation restrictions, and educating the public about open space issues. The Acton Stream Teams' goal is to identify sources of pollution and excessive nutrients for Acton waterways, and to raise awareness of the wildlife habitat and recreational opportunities provided by Acton's local streams.

Although the above groups have enabled the town to make significant strides in managing open space and recreation needs, serious gaps remain in our ability to protect existing open space and preserve additional open space for conservation and recreation purposes.

Need Permanent Open Space and Recreation Planning Committee
The last OSR plan identified the need to form an Open Space Planning and Recreation Committee that meets on a regular basis and is charged not only with preparing the Open Space and Recreation Plan, but also with overseeing its implementation.

This committee was established in 2001 and is responsible for preparing this current update. By state authority, the town Conservation Commission has the task of overseeing issues of open space and conservation lands. In reality, the Commission's work has focused on wetlands protection, with little time to spend considering broader open space issues. The OSR Committee, needs to be charged with keeping the town updated on issues relating to the open space planning process and to the completed OSRP. Among its tasks would be to keep track of priority parcels, provide information and research to town departments seeking to implement OSRP recommendations, and to gather information on regulatory and policy changes that have been

used successfully to protect open space and community character in other communities. The establishment of a permanent OSR Committee would also address several management issues.

Need Better Communication of Potential Changes of Use
Today Acton has at least one group, the Acton Conservation Trust, interested in privately protecting land through such means as conservation restrictions or even private purchase, and many other groups interested in the many values such space offers. More than ever before, property owners interested in preserving their land need to connect with the Trust, as well as other groups that are interested in preserving open space, such as the Natural Resources Department, the Conservation Commission, the LSCom, the OSR Committee and other regional conservation organizations. Given the energetic interest in open space, recreation and environmental issues demonstrated by town residents through their commitment to these values, open space issues should receive the widest possible public discussion.

Need To Advocate To Preserve Farms
Beginning with the Master Plan put into effect in 1989, and continuing through the village area plans, the Master Plan Update and the OSR Survey, residents have expressed their strong desire to preserve the remaining rural elements of the town. Unquestionably, the preservation of our existing farms fulfills this desire.

Open Space Preservation Funding Needs
As property values continue to escalate, so does the difficulty of preserving open space. Although there are a number of ways to protect space without an outright purchase, including purchasing just the development rights, in some instances purchasing a property is the only way to save it from development.

In the past, Acton's citizens have demonstrated their support for the purchase of open space. In 1995 Camp Acton was purchased and in 1997 the Morrison Farm was mostly financed through a debt exclusion override of $1.3 million. In the spring of 2000, a $6.8 million debt override for the purchase of the Robbins Mill Pond property was defeated.

Still, the OSRP survey respondents were overwhelmingly in favor of town supported land purchases. In the survey, 81% of the respondents said they would vote for a town supported land purchase, while 77% said they would support adding a line item to the town budget to set aside money for open space acquisition. Passage of the Community Preservation Act (CPA) was favored by 69% of the respondents.

In 2001, the Board of Selectmen appointed a CPA Advisory Committee. This committee has recommended a 1 ½% surcharge with two CPA specified exemptions; one for the first $100,000 of a home's value, and the second for low income and seniors of low and moderate income. The CPA was passed at the April 2002 Town Meeting and is scheduled for a November 2002 ballot vote. Passage of the CPA will greatly improve Acton's ability to dedicate funds to address the conservation and recreation needs of its residents.

Regulatory Needs
The town's Master Plan Update acknowledged the need to reduce the rate of residential growth, and discussed the difficulties each strategy would entail. The option it recommended to help ease the impact of growth on the school system, would limit the number of new residential units that are constructed per subdivision within a given year. Such a subdivision phasing requirement would limit the number of building permits to 10 per year for the construction of residential units on a tract of land divided into more than 10 lots.

There is also a study group evaluating possible changes to the PCRC bylaw.

Water Resource Protection Needs
The state Executive Office of Environmental Affairs stated recently that water used for maintaining landscapes and lawns should not be used at the expense of public health and safety, or the environment. While Acton's Water District has long encouraged water conservation in home and landscape, has applied outdoor watering bans in the summer, and enforced those bans, Acton's water supply is challenged by the town's rapid growth and the continued use of potable water for outdoor purposes.

The state has indicated that towns should manage their growth, with water as their first concern. The Acton Water District's water conservation efforts should be consistently reflected in future development. Town departments should use available regulatory tools—beyond those we already possess— to minimize future lawn and landscaping water use. EOEA's Policy on Lawn and Landscape Watering (in the Appendix) suggests some approaches.

Potential Change of Use Areas - Areas of Immediate Concern

Route 2 Fields
Acton has always considered the farm fields along Route 2, currently owned by the state Department of Correction, and unprotected, to be one of the greatest areas of concern, should the state wish to get rid of the fields. There are two recent developments that threaten the future of these fields. The state has indicated its desire to cease operating and possibly sell the Northeastern Correctional Center's dairy farm; although the farm buildings are in Concord (near the Route 2 rotary), there are approximately 98 acres of farm fields in Acton, used to grow corn, alfalfa and other feed crops. The dairy herd was sold in 2002.

Another threat to these fields comes from the state's plans to eliminate the Route 2 rotary. While these efforts are still in the preliminary phase, and may take many years to come to fruition, most of the preliminary design ideas would result in the loss of significant portions of these fields.

The town needs to actively lobby our representatives in the General Court to preserve these agricultural fields, and to preserve this historic and scenic vista. The town has rezoned all those fields as ARC, recognizing the importance of this open expanse of fields. Although the zoning does not apply to the state, it would apply to any potential purchaser of the fields.

SECTION 8 - GOALS AND OBJECTIVES

The purpose of this section is to synthesize those goals identified in Section 6 with the needs identified in Section 7. As stated previously, the OSR Committee concluded our goals are unchanged from the previous plan, but our objectives and focus have changed considerably.

In the prior plan, we were concerned with: preserving the remaining large chunks of unprotected open space; providing wastewater treatment for the part of town where pollution was a persistent problem; creating a Land Stewardship Committee to improve access to our conservation lands; reactivating the Recreation Commission and Recreation Department to address active recreation needs; and creating a community park and outdoor swimming facility to dramatically improve the recreation opportunities available in town.

It is a credit to all involved that the majority of these efforts have been successful, as documented in the accomplishments cited in Sections 4 and 5. Our major shortfall in the past five years was the town's inability to preserve two large properties and one smaller farm, all now slated for development. Another area of critical concern is the ability of our water resources to meet the needs of increased development. In this plan we will refocus our objectives and recommended actions to better deal with open space preservation and to protect Acton's water supply.

The table presented below provides an overview of our open space and recreation objectives – these are concrete ideas for accomplishing our three open space goals.

Goals	Objectives
1. Preserve the remaining elements of Acton's rural character	a) Improve communication from town staff and/or the BOS regarding potential change of use for open space parcels. b) Address citizens' concerns about mitigating growth. c) Maintain the present ratio of protected open space per resident of 81 acres per 1,000 residents. d) Preserve natural and man-made features that contribute to Acton's character such as open fields, woodlands, ponds, country roads, scenic vistas and stone walls. e) Preserve open space and develop additional public open spaces and parkland bordering Fort Pond Brook, Nashoba Brook and the Assabet River. f) Protect and maintain the remaining farmland in town, including the preservation of the open fields along Route 2. g) Through advocacy create an environment that facilitates and encourages farming in Acton.

Goals	Objectives
2. Environmental protection	a) Protect the quality and quantity of Acton's water supply. b) Protect wildlife corridors, through land acquisition and public education. c) Ensure the restoration of polluted environmental resources. d) Strictly enforce federal, state and local environmental laws.
3. Improve recreational opportunities	a) Promote the development of the two regional bike trails planned to run through Acton. b) Enhance possibilities for hiking, cross-country skiing, and horseback riding, boating and fishing on conservation lands. Expand public outreach to better inform the public of our available passive recreation opportunities. c) Provide additional athletic fields to meet the needs of the town's growing population. d) Encourage regional planning with abutting towns in order to create more expansive human (see 3b above) and wildlife (see 2b above) corridors. e) Ensure handicapped accessibility is available for recreation activities (e.g. trails, picnicking, spectating at athletic fields, water-based recreation and camping) at both recreation and conservation areas.

SECTION 9 - FIVE-YEAR ACTION PLAN

The purpose of this section is to develop a plan containing specific actions to accomplish the objectives identified in Section 8. An overview of the actions and their implementation schedule is shown below:

	Implementation Timetable			
Action Recommendations	**Accomplished as part of current plan**	**Within 2 years**	**Within 2 to 5 years**	**Meets Objective Number:**
GOAL #1: Preserve the remaining elements of Acton's rural character				
1. *Identify those parcels critical to preserving Acton's rural character.*	x			1d, 1e, 1f
2. *Charge the OSR Committee with the ongoing responsibility to evaluate open space preservation opportunities, act as an advocate to town boards, and keep the public informed about progress made on the OSRP.*		x	x	1a, 1b, 1c,
3. *Develop and implement a policy to inform the OSR Committee of potential changes of use of prioritized parcels.*		x		1a, 1b
4. *Create a sub-committee of the OSR Committee to serve as an advocate for Acton's farms.*		x		1f, 1g
5. *Charge the OSR Committee with researching, developing and advocating regulatory changes to mitigate and control growth, and preserve Acton's character. Implement Master Plan Update's recommended growth management control.*		x	x	1b, 1c
6. *Develop funding mechanisms and employ other strategies to preserve prioritized open space parcels. Procure separate funding for ongoing publication of the Guide to Acton's Conservation Lands.*		x	x	1b, 1c, 1d, 1e

Action Recommendations	Implementation Timetable: Accomplished as part of current plan	Within 2 years	Within 2 to 5 years	Meets Objective Number:
GOAL #2: Environmental Protection				
7. *Create a Water Advisory group to address water use planning and develop town-wide recommendations to help manage our water resources, from both public and private wells, in a sustainable fashion.*		x		2a, 2c
8. *Implement the Acton Water District's 2002 Master Plan designed to optimize existing sources, improve systems, and manage demand. By summer 2002 the AWD, the Planning Department, and other relevant departments, should review and implement relevant recommendations in EOEA's new Policy on Lawn and Landscape Watering.*		x	x	2a, 2c
9. *Identify and prioritize significant areas containing wetlands, water and wildlife resources that need to be protected.*	x			2b
10. *Advocate for the preservation of open space parcels to protect wildlife corridors and greenbelts.*		x	x	2b, 1d, 1e
11. *Certify vernal pools on town-owned lands.*		x	x	2d
***GOAL #3:* Improve Recreation Opportunities**				
12. *Continue work on the development of the ARRT and the BFBP bike trails.*		x	x	3a
13. *Implement the LSCom's five-year plan focusing on public outreach and inter-town trail connections.*		x	x	3b, 3d

Action Recommendations	Implementation Timetable: Accomplished as part of current plan	Within 2 years	Within 2 to 5 years	Meets Objective Number:
14. Implement the Recreation Department's five-year plan to improve existing recreation facilities and develop new recreation sites and fields.		x	x	3c, 3a, 3e
15. Identify additional sites for future athletic field development.		x	x	3c

All actions are grouped according to the three key open space and recreation issues identified in the planning process. The action plan for each goal identifies concrete steps to be taken within the near-term (immediate to two years) and the longer term (two to five years). Those steps that have implications for open space acquisition/preservation are keyed to Map M - Acton's Five-Year Mapped Action Plan, provided in Section 13. This map provides a pictorial of our Open Space and Recreation Plan land priorities.

Goal #1: Preserve the remaining elements of Acton's rural character.

Action Recommendation 1: Identify those parcels critical to preserving Acton's rural character.

The process used to prioritize Chapter 61, 61A, 61B and significant non-Chapter 61 private (and some public unprotected) parcels is described in Section 5A. Over 940 acres of private land are held under one of the three Chapter 61 programs. Over 675 acres of private non-Chapter 61 lands were identified as having open space significance, as were an additional 215 acres of unprotected publicly owned land.

The preservation of these properties is not only relevant to Goal #1, but also to Goal #2 environmental protection (see Action Recommendation 9), and Goal #3, improved recreational opportunities (see Action Recommendation 16). Protecting these properties serves to ensure the continued rural ambiance of Acton; safeguards important wetlands, water and wildlife resources; provides enhanced opportunities for human corridors for hiking, bicycling, horseback riding, cross-country skiing and camping; and provides for an adequate amount of active recreation fields to meet the demands of Acton's burgeoning population. These key properties are highlighted in the Action Plan Map in Section 13.

Action Recommendation 2: Charge the OSR Committee with the ongoing responsibility to evaluate open space preservation opportunities, act as an advocate to town boards and keep the public informed on progress made on this OSRP.

The OSR Committee must gain approval from the Board of Selectmen to continue to operate, beyond the preparation of this plan, and to function as an open space and recreation advocate to the town boards. Conservation commissions were established by state statute in 1957, "for the

promotion and development of the natural resources and for the protection of watershed resources of said city or town." The Act went on to require commissions to keep an inventory of all open space parcels. The enactment of state wetlands protection legislation in the late 60s and the subsequent designation in the early 70s of the local commissions as enforcing agent, (the town bylaw was adopted in 1981) has left the Commission with little time to devote to open space issues.

At present there is an Economic Development Committee (EDC) whose mission is to advise the Board of Selectmen on issues related to commercial development. A more focused formal town board or committee reporting to the Board of Selectmen is needed to fill the same role for open space protection.

Acton's human infrastructure—the dozen or more groups (largely volunteer) working to protect the environment, to maintain open space and its values, and to encourage active and passive recreation—are a formidable resource whose efforts underpin this plan. To keep these groups, the town boards and the general public, informed of the progress in implementing this plan, the OSR Committee should remain active, reporting to the public on a yearly basis gains and losses.

In this role the OSR Committee should work closely with the Board of Selectmen, Natural Resources Department (including the Recreation Department) the Conscom, LSCom, Recreation Commission, the Acton Conservation Trust and other area land trusts.

Action Recommendation 3: Develop and implement a policy to inform the OSR Committee of potential changes of use of prioritized parcels.
A first priority for the OSR Committee is to investigate with the Board of Selectman and Town staff how best to construct and implement a policy to ensure the OSR Committee is provided with information about all potential change of use for prioritized open space parcels. This will ensure that appropriate action will be taken early on in order to have the best opportunity for property preservation.

Action Recommendation 4: Create a sub-committee of the OSR Committee to serve as an advocate for Acton's farms.
The previous OSRP identified farm preservation as an objective, but unfortunately, little has been done in the last five years towards that end. The remaining crop or "truck" farmers in Acton, the state's farm fields along Route 2, and the more than two dozen horse farms contribute much to the preservation of open space and to Acton's remaining rural character. A sub-committee of the OSR committee needs to concentrate solely on farming, in order to catalog all of the existing farms in Acton, survey Acton farmers on their problems and research how best to preserve agriculture in our town.

The New England Small Farm Institute is one source for future research, as is Land Link, which assists transfers of agricultural property from one farmer to another. It would be beneficial to develop some kind of in-town agricultural assistance, perhaps even a published policy, to encourage agriculture in the town.

Action Recommendation 5: Charge the OSR Committee with researching, developing and advocating regulatory changes to mitigate and control growth, and preserve Acton's character. Implement Master Plan Update's recommended growth management control.
In its section on Suburban Residential Development, The Master Plan Update commented that, in general, the development patterns in Acton are typical, and that new subdivisions "erodes the rural New England Landscape, once characterized by narrow roads, stone walls, and large trees." The architecture and site planning of multi-family developments along Great Road "has done nothing to mitigate the impacts of the increased density and scale of development."

"Fortunately, scenic roads still abound in Acton and serve as a much needed buffer to development. Nagog Hill Road is an excellent example of a scenic, rural road. It is characterized by farms, conservation land, and attractive single family development...replaced by more densely-placed homes as the road approaches the town center. The characteristics of Nagog Hill Road are important to preserve and use as an example of the compatibility of incremental development and open space preservation."

The Town's Master Plan Update recommended, as a means of preserving neighborhood character, that Acton "monitor strategies that other communities are implementing to address the issue of "tear-downs" in healthy neighborhoods". This research should be undertaken.

There is a study group which is currently investigating the PCRC bylaw to determine if changes could be made to limit the number of units.

Other communities in Massachusetts have developed interesting preservation strategies that may or may not be applicable to Acton: Brookline and Amherst have Design Review Boards to ensure that new construction is compatible with its surroundings. A Neighborhood Conservation District, used in Cambridge, helps an established, older neighborhood protect its overall neighborhood character.

The Cape Cod Commission has a model bylaw addressing Land Clearing and Grading on land areas over a certain size. Through a combination of site plan review standards and special permit requirements, the bylaw seeks to minimize the loss of natural vegetation and topography and to protect specimen trees, significant forest types and wildlife habitat when developing a site. It is also a means of preventing non-point source pollution, and damage to wetlands over 100 feet from a work site.

Action Recommendation 6: Develop funding mechanisms and employ other strategies to preserve prioritized open space parcels. Procure funding for ongoing publication of the Guide to Acton's Conservation Lands.
With the state's passage of the Community Preservation Act (CPA) in 2000, communities have a new tool at their disposal to fund open space and recreation land acquisition. The Act provides a local option for municipalities to adopt property tax surcharges of up to 3% to fund open space acquisition, affordable housing, and historic preservation activities. Although a minimum of 10% must be spent annually on each of these three programs, the remaining 70% can be apportioned to these categories in any amount and can also be used to fund active recreation

projects such as bike path development, recreation land purchases, and field development. Communities adopting the CPA will also qualify for state matching funds from the Department of Revenue's Community Preservation Trust Fund.

