OPEN SPACE AND RECREATION PLANNER'S WORKBOOK

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First published June 1991, revised February 2001 and March 2008

This Workbook was originally developed in 1991 by the Executive Office of Environmental Affairs (now EOEEA) through the cooperation of the Division of Conservation Services, Joel A. Lerner, Director, and Department of Environmental Management, Peter Webber, Commissioner
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February 2001 Revision
Funded by a grant from the Massachusetts Watershed Initiative Watershed Improvement Program
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March 2008 Revision
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We gratefully acknowledge the following people, whose hard work and thoughtful writing encouraged us to use their Open Space and Recreation Plans as models. Thanks go to the following:

Brookline Open Space and Recreation Plan, April 2006. Prepared by the Brookline Conservation Commission (Werner Lohe, Chair).
Burlington Open Space and Recreation Plan, June 2005. Prepared by the Burlington Conservation Department.
Greenfield Open Space and Recreation Plan, June 2007. Prepared by the Department of Planning and Development.
Ipswich Open Space and Recreation Plan, 1996. Prepared by the Ipswich Open Space Committee (Carolyn Britt and Glenn Hazelton, Committee Co-Chairs).
Melrose Open Space and Recreation Plan, October 2007. Prepared by the Office of Planning and Community Development (Denise Gaffey, Director).
Peabody Recreation and Open Space Plan, May 2006. Prepared by the Peabody Department of Community Development & Planning and the Recreation Park & Forestry Department, with the Open Space Plan Advisory Group.
Salem Open Space and Recreation Plan, November 2007. Prepared by the Salem Department of Planning and Community Development and Vanasse Hangen Brustlin, Inc. (Ralph Willmer, VHB and Carey Duques, City of Salem).
Yarmouth Open Space and Recreation Plan, December 2007. Prepared by Horsley Witten Group, Inc. (Julie Ann Conroy, Principal Author).

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INTRODUCTION

THE IMPORTANCE OF PLANNING FOR OPEN SPACE AND RECREATION

It is through thoughtful planning and active stewardship that Massachusetts' open spaces, critical plant and animal habitats, neighborhood parks, and quality outdoor recreation facilities remain a part of our communities' landscapes. Without planning, the appearance of a community, the lifestyle of its residents, and the condition of its natural resources can be dramatically altered in a short period of time due to ill-conceived changes in land use patterns.

During the development boom of recent decades, many small and moderately-sized Massachusetts communities saw their populations increase dramatically, straining infrastructure and local resources and degrading the quality of life that originally attracted many people to the Commonwealth. As a result, open space resources diminished and recreational facilities were overused.

Planning provides the opportunity to assess where you are, where you would like to go, and how you might get there. Planning now to protect important open space and recreational facilities can greatly enhance the attractiveness of your community and encourage compatible growth in the future.

To obtain the benefits of development without losing valued environmental assets, you must plan *how* your community uses its land. Planning allows you to confront and manage many aspects of the community's growth and development in a way that preserves, protects, and enhances the environment. Many communities are embracing the concept of smart growth, which protects critical natural resources while encouraging high quality development in places where development should go. Smart growth means identifying areas that should be protected as well as areas that can accommodate new development, such as in and around existing neighborhoods, on underutilized parcels, and other places where infrastructure exists. On the site-scale, development can be compatible with natural resource conservation. Open Space Residential Developments provide new homes on smaller lots than conventional subdivisions while also permanently protecting valuable open space. Development can also utilize ecologically-appropriate techniques such as Low Impact Development water management and green buildings that minimize environmental impacts.

Open Space and Recreation Plans allow a municipality to maintain and enhance all the benefits of open space that together make up much of the character of the community and protect the "green infrastructure" of the community. Planning this "green infrastructure" of water supply, land, working farms and forests, viable wildlife habitats, parks, recreation areas, trails, and greenways is as important to the economic future of a community as planning for schools, roads, water, and wastewater infrastructure.