In 2001 the Board of Selectmen appointed a CPA Advisory Committee. This committee has recommended a 1 ½% surcharge with two CPA specified exemptions; one for the first $100,000 of a home's value, and the second for low income and seniors who qualify for low and moderate income housing. The CPA passed at the April 2002 Town Meeting, and now needs to come before the electorate in a November 2002 ballot vote.

The passage of the CPA at the above-described level would bring in around $430,000 annually in tax collections; Acton would be eligible for up to an additional $228,000, or 53%, in state matching funds.

Should passage of the CPA fail at ballot vote, the OSR Committee must place a high priority on developing other funding options such as including an annual budget line item for open space and recreation land purchase.

Respondents to the OSR survey indicated a need for more hiking trails. In order to meet this need, a first step is to better publicize the extensive trail system that exists on our conservation lands. The Guidebook to Acton's Conservation Lands is currently out of print due to funding issues. The OSR Committee should investigate a permanent source of funding for the publication of this guidebook.

Goal #2: Environmental Protection

Action Recommendation 7: Create an ad hoc Water Advisory group to address water use planning and develop town-wide recommendations to help manage our water resources, form both public and private wells, in a sustainable fashion.

As advocated by the Acton Water District, an *ad hoc* Water Advisory group to address water use planning should be formed. This group would meet four or five times and then disband. The mission of the advisory group would be to develop town-wide recommendations (including the proposal of new regulations and bylaws) to help manage our water resources in a sustainable fashion. Recommendations would focus on planning tools that prioritize water conservation. Members should include representatives from the Water District, Planning, Building and Conservation departments as well as the Economic Development Committee. The Water Advisory group should draft guidelines for town boards to apply when working with applicants for new developments to implement, in a reasonable way, water-saving development techniques. (Note: This already occurs to some extent.) Refer to the Appendix for state recommended lawn and landscape water conservation measures and examples of other community's water related regulations or bylaws.

Acton's immediate water problems, as well as the new state watering policy, call into question a homeowner's hitherto taken-for-granted "right" to a large, lush, green lawn in the summer. Limiting lawn size, banning the installation of all lawn irrigation systems, installing meters that

will allow the Water District to bill higher rates for lawn watering systems, or even limiting development until the Town can solve its water problems should be on the agenda of the Water Advisory group.

Action Recommendation 8: Implement the Acton Water District's 2002 Master Plan designed to optimize existing sources, improve systems, and manage demand. By summer 2002 the Acton Water District, the Planning Department, and other relevant departments, should review and implement relevant recommendations in EOEA's new Policy on Lawn and Landscape Watering.

AWD Master Plan

The Water District will continue to investigate future sites for wells and look for additional sources. Currently, the only remotely viable, potential, additional overburden source is Assabet III, a source in the center of the W.R. Grace site. This source was acquired from the W.R. Grace Company, and its potential development as a source of drinking water will be tied to the cleanup progress at the Grace site. Additionally, potential bedrock well supplies are being identified at various sites in Acton.

The Acton Water District is developing a new regulation that would require any person applying for water use having a design demand in excess of 2500 gallons per day to submit a water impact report. This report will define the impact on the District's current/future water demand, withdrawal permit compliance, and existing supply system. The report will stipulate conditions and water conservation measures that will mitigate the effects of the project's impact. The report will be reviewed and approved by the Water Commissioners. Costs associated with generating the report will be the responsibility of the applicant. A copy of this report will go to the Planning Department, Building Inspector, and other appropriate Town departments on request.

Several of the Acton Water District wells are not used to their fullest extent because of concerns about the aesthetic water quality. As the need for this water increases, treatment for these wells may be necessary. The additional revenues necessary to install these treatment systems may be generated by rate increases, particularly for high-water users.

EOEA's New Policy on Lawn and Landscape Watering

This policy recommends that communities "regulate or write bylaws to strengthen the ability of water suppliers to conserve water". These bylaws could include a ban on all irrigation devices, limits on areas that are cleared for new development, and require a smaller lawn size for new structures, for example. The state urges such recommendations be written as bylaws, although they can also be applied as part of the review process for new development. To address Acton's water problem as soon as possible, the Planning Board should meet with the Water District—even before the proposed Water Advisory Group convenes—to investigate the new state policy and other measures that could be taken to decrease the demand for water.

Action Recommendation 9: Identify and prioritize significant areas containing wetlands, water and wildlife resources that need to be protected.

Much of our wetlands, water and wildlife resources are already protected under our current town bylaw, as well as state and federal laws. However, there are many important resource areas in

town that could be irreparably altered and destroyed by development. These parcels have been identified in the Wildlife write-up found in Section 4 and prioritized in Section 5A.

Action Recommendation 10: Advocate for the preservation of open space parcels to protect wildlife corridors and greenbelts.
This is a task that will be included in the OSR Committee's efforts described in Action 2 above.

Action Recommendation 11: Certify vernal pools on town-owned lands.
LSCom has begun planning to implement a vernal pool certification program within the Town of Acton. Upcoming workshops will educate participants about what vernal pools are, what species to look for, and how to do the certification. There is also a small subsidiary program already established in one of the elementary schools which each year conducts a Community Service Learning program for 5th and 6th grade children.

Conservation-minded people from our contiguous towns will be invited to attend the workshop. Subsequently, the LSCom will identify vernal pool candidates and organize volunteers to observe these areas at the appropriate time in the early spring. This will be an ongoing annual program.

Work will begin with candidate pools on conservation land, and continue later on those private lands whose owners may be willing to have certifications performed. Contact with private landowners will be made through newspaper notices and a continuing educational effort.
No significant funding will be needed for this effort, except for the fee of the biologist who will give the annual workshops.

Goal #3: Improve Recreational Opportunities

Action Recommendation 12: Continue work on the development of the ARRT and the BFBP bike trails.
In the OSR survey respondents chose bike paths as their number one active recreation priority. Refer to Section 5B6 for a description of the plan to develop these two bike paths.

Action Recommendation 13: Implement the LSCom's five-year plan focusing on public outreach and inter-town trail connections.
In the next five years, the primary focus of the LSCom will be outreach. This will include further work on its website, publication of a greatly improved Field Guide, increased publicity concerning LSCom activities, introduction of educational programs into the schools, some town wide projects such as vernal pool certification, and both intra-town connectors between parcels where possible and inter-town connectors to conservation lands in several of the contiguous towns where these lie just across the boundary.

Presented below is more information on the publication of the Field Guide, planned publicity efforts and an overview of the LSCom's plans for connecting our conservation areas to those of our neighboring towns. Included as an appendix in Section 13 are the LSCom plans for individual conservation areas and planned Town-wide projects for:

- Website completion and tie-in to Town website

- Conservation parcel boundary exit signs
- Forest, meadow, orchard and barrens management plans
- Protection and marking for historical sites and unusual botanical species

Updated Field Guide publication: The first Acton Field Guide is not only out of press, but also greatly out of date, as it was published before LSCom came into being approximately five years ago. During the past two years, all conservation lands have been re-mapped using DGPS equipment, and the resulting rudimentary maps have been redrawn with consistent use of icons and special terrain markers. These second-stage maps have been computer scanned and then colored not only to reflect differences in kinds of terrain, but also to indicate in color the three degrees of trails on each property.

These maps are currently being employed on the newly designed website, but their originally intended use was for the new Field Guide. Remaining maps will be completed early in 2002. These, together with updated text and both new and old graphics, will comprise the new publication. As several additional conservation areas have been added to those actively stewarded since the prior publication, and as the maps will be printed in color, the new Guide will be both longer and more costly to produce.

To print this guide in a format that does justice to the quality of its content and the effort involved in its production will require more funding than LSCom presently has at its disposal. When printed and distributed, the booklet will be far superior to the prior version, which even in its simple style was enthusiastically received not only by Actonians, but also by conservation-minded people throughout the state who became aware of it.

Expanded publicity and educational effort: When the Field Guide has been published and the website has been fully implemented, some of the committee's energies can be shifted to other activities. The focus of the past five years on infrastructural concerns will shift from new projects to maintenance only in many areas. As a consequence, we will be able to put more energy into activities that collectively could be termed 'outreach'.

Currently, the LSCom is placing one article a month in the *Beacon*. Similar articles will be placed in other publications as agreements can be reached. One of LSCom's members is dedicated to this kind of activity, and several others may join him in the future.

The Merriam School's Community Service Learning Project is the beginning of an expanded program to familiarize participants with the natural resources in Acton that are open to the public, and to raise consciousness about the natural world in order to encourage preservation efforts. The Vernal Pool Certification program mentioned above is one such project. Others are implied in discussions above. To the extent that such activities would require funding, the breadth of such activities would be determined to some extent by the funding available.

Communication links with conservation areas in contiguous towns: Acton is contiguous to seven towns. Of these, five have conservation properties of their own just beyond the common boundaries at places where Acton conservation areas also exist. LSCom plans to initiate talks

with these towns to establish inter-town links across the common boundaries so that hiking trails can be extended and connected to those existing in these other towns.

LSCom has already initiated a dialogue with the Littleton Conservation Trust to attempt to provide a permanent corridor between our Nagog Hill property and their Sarah Doublet property. The intervening land runs along the shore of Nagog Pond across the Concord Water District property, where a fisherman's trail already exists.

Other possible links to our neighboring towns are:

- West Acton's Heath Hen Meadow to Stow's Captain Sargent Farm conservation area.
- West Acton's Jenks Land along the railroad bed to Boxboro's Sargent Road Half Moon Meadow conservation land and Heron Rookery.
- South Acton's McGloin and Steinman properties across the golf course to the Maynard Assabet Riverway property.
- East Acton's Stoneymeade land to the contiguous Concord conservation land.
- North Acton's Nashoba Brook Conservation Area via the Robbins Mill Pond land to the Carlisle Spencer Brook conservation land.

Each of these possibilities presents a different challenge. The simplest, the erection of a sign announcing the connection, will only require an agreement between towns. The most difficult, acquisition by both towns of one landlocked parcel on each side of the boundary, will require funding for the purchase of the intervening land as well as for the construction of a long boardwalk through a beautiful wetland that is home to many species of birds and mammals. This latter project, between Acton and Stow, would require considerable cooperation between the two towns as well as local and possibly state funding. The resulting connection would represent a splendid achievement for both environmental protection and enjoyment, but also for inter-town cooperative effort.

Action Recommendation 14: Implement the Recreation Department's five-year plan to improve existing recreation facilities and develop new recreation sites and fields

Presented below are the Recreation Department's plans for comprehensive improvements for NARA, and for new recreation sites or athletic fields, including: development of a skateboard park; development of the Morrison Farm property; and installation of new fields at School Street Included as an Appendix in Section 13 are the Recreation Department's plans for existing athletic fields and playgrounds.

NARA Park – Five-Year Plan

While much has been done at NARA Park, there are many improvements necessary to make this facility work more efficiently and better serve the public's needs. Presented below is the Recreation Department's five-year plan for NARA. The plan includes: program enhancements; projects to improve accessibility, aesthetics and privacy; the addition of many amenities for park users: amphitheatre improvement projects; and projects to improve the beach, pond and bathhouse area.

Program Enhancements:

The Recreation Department staff will be expanded to provide more activities and events at NARA. Beginning in Spring 2002, more programs will be added including:

- Swim lessons
- Additional concerts and special events
- Expansion of the NARA Youth Summer Program
- More adult recreational opportunities
- A more comprehensive nature program and summer camp

Projects to Improve Accessibility:

1. Pave the interior trail system to make it more accessible to senior citizens and physically disabled citizens
2. Expand the upper parking lot

Projects to Improve the Park Aesthetically and Increase Privacy:

1. Install a fence between the resident abutters and the lower parking lot to provide privacy and noise reduction to those residents
2. Plant additional screening trees between Rex Lumber and the pond to help bring that area back to a natural state
3. Raise funds for tree plantings and seek state grants
4. Continue work with elementary school groups to enhance the wild flower meadows on the back of the amphitheater hill
5. Plant more shade trees

Projects to Provide More Amenities to Park Users:

1. Install a water fountain in the upper fields
2. Each year, add benches along the walking trail, to meet the goal of a park bench every 200 feet
3. Seek funding for permanent interior lighting throughout the park
4. Add shade trees and benches to the playground
5. Design and seek funds to construct a picnic pavilion behind the beach area
6. Seek funding to install a basketball court and garden near the lower parking lot

Amphitheater Projects:

At the amphitheater, a 50 by 30 foot brick patio will be created in front of the stage, improving accessibility. Additional permanent stage lighting and exit lighting will be added to allow more evening concerts. Landscaping will continue around the amphitheater to provide shade. The Recreation Department will investigate putting a storage shed near the amphitheater to accommodate stage equipment. A 319 Non-Point Source Pollution Grant will be used to complete the replication area/phosphorus treatment wetlands adjacent to the stage.

Pond, Beach Area and Bathhouse Projects:

1. Increase sand depth on the beach
2. Expand both the number and types of boats in the boating program
3. Continue to address the goose problem at the beach

4. Improve access to the backside of the beach and access to the water
5. Increase food service at the snack bar to meet the demand
6. Investigate the addition of a storage/maintenance shed near the bathhouse
7. Investigate a long-term turf maintenance program that addresses pond water quality

T.J. O'GRADY MEMORIAL SKATEBOARD PARK

Over the past three years a grassroots effort by teenagers and adults to develop a skateboard park is finally becoming a reality in Acton. The Town is now negotiating with the State to use a one-acre parcel of state-owned land on Hayward Road for the proposed park. A preliminary design has been done and the 2001 Acton Town Meeting has appropriated construction money. The members of the T.J. O'Grady Memorial Skate Park Committee have also worked extensively to provide half of the construction costs to build this park.

During the next five years the Recreation Department will finalize all design plans, oversee construction and bring this park on-line. In addition, the area will be landscaped with adequate shade trees, and a parking lot will be installed.

MORRISON PROPERTY

In 1999, The Conway School of Landscape Design completed a preliminary conceptual design for this site. During the next five years funds will be sought for the final design and construction stages of this project. The cost of developing several fields on this site is estimated at $350,000.

The Recreation Department will work closely with other town boards and committees to address site issues before construction begins. Part of this five-year plan will include developing an integrated trail system connecting the future rail trail to the Morrison Property and to the East Acton Village landscaped area. Better access to fishing and pond related activities would also be addressed at the adjacent Ice House Pond site. Finally, both short and long-term forestry plans will be developed to properly manage the forested areas on this site.

SCHOOL STREET

In the next five-years the Town will be preparing a new land use lease agreement with the State that will increase the acreage available at this site. This area would be ideal for a full-size baseball field complex complete with a large practice field suitable for football practice and/or games. In addition, improvements need to be made in both parking and the irrigation system at this site.

Action Recommendation 15: Identify additional sites for future athletic field development.
This is a task that will be included in the OSR Committee's efforts described in Action 2 above. As town funds become more and more difficult to obtain for recreation projects, alternative funding sources, such as the CPA, will be critical to ensure the town's ability to address recreational needs.

The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

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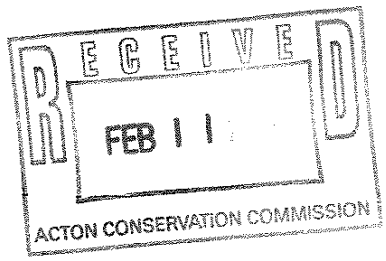

February 7, 2003

Morene Bodner
Barbara Smith
Open Space and Recreation Plan Committee
72 Main St.
Acton, MA 01720

Re: Acton Open Space and Recreation Plan

Dear Morene and Barbara:

Thank you for submitting Acton's draft Open Space and Recreation Plan to this office for review for compliance with the current Open Space and Recreation Plan Requirements. This plan has been conditionally approved through February 2008. The plan will receive final approval once the required maps and letter of review from MAPC are submitted.

Conditional approval will allow the town to participate in DCS grant rounds through February 2008, and a grant award may be offered to the town. However, no final grant payments on any project can be made until the plan is completed.

This is a very well organized report and several sections were outstanding including the Plan Summary, Inventory, and Analysis of Needs. The thorough explanation of what is meant by lands protected under Article 97 was terrific. Be sure to mention which of the town owned recreation lands, not owned by the school department, are also protected under Article 97.

I was particularly intrigued by the description of the Land Stewardship Committee. It seems that so many conservation commissions are absolutely torn between their duties to enforce wetlands regulations, and their desire (sometimes bordering on a "calling") to protect other open space as well. I'd be very interested to hear more feedback on how this subcommittee of the conservation commission fares in the future.

Again, this plan was a job well done, and I look forward to receiving the maps and final copy. Please call me at (617) 626-1015 if you have any questions or concerns.

Sincerely,

Jennifer Jillson Soper
Regional Planner

cc: Board of Selectmen
Conservation Commission
Recreation Department

Metropolitan Area Planning Council

60 Temple Place, Boston, Massachusetts 02111 617-451-2770 fax 617-482-7185 www.mapc.org

Serving 101 cities and towns in metropolitan Boston

February 24, 2002

Morene Bodner
Barbara Smith
Co-Chairs, Open Space and Recreation Plan Committee
Acton Town Hall
472 Main Street
Acton, MA 01720

Dear Ms. Bodner and Ms. Smith:

The Metropolitan Area Planning Council has reviewed the draft of the Town of Acton's Open Space and Recreation Plan 2002-2007. The plan is very well-written and thorough. You have done an excellent job of addressing regional issues.

Thank you for the opportunity to review this plan.

Sincerely,

Joan Blaustein

Joan Blaustein
Land Resources Planner

Cc: Joel Lerner, Division of Conservation Services
Christopher Schaffner, MAPC Representative, Town of Acton

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William H. Shupert, III, Chairman
Board of Selectmen

June 28, 2002

Morene Bodner
Barbara Smith
Co-Chairs
Open Space and Recreation Committee
472 Main St.
Acton, MA 01720

Dear Morene and Barbara:

The Acton Board of Selectmen has reviewed the Open Space and Recreation Plan: 2002-2007, developed by your committee. First, on behalf of the Board, let me thank both of you for your invaluable service to the town in organizing, leading, and implementing this effort to update our last Open Space and Recreation Plan. Your hard work and enthusiasm has paid off with an excellent update to the Plan and we thank you sincerely for your devotion to this effort.

Peter Ashton, a member of the Board of Selectmen, has been involved in the preparation of the Plan from its earliest stages, reviewing drafts for consistency with town policies, and making suggestions for areas that may have needed greater focus or clarification. He has also kept the Board informed of the committee's progress over the past year.

We believe the plan is a particularly useful document as it has benefited from input from many different groups. You have held public hearings in conjunction with the Conservation Commission to solicit input from the public at large, and you performed an extremely valuable survey that attracted over 1400 responses including an excellent cross section of the town's residents. The plan also updates our inventory of conservation and recreation lands of interest which is an extremely valuable planning tool. The passage of the Community Preservation Act at Town Meeting this spring is a further indication of the strong interest that the town has in preserving open space, building affordable housing and preserving our historical character.

The update of this Plan has been an extremely productive exercise, highlighting town needs and concerns, and I am pleased to endorse this Plan on behalf of the Board of Selectmen.

Very truly yours,

William H. Shupert, III
Chairman

TOWN OF ACTON
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Acton Conservation Commission

July 9, 2002

Joel Lerner, Director
Executive Office of Environmental Affairs
Division of Conservation Services
100 Cambridge Street
Boston, MA 02202

RE: Town of Acton Open Space and Recreation Plan

Dear Mr. Lerner:

The Acton Conservation Commission has reviewed, and participated in, the preparation of the 2002 – 2007 Town of Acton Open Space and Recreation Plan. This document builds upon and expands the excellent work of the Town's earlier plan, adding a new, virtually parcel by parcel assessment of the Town's open space resources.

The strength and success of the earlier Open Space and Recreation Plan are reflected in the number of recommendations made five years ago that have been acted upon and implemented during the plan years. These range from the purchase of lands specifically identified in the previous plan to the creation of a Land Stewardship Committee to maintain our conservation parcels and a Recreation Department to manage our active and passive recreation lands.

The 2002 – 2007 Open Space and Recreation plan reflects the continued determination of the Town's citizens to preserve and protect the natural resources and public open spaces of their community, and to maintain a sense of community in a world of development pressures. The 2002 – 2007 Open Space and Recreation Plan recognizes the successes and adopts the goals of the earlier plan, while expanding the knowledge base and presenting recommendations that recognize the changes that have occurred in the intervening years.

The Conservation Commission supports and endorses each and every of the goals and objectives identified in the 2002 – 2007 Open Space and Recreation Plan. We particularly encourage the immediate adoption of a permanent Open Space and Recreation Planning Committee – a committee identified in the plan that "is charged not only with preparing the Open Space and Recreation Plan, but also with overseeing its implementation." Just as there is a need for the

Economic Development Committee to advise the Board of Selectman on issues related to commercial development, there is a need for a similar body to advise the Board on issues related to the use, preservation and protection of the Town's open space.

The Conservation Commission would like to take this opportunity to thank the Co-Chairs and members of the Open Space and Recreation Committee for an excellent document that captures the character of the Town and so coherently expresses the desires and goals of its citizens as pertains to open space and recreation planning.

Sincerely,

Andrew D. Magee
Chairman, Acton Conservation Commission

Acton Conservation Trust
PO Box 658
Acton, MA 01720

July 10, 2002

Joel Lerner, Director
Executive Office of Environmental Affairs
Division of Conservation Services
100 Cambridge Street
Boston, MA 02202

RE: Town of Acton Open Space and Recreation Plan

Dear Mr. Lerner,

Members of the Acton Conservation Trust (ACT) were privileged to participate in the preparation of the 2002 – 2007 Town of Acton Open Space and Recreation Plan. The ACT Board has proudly voted to support and endorse the recommendations presented here.

I believe this is a thoughtful and necessary plan that must be used to focus town planning, zoning and recreation decisions for the foreseeable future. This plan accurately reflects the expresses desires of Acton citizens (as noted in a recent survey) to preserve the remaining open space and natural resources in our town.

While I support all the goals and recommendations presented here, I believe it is particularly important that the Town immediately implement the recommendation to set up a permanent Open Space and Recreation Planning Committee – to advise the Board on issues related to the use, preservation and protection of the Town's open space.

The Committee has circulated this plan widely and has actively involved many diverse coalitions in town. On behalf of the Acton Conservation Trust, I would like to commend the Co-Chairs and members of the Open Space and Recreation Committee for their tremendous efforts in developing this plan. I urge you to accept this document and believe it will energize the Acton citizens further towards protection of open space.

Sincerely,

Karen O'Neill, Clerk, Acton Conservation Trust

Susan Mitchell-Hardt, President, Acton Conservation Trust

TOWN OF ACTON
HISTORIC DISTRICT COMMISSION
472 Main Street Acton, MA 01720

July 3, 2002

Open Space and Recreation Committee
Acton Town Hall
472 Main Street
Acton, MA 01720

To the committee:

Thank you for asking us to comment on the new OSR Plan final draft. The copy we have seen covers Sections 1 through 9. It is a monumental undertaking, and we commend you on its foresight, thoughtfulness, and professionalism.

In administering Acton's three Ch. 40C local historic districts, we are continually aware of the contribution that open parcels and landscape elements make to the town character that we all wish to preserve. A few recreational properties and undeveloped parcels are located within the districts. Many undeveloped properties also presently provide an important backdrop to these areas. This is particularly true along some of the streets in the South Acton district.

In reviewing the draft plan, we have learned a lot about the status of Acton's land protection. We were surprised to see that there are only two properties in town under permanent conservation restriction, and none under permanent agricultural preservation restrictions. Given the recent failed attempts to purchase the Robbins Mill and DiDuca lands, as well as the perilous state of some of the local farmland, we strongly agree with the plan's goals of expanding the use of conservation restrictions, and of initiating a stronger local policy for farm preservation. In our experience, Acton lags behind many other nearby communities in both areas.

The plan again reminded us of the places where historic preservation, and its tools, can work together with, and at times, enhance, conservation programs and goals. We are thus appreciative of the inclusion of historic structures and landscape resources in both the OSR plan's inventory and its goals, and in its analysis of the community's needs. Passages like the one on the town common in Section IV B, for instance, which describes the entire common and its attributes, not just the monument triangle, go a long way toward educating both the public and town boards about the true nature of Acton's historic landscapes.

We were glad to see that the plan notes certain preservation tools which are available to aid in the conservation of landscapes as well as historic buildings and structures. There are several references to the Community Preservation Act and the Community Preservation Fund, at least one mention of the National Register, and a reference to the role of Ch. 40-C Local Historic Districts in design review over open parcels within their boundaries.

While there seems to be a broad understanding in town of the function of the Local Historic Districts, we would like to emphasize the potential of the National Register of Historic Places, as well, as a factor in preserving Acton's rural and historic character. Although the National Register program does not involve any degree of design review unless state or federal funds, licenses, or actions are involved, it can still be a powerful force in preserving town character. Over forty properties in Acton are currently listed on the National Register either individually or as part of a National Register district, (many possessing significant landscape components,) as is the entire length of the Isaac Davis Trail in both Acton and Concord.

Nevertheless, we have found that there is a low level of awareness on the part of developers, town volunteers, and the general public as to where those parcels are, what the NR designation means, and the opportunities it offers to the town. Federal and state preservation funding grants, for instance, such as the Mass. Dept. of Environmental Management historic landscape grants and those for cemetery restorations, tend to be available only for National Register-listed or eligible properties. (While the town's most important municipal historic landscape, the town common, is part of the Acton Centre National Register District, none of Acton's cemeteries or other major landscapes are on the National Register.) NR designation or eligibility also triggers the involvement of the Massachusetts Historical Commission in state- or federal-funded development projects. The MHC can be a powerful ally in any local attempts to preserve the character of a community's landscape.

In addition to those that are already NR-listed, many more properties in Acton are likely to be eligible for the National Register. Among them would be some of the parcels listed in the plan as priorities for preservation, such as some of the mill ponds, farms, and possibly the agricultural fields along Route 2. It is thus our recommendation that a permanent OSR committee (and we hope that there will be one) keep the National Register program in mind as one possible tool it can use, and that it work with the Acton Historical Commission (and, where appropriate, the Historic District Commission,) to utilize the program's potential.

Again, we congratulate you on this major step toward meeting the town's conservation, open space, and recreation goals, and we support you wholeheartedly in your efforts.

Sincerely,

Anne Forbes,
for the Historic District Commission

Andrea Ristine

From: Matt Lundberg [mlundberg@lundbergsys.com]
Sent: Tuesday, July 09, 2002 3:05 PM
To: Andrea Ristine
Cc: Chelle Melander; Jim McCoy
Subject: OSRP Final Draft comments

Dear Andrea,

This note is my review of the OSRP final draft. In summary I applaud all concerned for producing a thorough, well-organized document that in my opinion (a) reflects hard work done to ensure it represents the opinions of our town as a whole, and (b) provides a solid, understandable working plan to guide Acton's development of open and recreation space.

In my role representing A-B Pop Warner we are delighted to see the acknowledgement given to our needs in Section 7B (Analysis of Needs/Summary of Community's Needs/Active Recreation), where on page 116 it states that, "Of highest priority is the need to construct a new lighted football field, a full-size baseball field, and two softball fields."

Of all the youth sports programs in town Pop Warner has been the most field constricted over the previous four years. Despite increasing demand we have had to hold our program static and turn children away, a situation which can only be alleviated with the addition of a field.

I would also like to point out that A-B Youth Lacrosse, the fastest growing youth program that uses fields, is not represented in the plan. Lacrosse had approximately 120 participants this spring and is growing at 20% per year. It too is restricted by field space; they are allocated a limited amount of time at the High School's soccer/lacrosse field, which is showing significant deterioration due to overuse and which will be hosting even more activity during school construction in the coming years.

With this in mind, I have two final comments.

1) If you would like to include any additional information regarding A-B Youth Lacrosse please contact Chelle Melander, whom I've copied on this email.

2) As I've discussed with Nancy McShea in the past (and noted in my comments on page 117 of the OSRP draft), A-B Pop Warner and Youth Lacrosse would both enthusiastically support (financially and otherwise) the addition of a multi-use active field that would be designed to primarily support football and lacrosse. These sports have complimentary seasons (lacross in spring, football in fall), and the field would be available to support a variety of other activities during our off-seasons. I will be continuing discussions with Nancy and with others as appropriate to develop this concept further.

Thanks & Regards,
Matt Lundberg
Past President, A-B Pop Warner

(cc: Chelle Melander / A-B Youth Lacrosse
Jim McCoy / current President, A-B Pop Warner)

TOWN OF ACTON
472 Main Street
Acton, Massachusetts, 01720
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Fax (978) 264-9630

Planning Board

July 30, 2002

Ms. Barbara Smith
Open Space & Recreation Committee
159 Central St.
Acton, MA 01720

Dear Barbara:

I have reviewed the Final Draft of the Open Space and Recreation Plan, which you have provided to the Planning Board. After a discussion at our July 22, 2002 meeting, the Planning Board voted to send the attached list of corrections and comments regarding the plan to you. The Board also endorsed the comments sent to you previously by the Town Planner, Roland Bartl. I am also attaching his comments to this letter for your reference.

The Open Space and Recreation Plan is a very thorough, extensive document, providing a wealth of information relevant to the issues of open space and recreational resources in Acton. I commend all the hard work that is evident that went into completing the Final Draft.

The Planning Board recommends the adoption of the Plan, with some minor changes. We are concerned about the apparent perception that placing greater regulatory restrictions on development and downzoning parcels will alleviate some of the open space and environmental concerns of the OSR Committee. While the goals of the Committee are laudable, the issue is complex. Unfortunately, some of the recommendations of the Plan in this regard may have many unintended and unforeseen consequences, not necessarily related to open space issues.

The Planning Board believes the Plan should focus on developing and maintaining the facilities necessary to accommodate Acton under what is projected to be the final build-out of the Town. The Board supports identifying remaining key parcels for open space, and developing goals and strategies for addressing the Town's future open space needs. We also support maintaining existing farms, but would like to see more specificity in the strategies for accomplishing this goal.

We encourage the Open Space and Recreation Committee to be pro-active in identifying key remaining unprotected parcels, and in opening a dialog with key landowners. We emphasize that the land in question is not simply open land, but rather belongs to specific landowners, who have rights to use their land as they see fit. The time to discuss the preservation of key parcels for open space with the landowners is now rather than later. Waiting until a landowner begins the process of development may be too late.

The Planning Board appreciates the many hours of research and work that went into this Plan, and I want to thank you for your consideration of our comments.

Sincerely,

Ken Sghia-Hughes, Chair
Planning Board

To: Open Space and Recreation Committee

From: Ken Sghia-Hughes, Chair
Planning Board

Date: July 30, 2002

Subject: Comments on the Open Space and Recreation Plan—Final Draft

Below are specific comments and recommendations for changes to the text of the OSRP, Final Draft. Please also note the comments of the Planning Department, as written in the attached memo from the Town Planner.

As a general comment, throughout the document acronyms, such as PCRC, ACT, LSCom, etc., need to be spelled out, so that the reader can understand what they refer to.

Page, Paragraph	Comment
P5¶5	Meaning of first sentence in paragraph not clear. Also, should read "Acton's greatest environmental ~~problem~~ concern, water...". Second sentence should read, "Although summer watering ~~bans~~ restrictions have been in place for several years, the current ~~water supply~~ State-permit water withdrawal limit will support little new development ~~of any kind~~, without additional outdoor watering restrictions,..." In the third sentence, the reference to water supply protection is misleading, since the water supply is secure. Maybe the intent was the protection of the water quality.
P6¶4	Second sentence should read: "The Planning Department submitted a request to the Town Manager's office for funding the construction of the 1.1 mile portion of the ARRT, but due to budget constraints, this item was not included in the warrant presented at the Annual Town Meeting in April 2002."
P9¶2	Are Jane Ceraso and Tom Tidman voting members of the committee, or are they considered staff?
P14¶2	Fourth sentence should read: "Nearly 1/3 of this land was donated to the Town as a result of cluster developments over the past 15 years."
P16¶3	Fourth sentence should read: "A small portion of the Maynard Country Club lies in Acton, and the Club has appeared...."
P17¶2	Delete last 3 words: "...which lies nearby."
P20¶3	Third sentence: "Acton's new build-out analysis, . . . showed that the town's current water supply will not support ~~that level of development~~ full buildout of the town.
P20¶6	Second bulleted item: Delete extra spaces between "their" and "issues"
P23¶4	Insert after the fifth sentence: "The East Acton Village Planning Committee (EAVPC) is currently developing a plan for East Acton."
P25¶3	Last sentence: "According to the Master Plan Update, . . . 434 acres of open space have been preserved which ~~would likely~~ could not have occurred . . . ."
P26¶2	Last sentence: "As part of the plan to encourage economic development in town, ~~the town approved the formation of an Economic Development and Industrial Corporation (EDIC) in 2000~~, the Board of Selectmen established an advisory

	Needs. Nevertheless, the Town has not yet created an EDIC—it will probably be brought to Town meeting in April 2003.
P112¶5	A building permit limit is not effective, since the numbers are falling on their own, and locking in the historical rates would have no effect. A moratorium by law requires a crisis which can only be address with a temporary moratorium in effect.
P114¶3	It might be useful to also compare the total open space and recreation land from 1995 to today (the 2697 or 4347 acre numbers)
P114¶4	It might be good to exclude the NARA acreage from the 1995 calculation, for a more representative comparison of now and then.
P114¶5	Again, I don't understand the difference between the 2 total population numbers given for maximum buildout
P121 Table	Add to end of g): "where appropriate."
P123 Table	Number 4: ". . . advocate for Acton's existing farms." Number 5 change to: "Charge the OSR Committee with researching, developing and advocating regulatory changes to mitigate the effects of growth, and preserve Acton's character." As stated in the Plan, Acton will continue to experience residential growth. The OSR Committee should focus on addressing the open space and recreational needs of the increasing population based on the buildout projections
P124 Table	Numbers 7 & 8: While laudable goals, I don't see how these fit in to the mandate for Open Space and Recreation. Aren't these the responsibility of the AWD?
P126 Last Paragraph	Add to end of last sentence: "where appropriate."
P127¶4	"There is a study group, which is currently investigating the PCRC bylaw to determine if changes ~~could~~ should be made to further limit the number of units in a cluster development.
P128¶6	Action Recommendation 7: change "form" to "from"
P128 Last Paragraph	Limiting lawn size is unenforceable. Even if developers agreed, homeowners could always expand the lawn later. As far as banning irrigation systems, the AWD prefers in-ground systems with a timer over "manual" systems.
P131¶3	Delete second sentence: "Remaining maps will be completed early in 2002."
P131¶7	Third sentence: "Others are implied in discussions above." Need to detail what these are.