One of the potential tools available to Massachusetts municipalities to fund a "green infrastructure" plan is the Community Preservation Act (CPA). The CPA, which must be adopted by referendum, allows communities to create a local Community Preservation Fund by raising money through a surcharge of up to 3% of the real estate tax levy on real property. This revenue can then be used for open space protection, recreation, historic preservation and the provision of affordable housing. The Act also creates a significant state matching fund, which serves as an incentive to communities to pass the CPA. The Department of Revenue has distributed matching funds to CPA cities and towns of more than $17 million in FY'03, $27 million in FY'04, $30 million in FY'05, $46 million in FY'06, and $58 million in FY'07. To date, one hundred and nineteen (119) cities and towns have adopted the Community Preservation Act and are

appropriating fund revenues and matching state funds to thousands of community-based projects and needs.

Once adopted locally, the Act requires at least 10% of annual fund revenues for acquisitions or initiatives in each of the following three categories of allowable community preservation purposes: open space (excluding recreational uses), historic resources, and community housing. This allows the community flexibility in distributing the majority of the money for any of the three categories as determined by the community. When producing Open Space and Recreation Plans communities should consider that CPA funds may be used to purchase land, easements, or restrictions to protect existing and future water supply areas; agricultural, forest, or coastal lands; frontage to water bodies; wildlife habitat; nature preserves; and scenic vistas. Also, land can be purchased for active and passive recreational uses; community gardens; trails; non-commercial youth and adult sports; and use of land as a park, playground, or athletic field. In addition, funds may be used for park equipment and other capital improvements, but not ongoing maintenance of park lands.

Along with enhancing quality of life, protecting open space can provide significant economic benefits. It can help a community avoid the costly mistakes of misusing or overwhelming available resources. Protected open space usually raises the taxable value of adjacent properties and is less costly to maintain than the infrastructure and services required by residential development. Even taking into account the increased tax base that results from development, open space usually proves easier on the municipal budget in the long-run. A publication by the River and Trail Assistance Program of the National Park Service, *Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors*, presents many studies on this subject, including chapters on property values near open space and costs of municipal services for developed land, and is a valuable reference book for use in defending open space protection. Similarly, the Southern New England Forestry Consortium's study, *Cost of Community Services in Southern New England,* illustrates the net fiscal benefit of open space on local tax bases, when compared to residential development. Additional resources on this issue include the Trust for Public Land's study on open space and taxes and the American Farmland Trust that developed the methodology used in the Southern New England study.

Protecting your community's open space is not necessarily synonymous with costly acquisitions. Many municipalities and private nonprofit conservation organizations (often land trusts) hold partial ownership interests in land, such as conservation restrictions or agricultural preservation restrictions. These restrictions may be acquired through gift, purchases, or regulations and are designed to preserve natural resources from adverse future use. An Executive Office of Energy and Environmental Affairs publication entitled *The Massachusetts Conservation Restriction Handbook* explains all of the steps involved in drafting a conservation restriction and gaining state approval. The Handbook can be found online at www.mass.gov/envir/dcs/pdf/restrictions.pdf. In addition, certain zoning techniques, such as conservation subdivision design, can help a community achieve its open space objectives.

Completing an Open Space and Recreation Plan also allows you to take the next step: planning a greenway network for your region. The Department of Conservation and Recreation has prepared *Creating Greenways: A Citizen's Guide*, which is online at www.mass.gov/dcr/stewardship/greenway/creatinggreenways.htm. This guide can help you to take the valuable information gathered through the open space and recreation planning process and expand it to the planning of a greenway. An additional resource from the Department is the statewide greenway plan entitled *Commonwealth Connections: A Greenway Vision for Massachusetts*. This plan calls for the completion of a coordinated network of trails and greenways in Massachusetts. It can be found online at www.mass.gov/dcr/stewardship/greenway/connections.htm. Greenways provide a way to weave open space, cultural and

historic resources, and recreation areas into a fascinating system that enhances the experience of living in your community. Moreover, municipal greenways can lead to regional greenways, which reach out to include the green space of nearby communities. The ultimate goal is to begin to think about open space on a regional basis, not only to create these types of greenways, but also to promote resource conservation on a watershed level.

Regional and watershed based planning of open spaces is occurring in several coastal communities where continuous public access to and along the shoreline of developed harbors is actively being pursued by the Massachusetts Coastal Zone Management office. Greenways along rivers have also been successfully accomplished in several watersheds such as the Charles, Neponset, Nashua, Connecticut, and Deerfield. CZM is also providing technical assistance to help communities reclaim rights-of-way to the sea, such as public landings and foot paths, through an extensive reference document, *Preserving Historic Rights of Way to the Sea: A Practical Handbook for Reclaiming Public Access in Massachusetts*.