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Planning Department

INTERDEPARTMENTAL COMMUNICATION

To: Open Space and Recreation Committee ***Date:*** July 2, 2002

From: Roland Bartl, AICP, Town Planner R. B.

Subject: **'02-'07 Open Space and Recreation Plan - Final Draft**

On behalf of the Planning Board, I can provide the following comments on the final draft (draft 3 - 61202). Comments range from minor suggestions to contributions that are more substantial. I apologize that they come this late. When a previous draft circulated, there was simply no time to look at it:

- Page 5, last line: Non-point pollution comes from residential and commercial development.
- Page 6, 3rd paragraph - near end: It is best if the ARRT is not referred to as a recreational trail even if it will partially fulfill that function. Its primary purpose is to provide an alternative to motorized transportation. Primary funding will be sought from federal appropriations with a priority focus on transportation enhancements. I suggest to strictly use "bike trail or bicycle trail" when describing the ARRT; "multi-use trail" is second best. Definitely, delete any terminology labeling it "recreation". It may jeopardize future funding options. Please check the entire document for this item wherever reference is made to the ARRT. The same caution may be applies to any discussions of the Bruce Freeman Trail.
- Page 8, 5th paragraph - Losses: The development of the DiDuca Farm is not consistent with local or regional planing goal. After the 1990 master plan, which designated growth centers in Acton, the site's zoning is low-density residential (R-8). Acton fought and won in court a landmark case that upheld the zoning scheme and the underlying planning objectives. Only due to extremely generous State grandfathering laws can the commercial development still go forward. The new strip mall is near but decidedly too far outside of East Acton Village. Thus, it contributes to sprawl and detracts rather than enhances designated concentrated growth centers.
- Page 8, 6th paragraph: The development of the Robbins Mill Pond land is not a total loss. Currently in the permitting phase, the development plans for that land propose a cluster-type development (PCRC) that would preserve 157 acres of the 233 acre tract (67%), including the most valuable land along Nashoba Brook.
- Page 12, top: Reference is made here and in other locations of the document to section 12. The entire document sports only 9 sections.
- Page 14, 2nd paragraph: Of the 1600 acres preserved since 1960, 434 acres (27%) were protected through the cluster-zoning tool, mostly PCRC. Open spaces protected through cluster development dominated successes in land preservation during the last two decades. It seems this should be worth a mention.

- Page 16, Maynard: The Maynard Country Club had an appearance before the Acton Planning Board, too.
- Page 16, Stow (end of paragraph, next page): The notion that large lot zoning somehow protects open space is one of the worst pieces of misinformation in the planning and zoning debate. It would be too bad if it were to be retained in this Plan and characterized as a tool that neighboring communities use to preserve open spaces. Rather than protecting open space, large lot zoning simply creates fewer homes on larger lots, driving up the cost of housing, the length of streets needed to service each home, and the vehicle miles traveled by new homeowners (spells more air pollution). The effect of large lot zoning is to make the new housing market increasingly exclusive to the upper-income households. See also Carlisle in this chapter. In such a climate, affordable housing efforts will truly be relegated to charity.
- Page 17, Concord: I am not aware of a wholesale relocation of Route 2. The chosen words may create a false impression. Rather, the various alternatives are design options with varying degrees of encroachment into the open fields.
- Page 25, last paragraph: There is no town-wide "density bonus" for cluster type developments, only in certain zoning districts. More importantly, the term density bonus, while used loosely in the '98 Master Plan Update, is unfortunate because it fails to explain the real nature of this zoning tool. Looking at it historically, the housing density differential between standard and cluster-type development in the affected districts is a penalty for the standard development, not a bonus for the cluster. It would be good if this fact could be highlighted in the Town's official documents from now on.
- Page 28, Infrastructure - 1st paragraph: Traffic growth data for the 10 year period 1989 to 1998 show traffic essentially flat at +/-0.5% per year, not the 2% stated in this paragraph. Route 2A itself could handle quite a bit more traffic according to traffic analysis results. The trouble is left-turn accessibility from side streets and driveways.
- Page 29, long term development patterns, end of first paragraph: Preliminary research results from neighboring Towns indicate that Acton in comparison is vastly more successful in preserving open space through cluster development, but in a trade-off accommodates more homes in such developments.
- Page 38, first bullet: Regulatory approaches that focus on zoning and land use permitting for limiting water usage, such as restrictions on lawn sizes or specific xeroscape landscaping requirements are not enforceable without significantly increased staffing at Town Hall. Simple outdoor watering restrictions as used and enforced by the Acton Water District for many years have a self-regulating effect on landscaping and lawn sizes, or lawns will simply be brown during the hottest months of the summer. I highly commend the Water Districts educational effort, although its benefit will not be felt for some time. The first few experiences with lawn size limitations through Planning Board special permits have failed miserably right from the start, and there is no taste here for a repeat performance. To the extent that the draft plan refers to Planning Department involvement in future regulatory efforts (here and in other sections of the plan), I would add caution to this idea or delete it entirely. In short, it seems that the regulation of outdoor watering should start at the tap. It should also be noted, that Acton's highly successful cluster zoning option has contributed to smaller yard and lawn sizes than might otherwise have been the case.
- Page 52, scenic roads: For clarification, please add that stonewalls and trees are only protected within the street right of way. That is either the right of way as shown on a record plan, or the realm of public occupancy, usually lying between the faces of stonewalls (if there are any) but not including the stonewalls themselves. Stonewalls and trees on private property along scenic roads are not regulated under the scenic road bylaw.

- Page 55, last full paragraph: The assertion that development decreases flow in streams, potentially converting them from permanent to intermittent streams, is novel and should be substantiated. Usually the concerns are quite the reverse, that development increases flow causing greater flooding downstream. Engineering designs try to cause zero effect on the flow of streams, although this science does not have space flight accuracy. The example used (Nagog Brook) is not appropriate in any case. The only impediment to continuous stream flow of Nagog Brook is the dam at Nagog Pond. It was constructed about 100 years ago when this public water supply was created. Dam building was widespread during the early industrial era and the Army Corps of Engineers built huge water control projects in later years. Today, this is not the typical development in a watershed.
- Page 112, 3rd paragraph under water resources: The purpose of an EDIC is to "rescue" properties where the free market has failed so that blight and decadence can be avoided or remedied. It has been said that the EDIC would compete with free-market forces to bring development more in line with town goals, but this idea makes me extremely uncomfortable. I would prefer that this not be stated in an official Town document until it is clarified if such activities are indeed within the EDIC scope that the law had intended.
- Page 120, regulatory needs: The Planning Board has backed away from annual building permit limits. Research shows that limitations on the annual number of building permits would have little effect on the growth rate for new homes while requiring extensive administrative overhead. The lack of effectiveness is rooted in the legal doctrine that annual restrictions must be based on 5- to 10-year historical rates. Given the small number of large tracts remaining in Acton, it is extremely unlikely that Acton would exceed this historic rate even without regulatory limits. The remaining large tracts would all have to come on-line in the same year with builders and developers having capacity for turning out new homes at an unprecedented rate.

Cc: Planning Board
Town Manager

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Town of Acton Master Plan Update, 1998

South Acton Village Plan, 1995

West Acton Village Plan, 1994

Kelley's Corner Area Plan, June 1995

Town of Acton Zoning Bylaw

Acton Open Space and Recreation Plan, 1996-2001

Environmental Handbook for Massachusetts Conservation Commissioners, Massachusetts Association of Conservation Commissions

Acton Town Reports, 1998, 1999, 2000, 2001

The Open Space Planners Workbook, Executive Office of Environmental Affairs, Division of Conservation Services

"Preliminary Bedrock Geologic Map of the Westford and Billerica Quadrangle, Massachusetts", Open File Report 75-387. United States Geological Survey

Stratigraphy of the Nashoba Zone, Eastern Massachusetts: An Enigmatic Terrane", in The Bedrock Geology of Massachusetts, N.L. Hatch, editor

Massachusetts Landscape Inventory, a Survey of the Commonwealth's Scenic Areas, 1982, Massachusetts Department of Environmental Management

Metroplan 2000, Metropolitan Area Planning Council

"An Amphibian Bill of Rights", Sanctuary, Massachusetts Audubon Society, March/April, 2001

"Crossings Corrected" by Gayle Goddard-Taylor, Sanctuary, Massachusetts Audubon Society, March/April, 2001

"Rules of the Road" by Alexandra D. Dawson, Sanctuary, Massachusetts Audubon Society, March/April 2001

"Conserving Our Commonwealth, A Vision for the Massachusetts Landscape", prepared by The Land Conservation Center of the Trustees of Reservations, June, 1988

"Chemicals Found Near Acton Wells", Boston Globe, December 2, 2001, Davis Bushnell

"W. R. Grace Studies Development Options for Acton Land But Activists Fear Contamination Still Poses Threat, July 1, 2001, Boston Globe, Davis Bushnell

Land Trust News, Acton Conservation Trust, Vol. 2, No. 1; Vol. 3, No. 1; Vol. 4, No. 1

"Managing Growth Without a Growth Management Statute: The Uses of MEPA", by Jay Wickersham, Assistant Secretary of Environmental Affairs, Commonwealth of Massachusetts

"Acton Water District Water Words Notice" Winter 2002, Acton Water District

"Acton Profiles of General Demographics Characteristics, Census 2000", Metropolitan Area Planning Council.

"Preservation Through Bylaws and Ordinances, Tools and Techniques for Preservation Used by Communities in Massachusetts", Massachusetts Historical Commission, Boston 2001

"Building Vibrant Communities Linking Housing, Economic Development, Transportation, and the Environment", Executive Office of Housing and Community Development, Commonwealth of Massachusetts

"Fast Growth Outside Boston Strains Towns' Water Supplies", by Anthony Flint, Boston Globe, 8/26/01

"Public Comment Draft, Guide to Lawn and Landscape Water Conservation, November, 2001", Massachusetts Water Resources Commission, Commonwealth of Massachusetts

ONLINE RESOURCES

New England Land-Link, www.smallfarm.org

"Assabet River Rail Trail", ARRT Master Plan, www.arrtinc.com

"Model Land Clearing, Grading and Protection of Specimen Trees Bylaw", Cape Cod Commission Model Bylaws and Regulations, Citizen Planner Training Collaborative Model Ordinances, University of Massachusetts, www.umass.edu.massctpc
(Also CTPC list of Land Use Planning Links

Section 12 Appendix J - Water Recommendations

This appendix provides the planned Water Advisory Board (see Section 9, Action Recommendation #7) with information regarding state recommended lawn and landscape water conservation measures and examples of other community's water related regulations or by-laws.

State Recommended Lawn and Landscape Water Conservation Measures
The state Executive Office of Environmental Affairs (EOEA) recommendations on lawn and landscape water conservation measures should be carefully considered by the Water Advisory board. An EOEA Policy on Lawn and Landscape Water Conservation, released as a draft in November 2001, opened with the following statement: water used for maintaining landscapes and lawns "should not be used at the expense of public health and safety or the environment. In addition, water used for maintaining landscapes and lawns should be minimized by implementing sound water conservation and water efficiency practices". (See Acton Water District's guidelines for watering in the Appendix).

Recommendations for property owners and managers include:

- Minimize lawn size (The state recommends that communities use one of several mechanisms to minimize clearing activities, either through the zoning bylaw, or through site plan review standards that apply to all projects requiring site plan approval.)
- Choose drought tolerant grass species
- Abide by local water restrictions
- Water only when necessary, based on soil and turf conditions
- Do not water lawns or install automatic lawn irrigation systems in water-short communities
- Install rain shutoff devices on existing automatic irrigation systems
- Collect and reuse water for landscaping needs with cisterns or rain barrels
- Mow lawns at highest recommended heights

Recommendations for property owners and managers responsible for recreational fields:

- Facilities should be designed and maintained to minimize water use
- Use sophisticated automatic irrigation systems to water only areas needing water
- Use reused water where possible
- Raise public awareness

Acton's recreation fields already use some of these techniques. The proposed Quail Ridge golf course should abide by these recommendations, even though it will obtain its water from private wells. (The state recommendations also apply to private well owners.)

Recommendations for owners of private waters or private wells include:

- Abide by water restrictions and other conservation measures put into effect by the community, particularly if the water shortage is caused by dry conditions
- Do not hook up pumps to withdraw water directly from any small ponds/lakes, streams or rivers. (Note: Acton has discouraged this.)

The state recommends that communities regulate or write bylaws to strengthen the ability of water suppliers to conserve water, such as:

- Encouraging water conservation through water use rate structures that penalize for excessive outdoor water use, (via a second meter).
- Regarding automatic irrigation systems, the state recommends requiring rain shutoff devices for automatic irrigation systems or, in the case of communities with severe water shortages, banning automatic irrigation systems. Other recommendations include requiring timing devices to make the system conform to local watering restrictions, and moisture sensing devices to prevent the system from watering when it is not needed (when it rains). (Note: The draft uses Acton's Water Supply District as its example of good restrictions for in-ground irrigation systems. See Appendix for those regulations).

The Massachusetts Department of Environmental Protection also provides a model water use restriction by-law/ordinance and guidelines for drafting one.

Examples of other Community's Regulations or Bylaws

North Andover's bylaw: A fee is assessed for the connection of an automatic lawn irrigation system to the municipal water supply.

Sharon's bylaw: The installation of underground piped irrigation systems are prohibited for a percentage of the total lot coverage

Sterling's water district policy: Rain shutoff switches are required on automatic irrigation systems.

Sudbury, Bridgewater, and the Mashpee Water District: These towns all prohibit connection of in-ground irrigation systems to municipal water supplies.

The Cape Cod Commission's: Their "Model Land Clearing, Grading and Specimen Tree Protection Bylaw" requires review of any project involving land clearing of an area greater than 40,000 sq. ft., just under one acre. (The threshold for review may vary according to circumstances of the town and the individual site. See Appendix for the Cape Cod Commission Bylaw.)

.

By minimizing the loss of natural vegetation and establishing smaller lawns as a standard for new development, municipalities can reduce outdoor water used for lawn watering. In addition, minimizing soil disturbance by maintaining natural vegetation will enhance groundwater recharge, reduce sediment and storm water run-off and subsequent siltation of nearby streams, lakes and ponds, and maintain habitat for native wildlife. This may be enforced through a bylaw or through site plan review standards.

Section 12 Appendix K - LSCom Five Year Plan

Note: These plans augment the information provided in Section 9, Action Recommendation #13.

Anticipated Projects for Existing Conservation Areas:

Conservation Area 5 - Grassy Pond

1. Improve Newtown Road parking lot
2. Replace the long boardwalk across the wetlands
3. Construct a viewing platform at the end of the existing pier into the pond

Conservation Area 6 - Great Hill

1. Erect kiosk at Rt. 27 entrance
2. Construct parking lot and kiosk at Piper Road entrance
3. Create a foot trail around the pond with appropriate native plant landscaping

Conservation Area 7 - Guggins Brook

1. Improve Rt. 111 parking lot
2. Erect standard kiosks at both entrances

Conservation Area 8 - Heath Hen Meadow

1. Improve Overlook Trail
2. Construct observation platform on Overlook Trail for marsh wildlife viewing
3. Construct connecting boardwalk to Stow's Captain Sargent Farm Conservation Area

Conservation Area 9 - Jenks Land

1. Improve parking lot
2. Widen the access trail
3. Erect standard kiosk

Conservation Area 10 - Nagog Hill

No improvements anticipated

Conservation Area 11 - Nashoba Brook

No improvements anticipated

Conservation Area 12 – Pratt's Brook

1. Install handicapped picnic table and ramps for the Senior Park
2. Barrens management

Conservation Area 14 - Stoneymeade

1. Erect standard kiosk

Conservation Area 16 - Town Forest/Will's Hole

2. Erect educational kiosk at the bog entrance
3. Construct observation platform on the bog
4. Erect standard kiosk at Captain Handley entrance

Other Conservation Area - Wetherbee

1. Install entrance sign and standard kiosk
2. Complete loop trail and blaze to standard

Anticipated Town-Wide Projects:

Completion of website

The LSCom website was made accessible to the public in late fall of 2001. It is the result of a joint committee effort, but largely the work of one dedicated volunteer who has made his own computer resources available for the committee's needs in this area. Thus, further funding to complete this project is not anticipated.

The site is not yet complete, as certain maps are unfinished, and some text still has to be written. Our intent, however, has been to put on the website all the material that will appear in the Field Guide so that those computer users who have the capability may download maps and text as desired. Having the Guide material on the web also will allow easy updating of information concerning trails and possible new conservation areas as that information changes. The maps have been designed so that the three classes of trails will be distinguishable either in black and white or in color.

There are a number of links, either implemented or planned, to other Town websites, and websites in the contiguous towns. There is also information on the site on a number of topics that will not be included in the Guide. This concerns activities and projects of current interest. The LSCom website was linked to the official Town website in December of 2001. Presently the Town server is not capable of hosting the website. However this is planned for some future date.

Conservation parcel boundary exit signs

Although nearly all the trails within conservation parcels have now been blazed, there are many 'unofficial' paths that lead across the conservation boundaries that are not marked. As a last step in the signage process, where these informal trails come from/lead to more than one private abutting home lot, a sign will be posted such that walkers will be made aware that they are entering conservation area. Markers for this effort are either in hand or can be fabricated for minimal cost.

There is also need to perform some alteration to the Bay Circuit Trail markers within Acton conservation land. These markers will be supplied by the BCT organization from their own funds.

Forest and barrens management plans
In the Pratt's Brook Conservation Area there exists an open barrens area of approximately 15 acres covered with low-bush blueberry and surrounded by pitch pine and red oak. This vegetation complex is typical of Cape Cod but extremely rare in Middlesex County. Gray birch, an invasive species of little value, is moving into this area since the frequent burning caused by sparks from the nearby railroad has ceased in the diesel era. In general, LSCom has pursued a policy of allowing natural succession to take place on our conservation lands. However, this area is an exception to this policy for two reasons: 1) the area is nearly unique in Acton, and 2) Acton has very few naturally open areas. We hope to be able to continue a process already begun, whereby the gray birch and other undesirable species that would eventually take over this unusual habitat are cut back. The work is labor intensive, and ideally it could be extended into a greater portion of the surrounding woods where the blueberry still grows strongly. Funding would be required, perhaps in the form of a grant, to hire an outside contractor to accomplish this work appropriately.

The two conservation lands originally designated as Town Forest (the Bulette land and the Town Forest located between NARA and the Wills Hole Conservation Area), in particular, could benefit from having a forest management plan that would be carried out under the supervision of an accredited forester. This proposal would at first most likely not be favorably received even by members of LSCom, as the committee, as presently composed, prefers to leave all natural areas completely natural. However, many healthy forests are managed according to approved silvicultural practices under the supervision of specialists in this field. Education concerning the benefits of such a program would have to be carried out first. If the idea became acceptable, funding would be required to execute the plan.

Protection and marking for historical sites and unusual botanical species
Presently, there are few plans for marking either historical sites or unusual botanical species, but there are a number of historic and Amerindian sites on Acton conservation lands, as well as numerous species of plants that are either rare generally, unusual in the Acton area, or just of interest to folks who are botanically challenged. Too often when people think of conservation lands they think only of plants and animals. Sites of cultural importance must also be considered in the conservation and preservation effort.

The only specific plans that are currently being worked on relate to the unusual plants associated with the quaking bog at Wills Hole Conservation Area. An educational kiosk, such as the one located at the Pencil Factory site in the Nashoba Brook Conservation Area, is planned. It would present data collected and written up in 2001 by the Merriam School 5th and 6th graders enrolled in the Community Service Learning Project. The anticipated kiosk would not be as large as the one at the Pencil Factory site, but the fabrication of the plaques that contain the information would be expensive. Placement of vandal-proof markers for the unusual bog species would also require funds, as would the observation platform mentioned in the earlier section devoted to specific parcel projects.

No other specific plans are in the works at the time of this writing, but we are aware of the need to protect certain sites of historic and possibly pre-historic origin, especially Nashoba Brook's corbelled stone chamber of uncertain origin that has, at the least, a summer solstice sunset alignment.

Section 12 Appendix L - Recreation Five Year Plan

Note: These plans augment the information provided in Section 9, Action Recommendation #14.

Listed below are the Recreation Department's plans for improvement to our existing athletic fields. Refer to Section 9 for plans for NARA and the School Street Fields.

1, JONES FIELD
During the next five years the Jones Field fencing will be replaced in the outfield and the backstop areas. Removal of the pea stone surface, at the playground, and replacement with the wood safety fiber will allow greater handicapped access to this play structure. Continued focus will be given to improve field maintenance and address infield issues.

2. WOODLAWN FIELD
Over the course of the next five years the land use lease agreement between the Recreation Department and the Cemetery Commission will have to be addressed. In addition, plans are underway to improve the parking lot, including regrading the site and replacing existing gravel.

3. HART FIELD
Over the next five years the Recreation Department will address drainage issues on the left side of this field. The work needed to correct this problem will be handled by town staff and will require an EPA permit. In addition, benches, outfield fences and the backstop will be replaced. Spectator bleachers will be installed as will a safe "bull-pen" area for players.

4. MACPHERSON FIELD
In the next five years, new bleachers, outfield fences, benches, and a new backstop will be installed. The Recreation Department will investigate field lighting and the addition of an electric scoreboard..

5. GREAT HILL and #9. Little Great Hill
During the next five years the playground at Great Hill needs to be replaced and an appropriate wood fiber safety surface needs to be put in place. In addition, this site would benefit from improved handicapped access to walking paths around the pond and the establishment of more picnic locations..

6. ELM STREET FIELD
Improvements will continue to be made at the Elm Street field over the next 5 years. The infield will be replaced by spring 2002 in order to address drainage issues. The outfield fencing at this field is in desperate need of replacement as is the existing lighting. Plans are underway to resurface the parking area and to provide handicap accessibility to the picnic pavilion area.

7. 2A/27 – VETERANS MEMORIAL FIELD

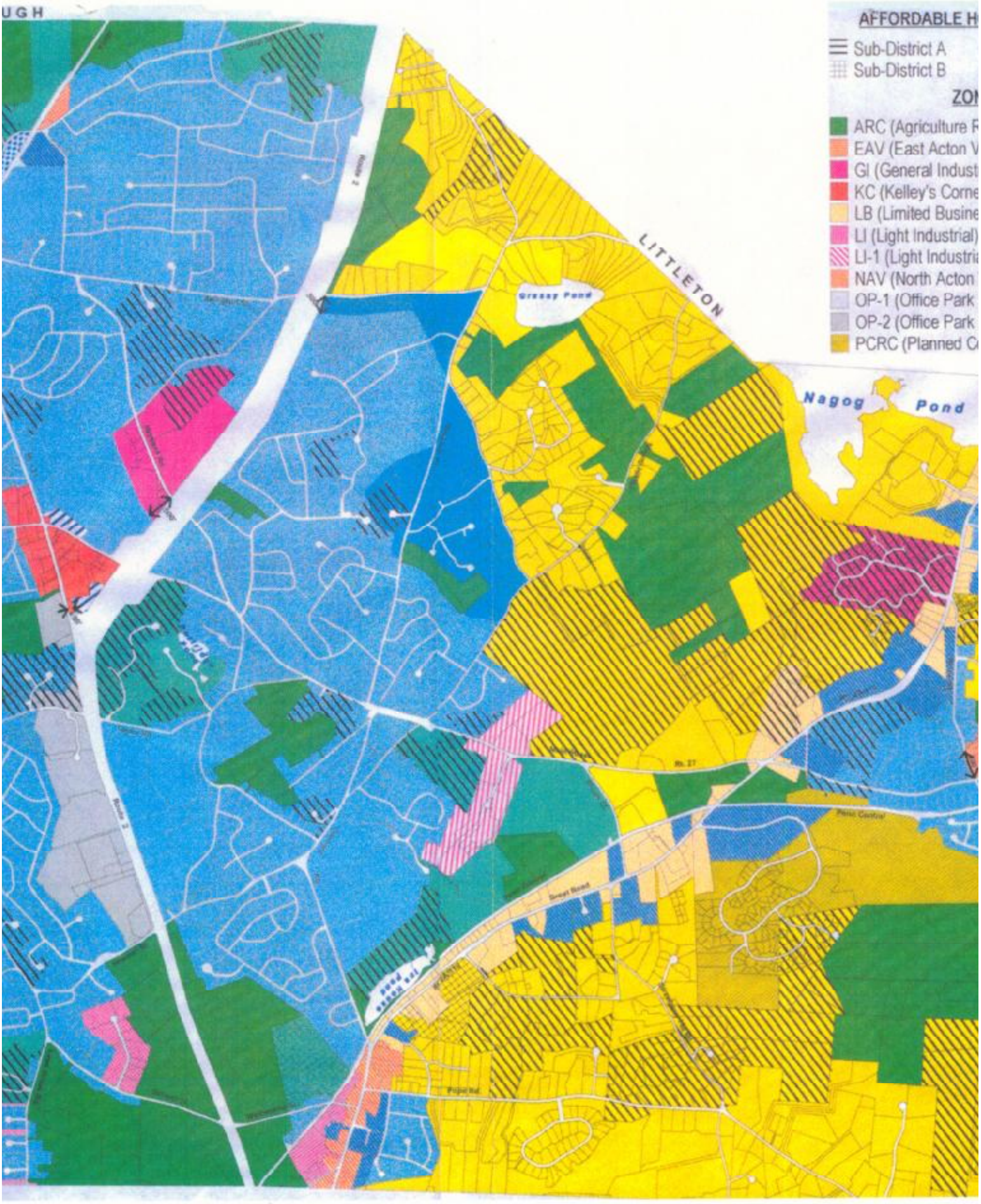
During the next five years the Town must address the lack of adequate parking at this site. General improvements should include more handicap accessible areas, more seating areas, and replacement of the pea stone surfacing at the playground with wood safety fiber. Priority items are to install a warming track in the outfield and increase field maintenance. Priority must also be given to the connection of this site to the future BFBP, as this may ease some of the parking issues. It is hoped that these fields will be considered in the design requirements of any new fire department building proposed for the adjacent site. The inclusion of a snack bar, storage area and public restrooms in that facility would benefit all who use these fields..

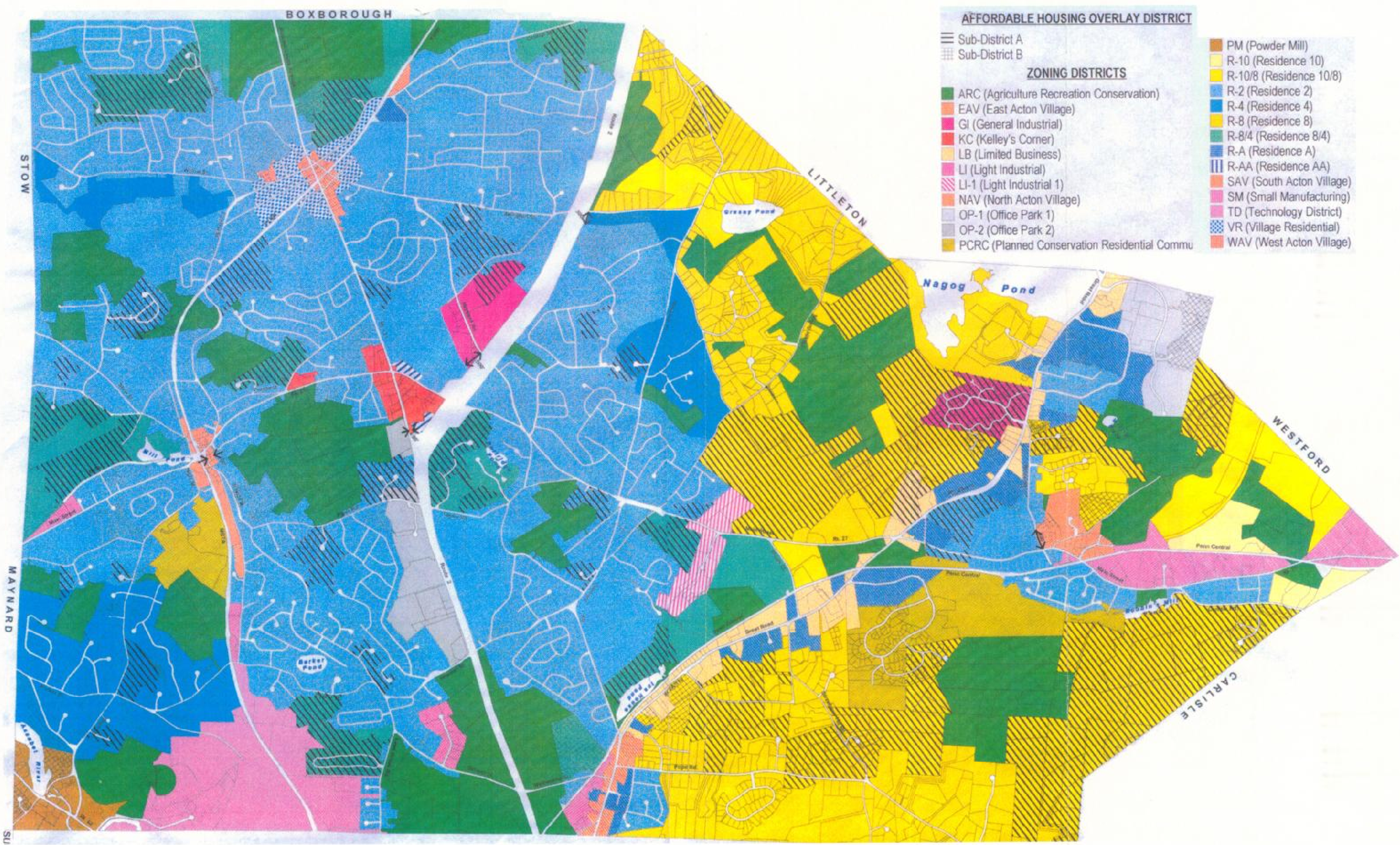
10. GOWARD PLAYGROUND

Due to the high traffic volume this playground receives, replacement of this piece of equipment is inevitable during the next five years. While once a premier play structure, wooden playgrounds are under increasing scrutiny with regards to safety and health related issues. In addition, replacement of the pea stone surfacing with wood safety fiber will improve handicap access and provide a safer play area.

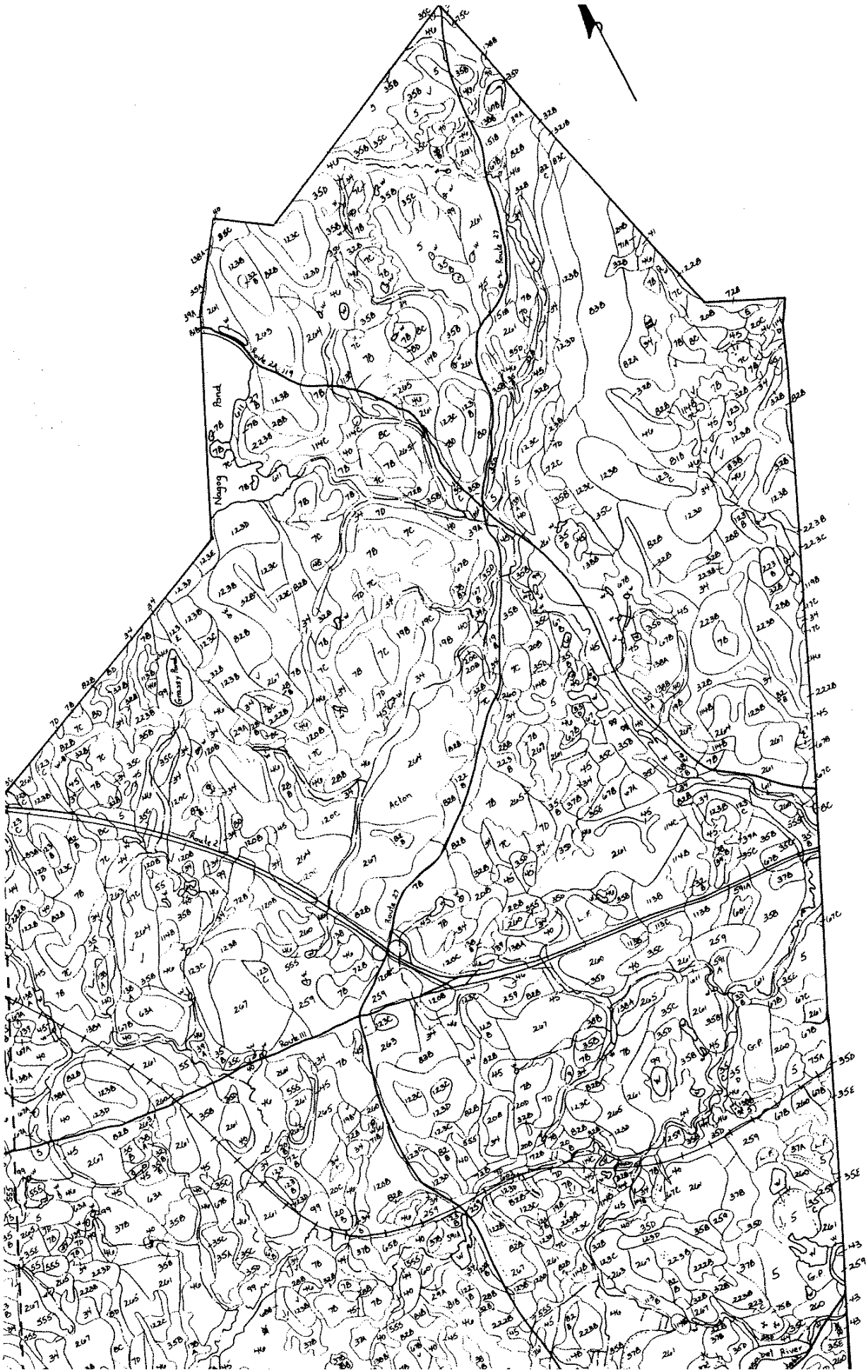
11. GARDNER PLAYGROUND

The next five years will focus largely on parking issues for this site. The recreation department will be working closely with the Acton Water District to create a parking lot adjacent to this field on a parcel of water district property. The remaining pea stone surfacing at the playground will also be removed and replaced with wood safety fiber surfacing to provide greater handicap access to this playground. In addition the recreation department will investigate the installation of a lit basketball court to provide a court for adult-based recreation programs. Shade trees will also be added to improve sun protection at this site.