Once completed, an Open Space and Recreation Plan is a powerful instrument to effect community goals. It establishes the community's aspirations and recommends patterns of development that will support them. Having this document available can help you advocate for the open space and recreation needs of your community.

Finally, a Massachusetts community with an approved Open Space and Recreation Plan becomes eligible to apply for Self-Help, Urban Self-Help, Land and Water Conservation Funds, and other grant programs administered by the Executive Office of Energy and Environmental Affairs, Division of Conservation Services. Open Space and Recreation Plans also help to coordinate with ongoing acquisition efforts of state environmental agencies and local and regional land trusts.

WHAT IS "OPEN SPACE"

The term "open space" is often used to refer to conservation land, forested land, recreation land, agricultural land, corridor parks and amenities such as small parks, green buffers along roadways or any open area that is owned by an agency or organization dedicated to conservation. However, the term can also refer to undeveloped land with particular conservation or recreation interest. This includes vacant lots and brownfields that can be redeveloped into recreation areas. Some open space can be used for passive activities such as walking, hiking, and nature study while others are used for more active recreational uses including soccer, tennis, or baseball. Throughout this document, the term is used with this broader definition in mind.

Although open space itself is a simple concept, the factors that affect it, and that it affects, are complex. Through an Open Space and Recreation Plan, you identify and examine these factors and lay out strategies your community can use to protect and enjoy its character, natural resources, and open spaces.

THE ROLE OF THE OPEN SPACE PLANNER'S WORKBOOK

The purpose of this workbook is to help guide you, your planning committee, and your community through the process of writing an Open Space and Recreation Plan without absolutely requiring a professional consultant. This approach hopefully will keep the planning process more affordable and make local "ownership" and implementation of the action items more likely.

Please note that this workbook is presented in the same order as your final Open Space and Recreation Plan. However, this order is not the best way to proceed as you organize your committee and get down to work. Some suggestions on a logical sequence of events are given on the section about organizing an Open Space and Recreation Committee. Don't overlook it – it's a very important distinction.

ENVIRONMENTAL JUSTICE AND EQUITY

Since 2002, EOEEA has been implementing an **Environmental Justice Policy**[1] to help ensure that all Massachusetts residents experience equal protection and meaningful involvement with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits. This policy was instituted recognizing that communities across the Commonwealth, particularly those densely populated urban neighborhoods in and around the state's older industrial areas, are facing many environmental challenges associated with Massachusetts' industrial legacy. Residents in these predominantly low-income and minority communities – nearly 29% of the state population – lack open space and recreational resources and often live side-by-side numerous existing large and small sources of pollution and old abandoned, contaminated sites, which can pose risks to public health and the environment.

Critical to advancing environmental justice (EJ) in the Commonwealth is the equitable distribution of environmental assets such as parks, open space, and recreation. Toward this end, and where applicable, municipalities shall identify and prioritize open space sites in their Open Space and Recreation Plans that are socially, recreationally, and ecologically important to EJ populations within the community.

Therefore, if your city or town includes EJ populations, you must include the data/information specified in Sections 2, 3, and 5. If your city or town does not have identified EJ populations, in Section 5C., consider and describe park and recreation inequities within the community as well as strategies to address those inequities. (Note: EJ populations have been mapped by MassGIS, maps.mass.gov/mgis/ej.htm).

[1] Full text of Environmental Justice Policy at: http://www.mass.gov/envir/ej/

THE OPEN SPACE AND RECREATION PLANNING COMMITTEE

Creating an Open Space and Recreation Plan, whether completely undertaken by volunteers or supervised by municipal staff, will likely require a Planning Committee. Be sure to spend time at the beginning of the planning process to decide what process will help you to develop the most meaningful plan in your community.

By having an inclusive planning process, you will help ensure public buy-in to your Open Space and Recreation Plan. By opening the process to a wide variety of stakeholders, you will have a built-in group of supporters for the plan when it is completed. For ideas on how to have an effective public participation process for your Plan, please see Section 2 – Introduction.