UGH
AFFORDABLE H
Sub-District A
Sub-District B
ZON
ARC (Agriculture R
EAV (East Acton V
GI (General Indust
KC (Kelley's Corne
LB (Limited Busine
LI (Light Industrial)
LI-1 (Light Industria
NAV (North Acton
OP-1 (Office Park
OP-2 (Office Park
PCRC (Planned C
LITTLETON
Nagog Pond
Great Pond
Route 2
Route 2
Rt. 27
Power Control
Sweet Road
Pope Rd


BOXBOROUGH
STOW
MAYNARD
LITTLETON
WESTFORD
CARLISLE
AFFORDABLE HOUSING OVERLAY DISTRICT
Sub-District A
Sub-District B
ZONING DISTRICTS
ARC (Agriculture Recreation Conservation)
EAV (East Acton Village)
GI (General Industrial)
KC (Kelley's Corner)
LB (Limited Business)
LI (Light Industrial)
LI-1 (Light Industrial 1)
NAV (North Acton Village)
OP-1 (Office Park 1)
OP-2 (Office Park 2)
PCRC (Planned Conservation Residential Commu
PM (Powder Mill)
R-10 (Residence 10)
R-10/8 (Residence 10/8)
R-2 (Residence 2)
R-4 (Residence 4)
R-8 (Residence 8)
R-8/4 (Residence 8/4)
R-A (Residence A)
R-AA (Residence AA)
SAV (South Acton Village)
SM (Small Manufacturing)
TD (Technology District)
VR (Village Residential)
WAV (West Acton Village)
Grassy Pond
Nagog Pond

1. Zoning Map


Nagog Pond
Creamery Pond
Route 2
Route 27
Route 111
Acton
L.F.
G.P.
Assabet River

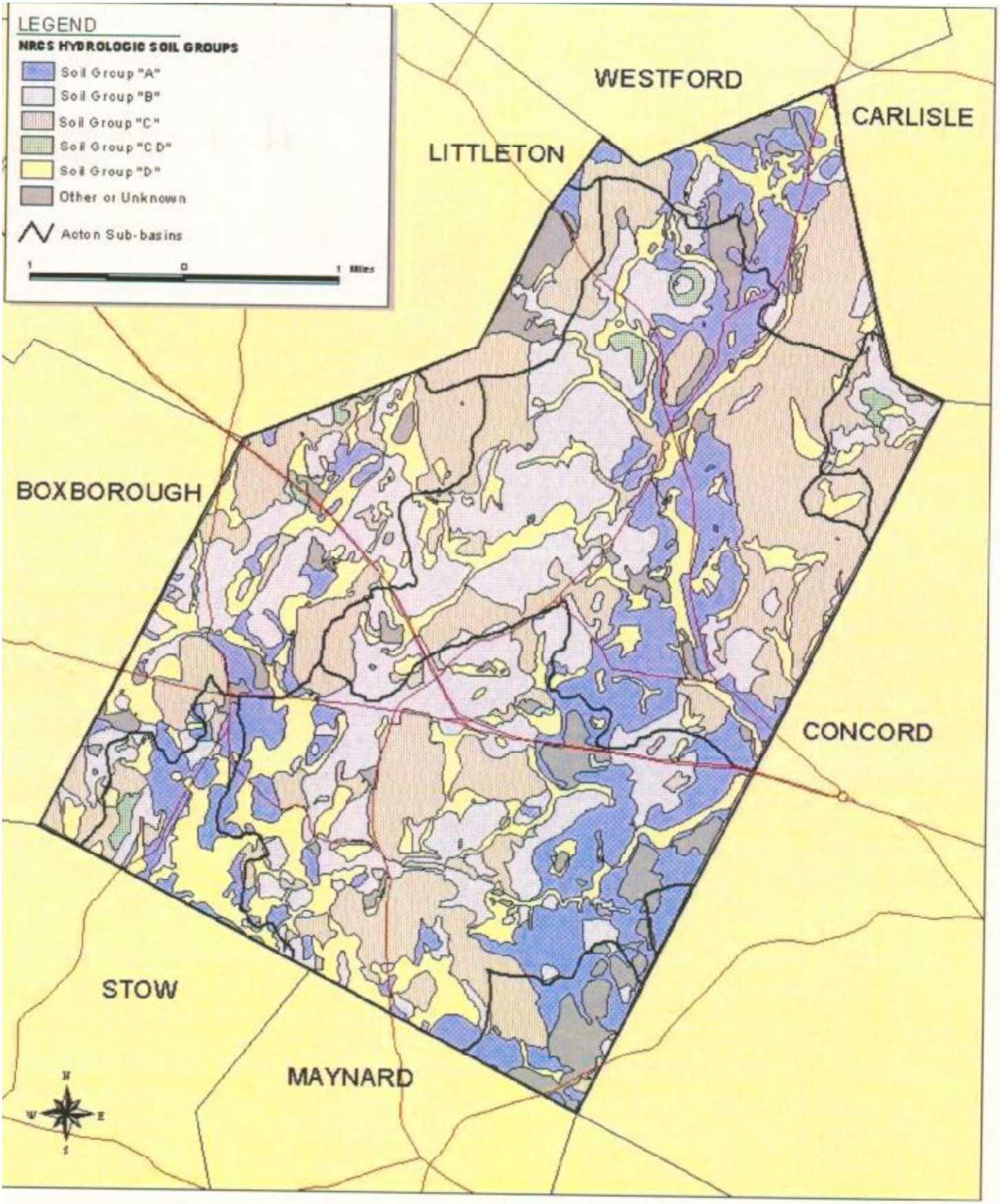
2. (a)

MIDDLESEX COUNTY SOIL SURVEY
Identification Legend

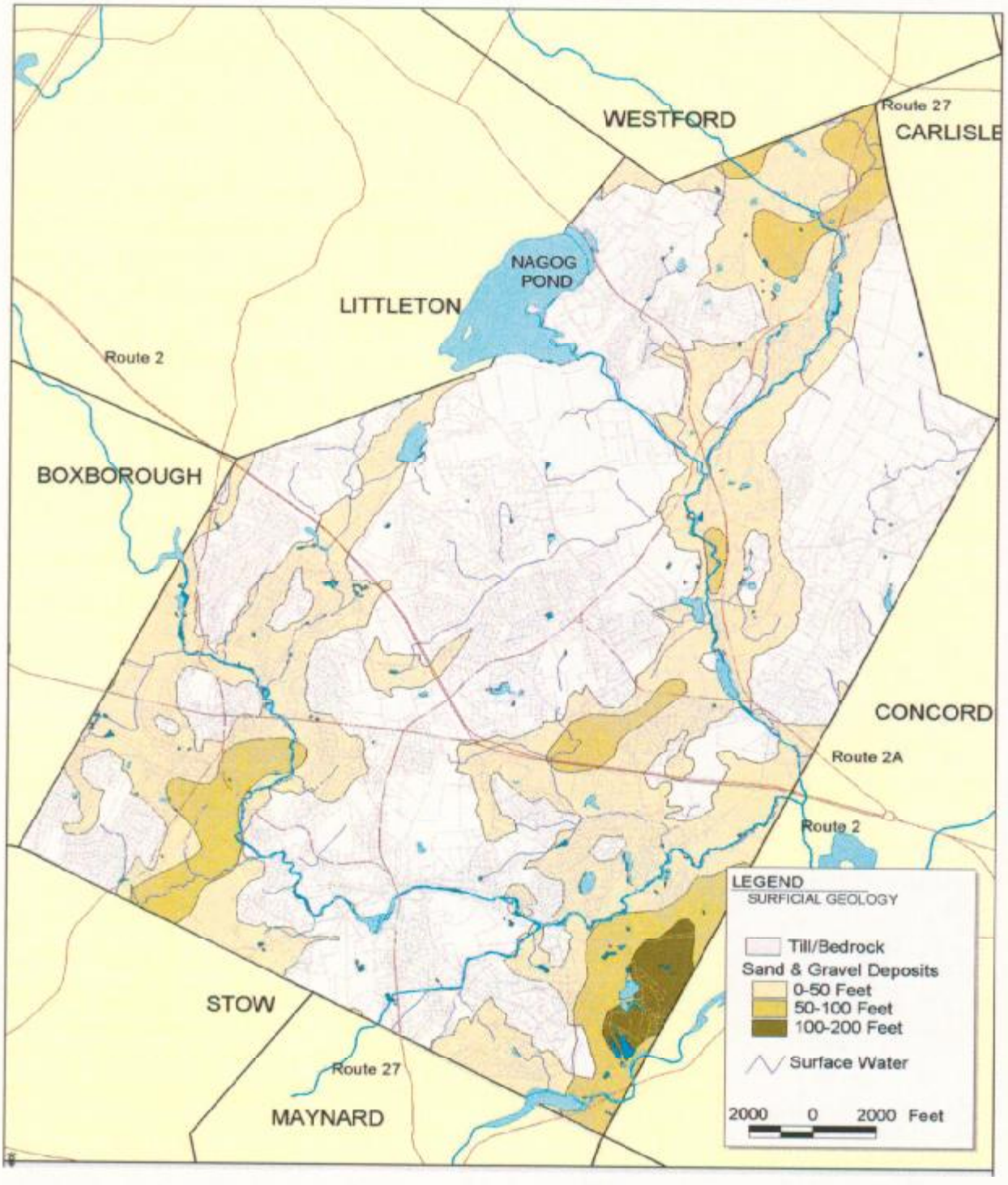
W - Water
GP - Pits, gravel
Pq - Pits, quarry
LF - Landfills, dumps
5 - Udorthents, sandy
7B - Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes
7C - Charlton-Hollis-Rock outcrop complex, 8 to 15 percent slopes
7D - Charlton-Hollis-Rock outcrop complex, 15 to 25 percent slopes
8C - Hollis-Rock outcrop-Charlton complex, 3 to 15 percent slopes
8D - Hollis-Rock outcrop-Charlton complex, 15 to 25 percent slopes
9 - Rock outcrop-Hollis complex
17C - Narragansett-Hollis-Rock outcrop complex, 3 to 15 percent slopes
17D - Narragansett-Hollis-Rock outcrop complex, 15 to 25 percent slopes
19B - Charlton fine sandy loam, 3 to 8 percent slopes
19C - Charlton fine sandy loam, 8 to 15 percent slopes
20B - Charlton fine sandy loam, 3 to 8 percent slopes, extremely stony
20C - Charlton fine sandy loam, 8 to 15 percent slopes, extremely stony
20D - Charlton fine sandy loam, 15 to 25 percent slopes, extremely stony
27B - Scituate fine sandy loam, 3 to 8 percent slopes
27C - Scituate fine sandy loam, 8 to 15 percent slopes
28B - Scituate fine sandy loam, 3 to 8 percent slopes, extremely stony
28C - Scituate fine sandy loam, 8 to 15 percent slopes, extremely stony
32B - Ridgebury fine sandy loam, 2 to 8 percent slopes, extremely stony
34 - Whitman loams, 0 to 5 percent slopes, extremely stony
35A - Hinckley loamy sand, 0 to 3 percent slopes
35B - Hinckley loamy sand, 3 to 8 percent slopes
35C - Hinckley loamy sand, 8 to 15 percent slopes
35D - Hinckley loamy sand, 15 to 25 percent slopes
35E - Hinckley loamy sand, 25 to 35 percent slopes
37A - Merrimac fine sandy loam, 0 to 3 percent slopes
37B - Merrimac fine sandy loam, 3 to 8 percent slopes
37C - Merrimac fine sandy loam, 8 to 15 percent slopes
38B - Sudbury fine sandy loam, 2 to 8 percent slopes
40 - Scarboro loamy sand, 0 to 3 percent slopes
42 - Pootatuck fine sandy loam, 0 to 5 percent slopes
43 - Rippowam fine sandy loam, 0 to 5 percent slopes
44 - Saco mucky silt loam
45 - Swansea muck
46 - Freetown muck
55 - Udorthents Loamy
63A - Haven silt loam, 0 to 3 percent slopes
63B - Haven silt loam, 3 to 8 percent slopes
67A - Windsor loamy sand, 0 to 3 percent slopes
67B - Windsor loamy sand, 3 to 8 percent slopes
67C - Windsor loamy sand, 8 to 15 percent slopes

75A - Carver loamy coarse sand, 0 to 3 percent slopes
75B - Carver loamy coarse sand, 3 to 8 percent slopes
75C - Carver loamy coarse sand, 8 to 15 percent slopes
81A - Woodbridge fine sandy loam, 0 to 3 percent slopes
81B - Woodbridge fine sandy loam, 3 to 8 percent slopes
81C - Woodbridge fine sandy loam, 8 to 15 percent slopes
82B - Woodbridge fine sandy loam, 3 to 8 percent slopes, very stony
82C - Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony
83B - Woodbridge fine sandy loam, 3 to 8 percent slopes, extremely stony
83C - Woodbridge fine sandy loam, 8 to 15 percent slopes, extremely stony
89A - Suncook loamy sand, 0 to 3 percent slopes
89B - Suncook loamy sand, 3 to 8 percent slopes
92 - Winooski very fine sandy loam, 0 to 3 percent slopes
93 - Limerick silt loam, 0 to 3 percent slopes
99 - Freetown muck, ponded
100A - Tisbury silt loam, 0 to 3 percent slopes
100B - Tisbury silt loam, 3 to 8 percent slopes
113B - Canton fine sandy loam, 3 to 8 percent slopes
113C - Canton fine sandy loam, 8 to 15 percent slopes
113D - Canton fine sandy loam, 15 to 25 percent slopes
114B - Canton fine sandy loam, 3 to 8 percent slopes, extremely stony
114C - Canton fine sandy loam, 8 to 15 percent slopes, extremely stony
114D - Canton fine sandy loam, 15 to 25 percent slopes, extremely stony
115B - Canton fine sandy loam, 3 to 8 percent slopes, extremely bouldery
115C - Canton fine sandy loam, 8 to 15 percent slopes, extremely bouldery
115D - Canton fine sandy loam, 15 to 25 percent slopes, extremely bouldery
119B - Narragansett silt loam, 3 to 8 percent slopes
119C - Narragansett silt loam, 8 to 15 percent slopes
120B - Narragansett silt loam, 3 to 8 percent slopes, very stony
120C - Narragansett silt loam, 8 to 15 percent slopes, very stony
120D - Narragansett silt loam, 15 to 25 percent slopes, very stony
122B - Paxton fine sandy loam, 3 to 8 percent slopes
122C - Paxton fine sandy loam, 8 to 15 percent slopes
122D - Paxton fine sandy loam, 15 to 25 percent slopes
122E - Paxton fine sandy loam, 25 to 40 percent slopes
123B - Paxton fine sandy loam, 3 to 8 percent slopes, extremely stony
123C - Paxton fine sandy loam, 8 to 15 percent slopes, extremely stony
123D - Paxton fine sandy loam, 15 to 25 percent slopes, extremely stony
123E - Paxton fine sandy loam, 25 to 40 percent slopes, extremely stony
138A - Deerfield loamy sand, 0 to 3 percent slopes
138B - Deerfield loamy sand, 3 to 8 percent slopes
139 - Wareham loamy sand, 0 to 5 percent slopes
151B - Quonset loamy sand, 3 to 8 percent slopes
151C - Quonset loamy sand, 8 to 15 percent slopes
151D - Quonset loamy sand, 15 to 25 percent slopes
151E - Quonset loamy sand, 25 to 35 percent slopes
181B - Birchwood fine sandy loam, 3 to 8 percent slopes

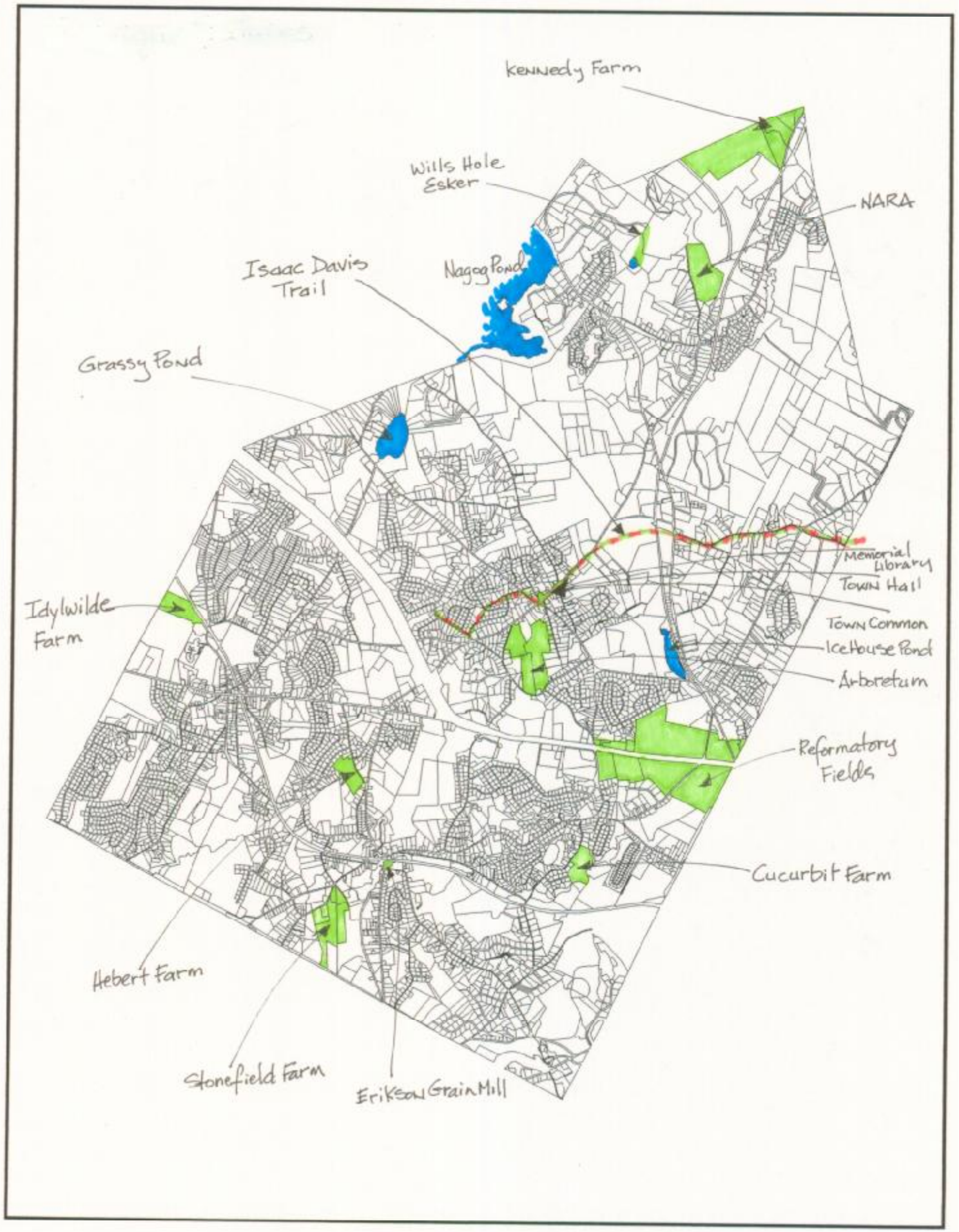
191C - Newport silt loam, 8 to 15 percent slopes
221B - Bernardston silt loam, 3 to 8 percent slopes
221C - Bernardston silt loam, 8 to 15 percent slopes
221D - Bernardston silt loam, 15 to 25 percent slopes
221E - Bernardston silt loam, 25 to 40 percent slopes
222B - Montauk fine sandy loam, 3 to 8 percent slopes
222C - Montauk fine sandy loam, 8 to 15 percent slopes
222D - Montauk fine sandy loam, 15 to 25 percent slopes
223B - Montauk fine sandy loam, 3 to 8 percent slopes, extremely stony
223C - Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony
223D - Montauk fine sandy loam, 15 to 25 percent slopes, extremely stony
241B - Rainbow silt loam, 3 to 8 percent slopes
242B - Rainbow silt loam, 3 to 8 percent slopes, very stony
252B - Broadbrook silt loam, 3 to 8 percent slopes
252C - Broadbrook silt loam, 8 to 15 percent slopes
253B - Broadbrook silt loam, 3 to 8 percent slopes, very stony
253C - Broadbrook silt loam, 8 to 15 percent slopes, very stony
253D - Broadbrook silt loam, 15 to 25 percent slopes, very stony
259 - Udorthents-Urban land Complex, 0 to 25 percent slopes
260 - Urban land
260X - Urban land, wet substratum
261 - Merrimac-Urban land Complex, 0 to 8 percent slopes
262 - Scio-Urban land Complex, 0 to 8 percent slopes
263 - Woodbridge-Urban land Complex, 3 to 15 percent slopes
264 - Canton-Charlton-Urban land Complex, 3 to 15 percent slopes
265 - Charlton-Hollis-Urban land Complex, rocky, 3 to 15 percent slopes
266 - Newport-Urban land Complex, 3 to 15 percent slopes
267 - Paxton-Urban land Complex, 3 to 15 percent slopes
268 - Haven-Urban land Complex, 0 to 8 percent slopes
281A - Pittstown silt loam, 0 to 3 percent slopes
281B - Pittstown silt loam, 3 to 8 percent slopes
411 - Occum fine sandy loam, 0 to 5 percent slopes
555 - Udorthents, wet substratum
591A - Scio very fine sandy loam, 0 to 3 percent slopes
591B - Scio very fine sandy loam, 3 to 8 percent slopes
601 - Raynham silt loam, 0 to 5 percent slopes
602 - Raypol silt loam, 0 to 5 percent slopes
611 - Birdsall silt loam, 0 to 3 percent slopes

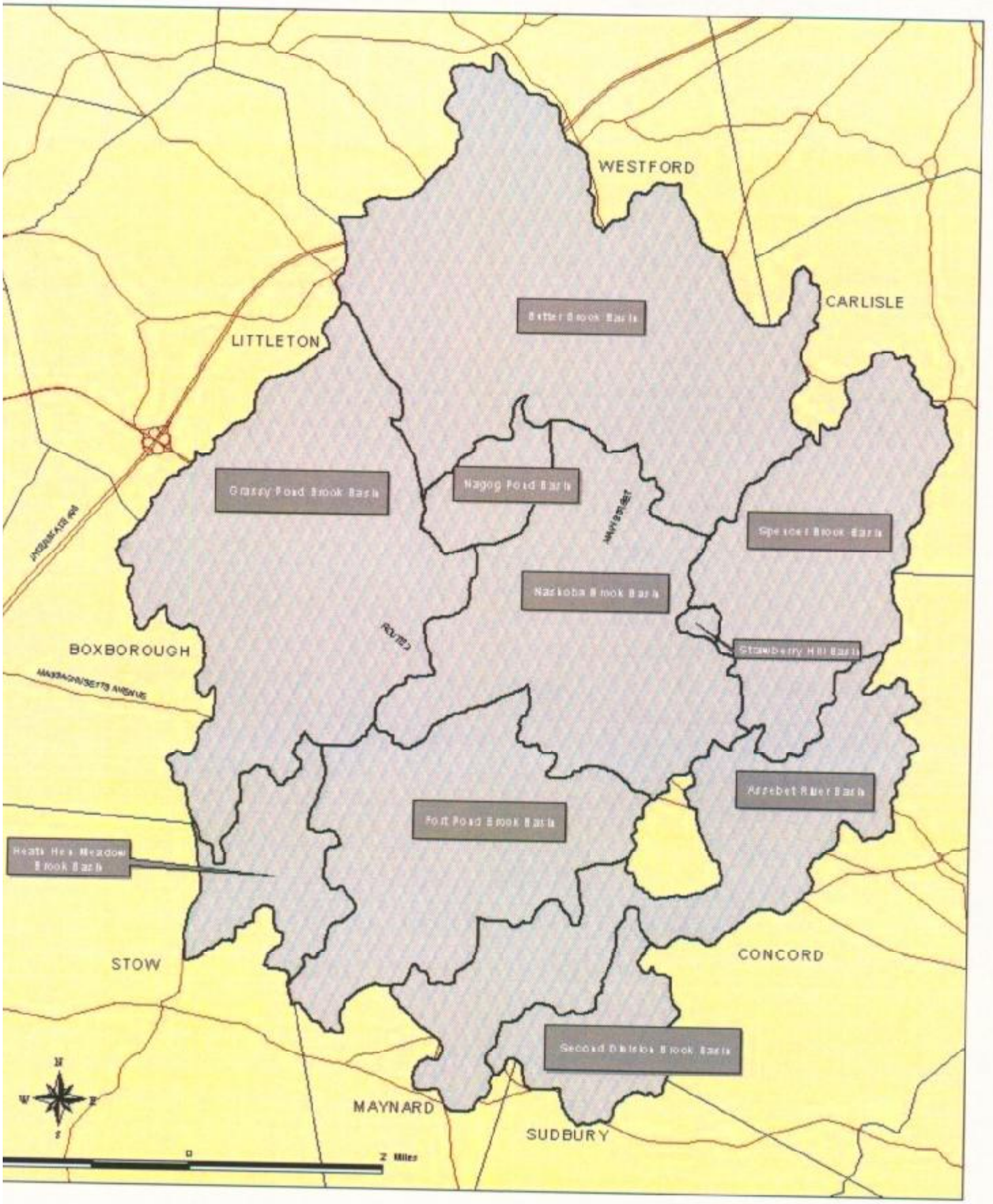

LEGEND
NRCS HYDROLOGIC SOIL GROUPS
Soil Group "A"
Soil Group "B"
Soil Group "C"
Soil Group "C D"
Soil Group "D"
Other or Unknown
Acton Sub-basins
WESTFORD
CARLISLE
LITTLETON
BOXBOROUGH
CONCORD
STOW
MAYNARD

Surficial Geology

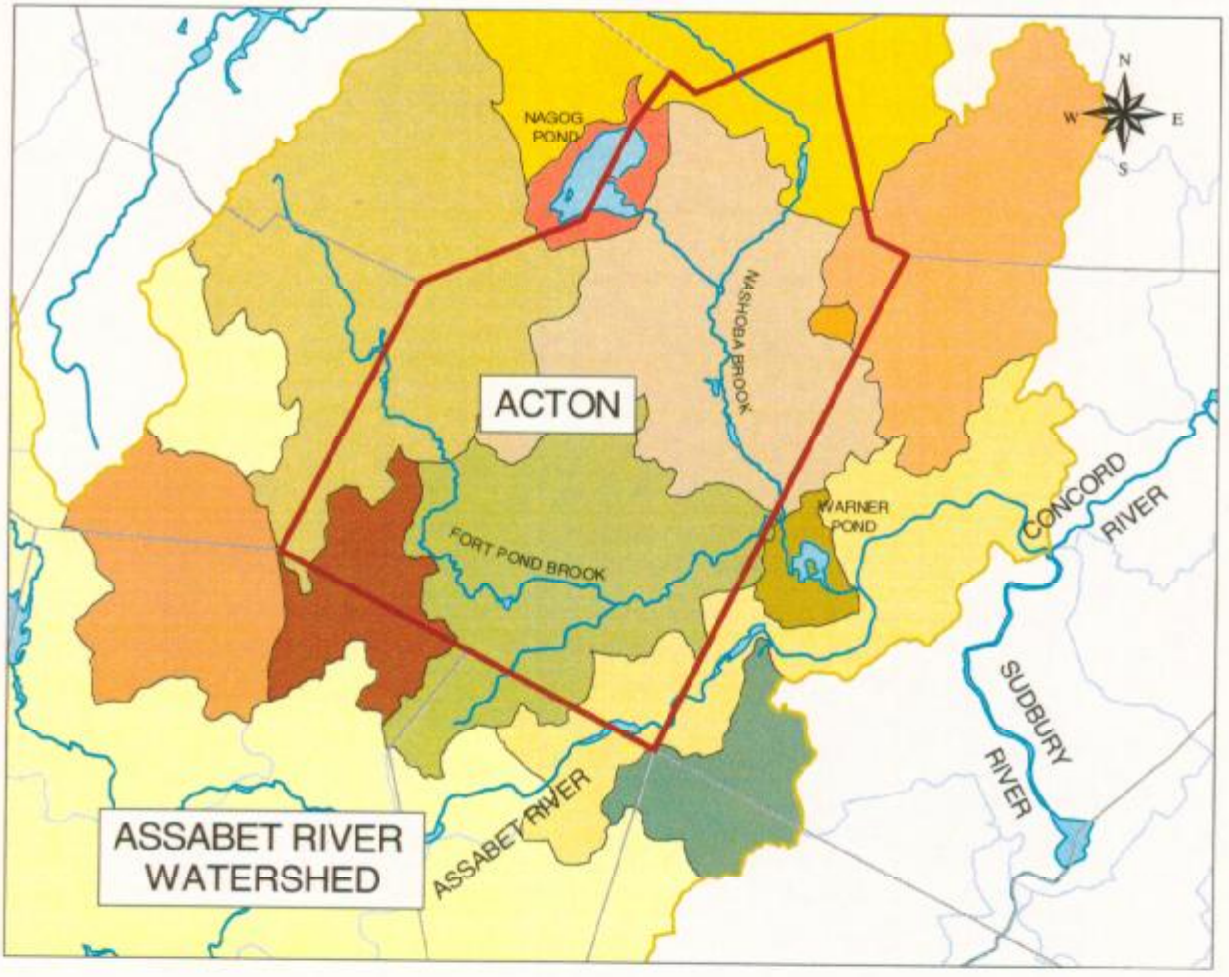


2. (c)


Kennedy Farm
Wills Hole Esker
NARA
Isaac Davis Trail
Nagog Pond
Grassy Pond
Memorial Library
Town Hall
Idylwilde Farm
Town Common
Icehouse Pond
Arboretum
Reformatory Fields
Cucurbit Farm
Hebert Farm
Stonefield Farm
Erikson Grain Mill

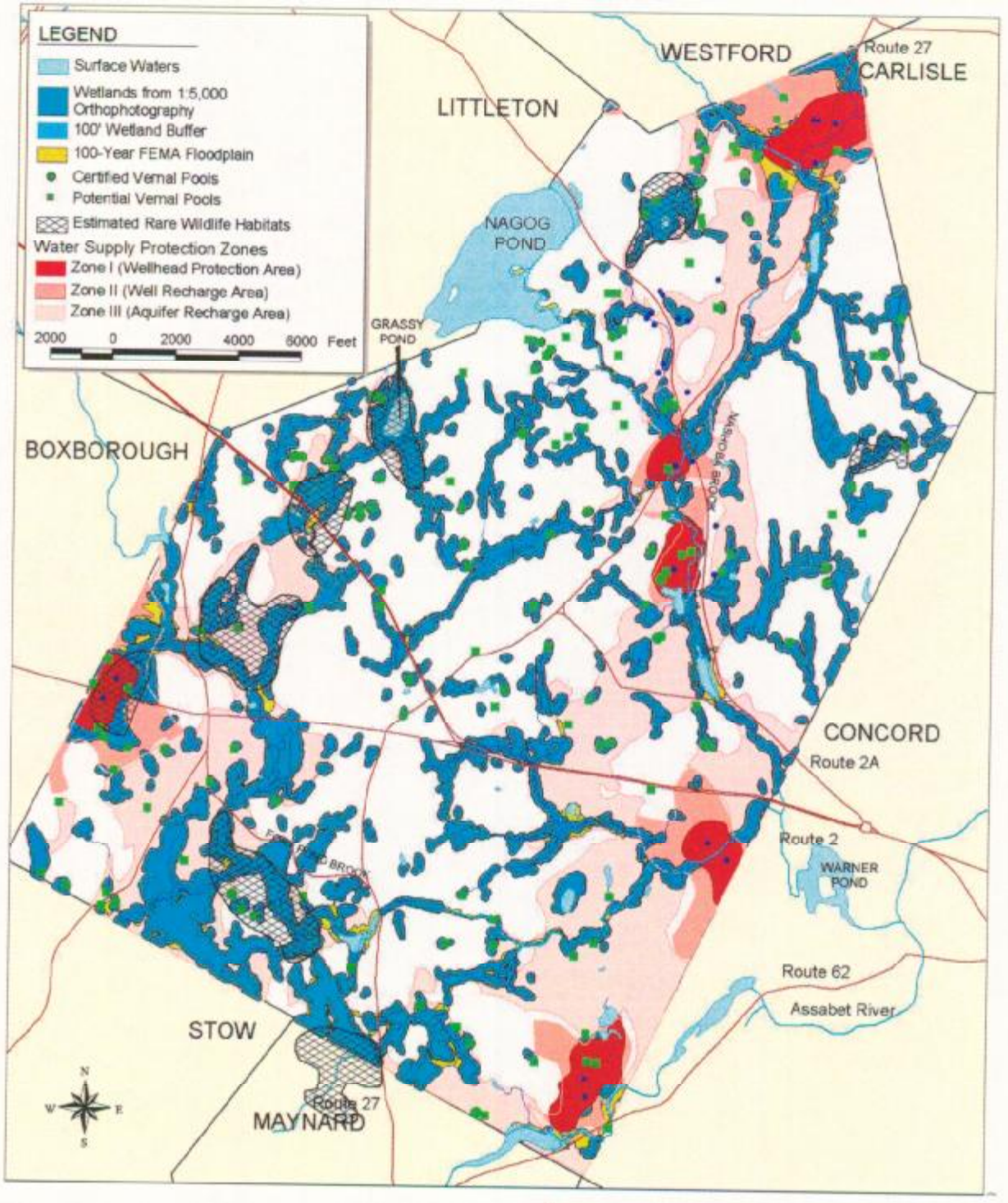

WESTFORD
CARLISLE
LITTLETON
Butter Brook Basin
Grassy Pond Brook Basin
Nagog Pond Basin
Spencer Brook Basin
Nashoba Brook Basin
Strawberry Hill Basin
BOXBOROUGH
Assabet River Basin
Fort Pond Brook Basin
Heath Hen Meadow Brook Basin
CONCORD
STOW
Second Division Brook Basin
MAYNARD
SUDBURY
2 Miles

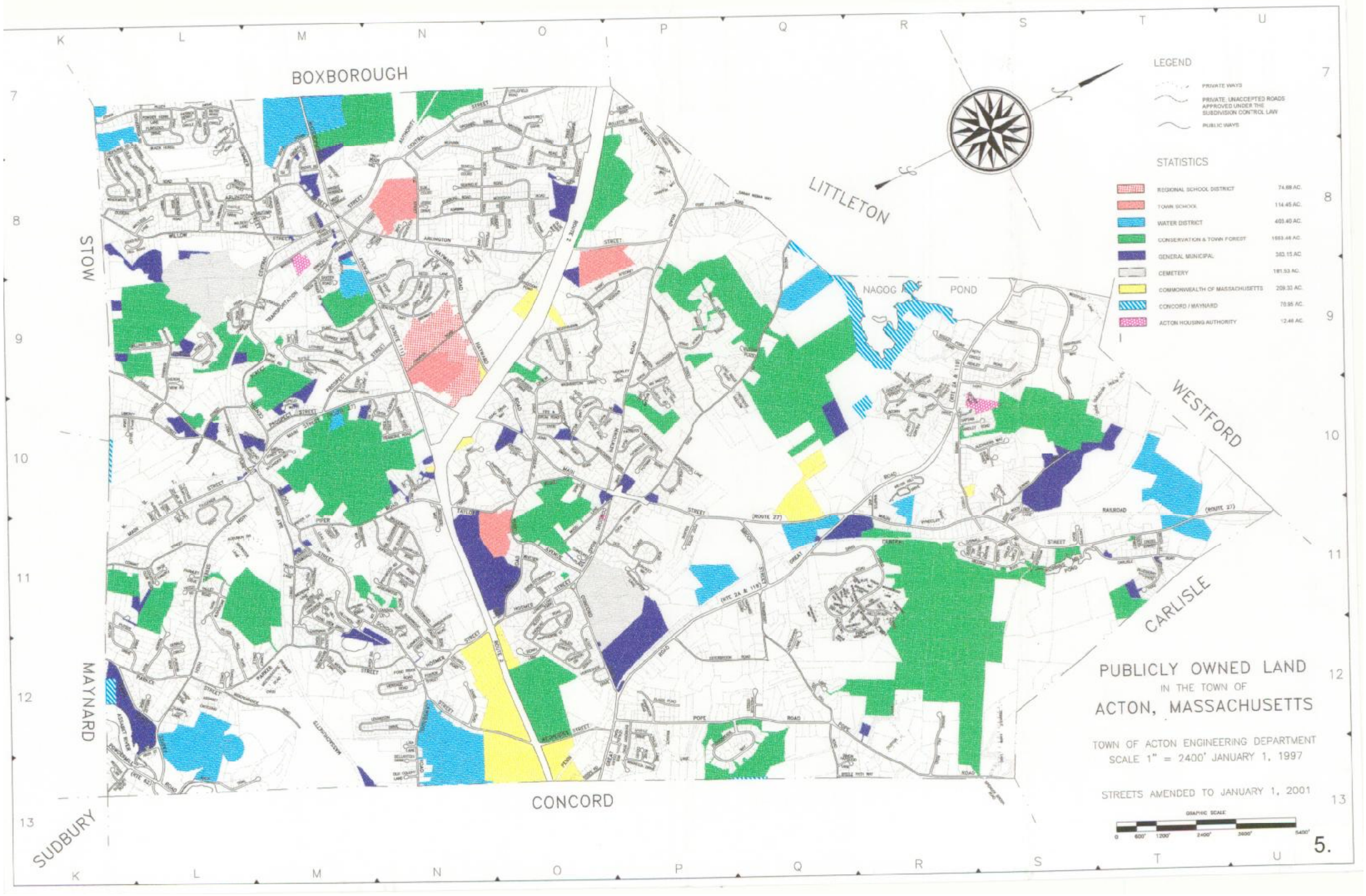
4. (a)


NAGOG POND
ACTON
WASHOBA BROOK
FORT POND BROOK
WARNER POND
CONCORD RIVER
SUDBURY RIVER
ASSABET RIVER
ASSABET RIVER WATERSHED
N
W
E
S

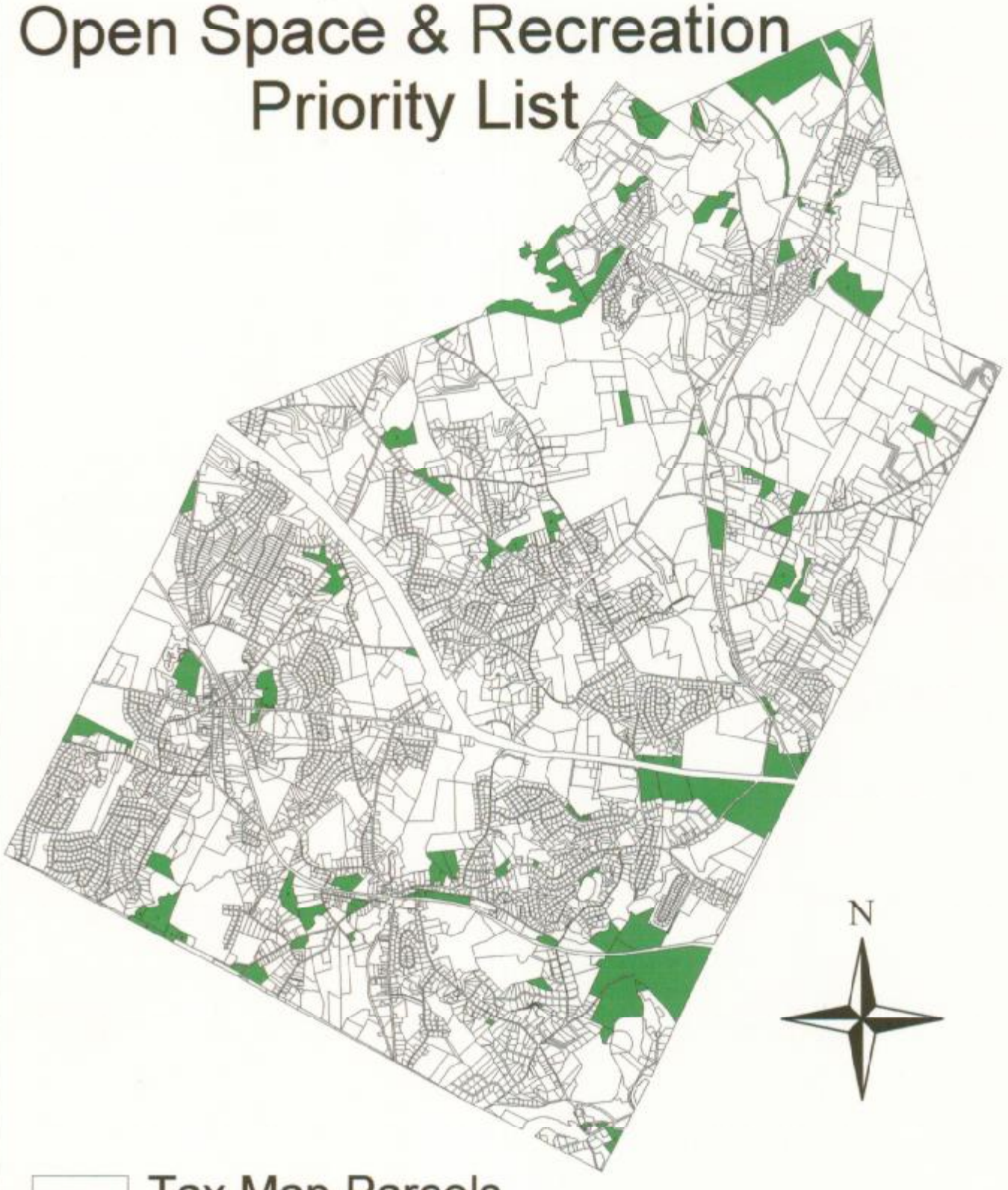
4. (b)

Environmentally Sensitive Areas




BOXBOROUGH
LITTLETON
STOW
MAYNARD
CONCORD
SUDBURY
WESTFORD
CARLISLE
NAGOG POND
LEGEND
PRIVATE WAYS
PRIVATE, UNACCEPTED ROADS APPROVED UNDER THE SUBDIVISION CONTROL LAW
PUBLIC WAYS
STATISTICS
REGIONAL SCHOOL DISTRICT 74.88 AC.
TOWN SCHOOL 114.45 AC.
WATER DISTRICT 403.40 AC.
CONSERVATION & TOWN FOREST 1663.46 AC.
GENERAL MUNICIPAL 383.15 AC.
CEMETERY 181.53 AC.
COMMONWEALTH OF MASSACHUSETTS 209.33 AC.
CONCORD / MAYNARD 70.95 AC.
ACTON HOUSING AUTHORITY 12.46 AC.
PUBLICLY OWNED LAND
IN THE TOWN OF
ACTON, MASSACHUSETTS
TOWN OF ACTON ENGINEERING DEPARTMENT
SCALE 1" = 2400' JANUARY 1, 1997
STREETS AMENDED TO JANUARY 1, 2001
GRAPHIC SCALE
0 600' 1200' 2400' 3600' 5400'

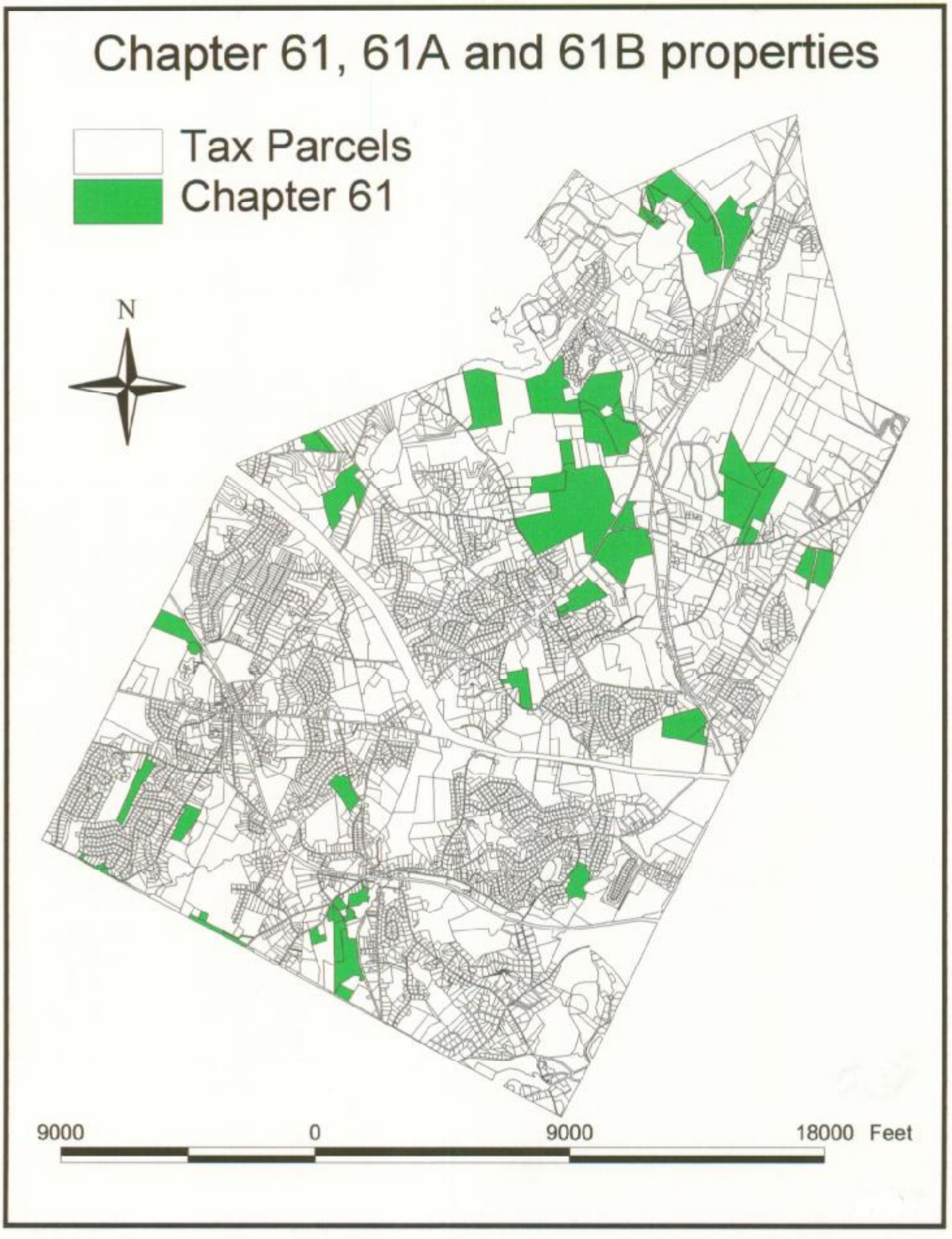
Unprotected Open Space & Recreation Priority List



Tax Map Parcels

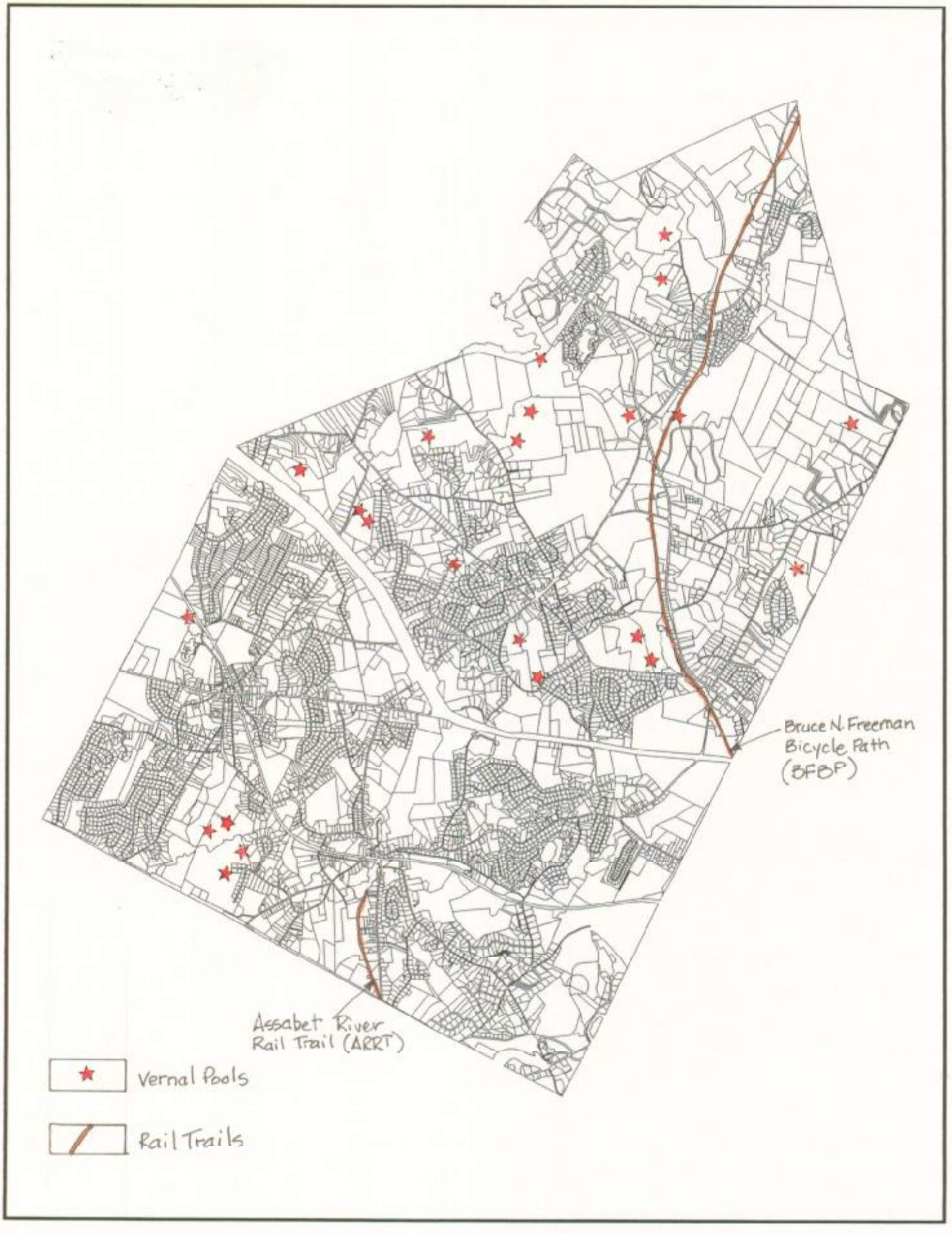
Open Space & Recreation Priority

Chapter 61, 61A and 61B properties




NAGOG BROOK
WILLS HOLE BROOK
NASHOBA BROOK GREENBELT
CONANT BROOK
OAKLEY POND
FORT POND BROOK GREENBELT
NASHOBA BROOK
FORT POND BROOK GREENBELT

6. (c)


Bruce N. Freeman Bicycle Path (BFBP)
Assabet River Rail Trail (ARRT)
Vernal Pools
Rail Trails

6. (d)

Recreation Improvements (next 5 years)

1. Skateboard Park
2. Elm St. Softball field
3. Great Hill playground
4. School Street fields
5. Morrison Farm
6. Veterans Field
7. NARA