Whether the community decides to hire a consultant, utilizes a professional planner, or a volunteer writes the plan, it is important that an Open Space and Recreation Plan committee be established. Ideally the committee should be involved in all facets of the planning process, including public participation, research, and writing. You want to avoid a situation where very few people have actually read the Plan, resulting in recommendations that are solely those of the author. The recommendations made here are applicable regardless of how your community wishes to proceed.

Committee Leader

Getting the most out of the committee means choosing an effective leader. Keep in mind that the most effective leader may not be the person with the most knowledge about open space, recreation, or the environment. The most important role for the committee leader is to coordinate the work of the committee, motivate the volunteers, and ensure timely completion of the plan before committee members lose interest.

It is important that the person leading this effort have many of the following traits:

- dedication to the project;
- ability and willingness to delegate important tasks to others;
- ability to recognize the (sometimes hidden) strengths of others;
- be a "people person" someone who genuinely likes working in a group;
- ability to keep group discussions focused;
- ability to interpret and translate good ideas of others;
- be organized; and
- be able to keep the group's progress on schedule.

Committee Membership

The membership should be representative of the population in your community. To ensure that the plan has broad based support, involve as many citizens and board representatives as possible. To the extent that they are available, staff from municipal departments should be asked to participate. Some of these people may participate only on the subcommittee dealing with the subject of their interest, others may participate in every aspect of the project. Typically, an Open Space and Recreation Plan Committee will include the following:

- Conservation Commission member;
- Planning Board member;
- Recreation Commission member;
- Historical Commission or Society member;
- members of Board of Public Health, Water Commission, or Public Works Department;
- Community Preservation Committee member;
- landowners;
- real estate, development, or business interests;
- citizens interested in community character and landscape preservation;
- citizens interested in the environment and natural resource conservation;
- citizens interested in playgrounds and recreation;
- citizens interested in trail development and use;
- citizens interested in rare and endangered species; and
- others you determine to be important.

Forming Subcommittees

Among the objectives of your first meeting should be to review the purpose and tasks involved in the project you are beginning, and to divide the Committee into subcommittees, each of which will be responsible for contributing to specific portions of the plan. You might consider giving everyone a copy of the *Open Space and Recreation Plan Requirements* so that they understand how everything fits together. Since you will ultimately need information on many subjects, encourage interested Committee members to chair subcommittees on these major topics. Then, give the subcommittees appropriate sections of this workbook to guide their work. Although the subcommittees (topics) can be organized in any way, this is one suggestion:

- Regional Context, Community History, Landscape Character, and Population Data
- Growth and Development Issues and Environmental Problems
- Geology, Soils, Topography and Water Resources
- Vegetation, Fisheries and Wildlife, and Scenic Resources

- Inventory of Lands of Conservation and Recreation Interest
- Conservation and Recreation Needs Assessment and Inventory of Resource Protection Measures
- Community Goals and Five-Year Action Plan

The leaders of each subcommittee are responsible for recruiting others to work with them and following the guidelines given in this Workbook. After everyone agrees on a timetable for completing their research and writing, the leader of the whole Committee is responsible for keeping the sub-committee leaders on schedule.

One or two people should be assigned to write the final plan. They will collect draft versions of all the required sections of the Plan from the various subcommittees and edit them into a document with a consistent style.

Suggested Timetable

As mentioned earlier, the order of the final Open Space and Recreation Plan document is not the order in which the open space planning process occurs. There is no hard and fast first-step-next-step order that must be followed, many of the "steps" happen concurrently. However, the following chart gives a general idea of one approach to scheduling the process. It assumes that the Open Space and Recreation Plan Committee has been formed, that it is largely a volunteer process, and that it will take approximately 12 months to complete the plan.

Activities	Year One												Year Two			
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
SETTING GOALS AND OBJECTIVES																
Articulate, Organize and Refine																
Form Subcommittees																
Gather And Evaluate Past Plans																
Develop a Public Participation Program, Schedule Events, and Publicize the Project Early and Often!																
Public Meetings																
COLLECTING THE DATA																
Community Setting																
Environmental Inventory																
Section 5 Inventory																
Develop Maps Illustrating Data																
ANALYZING THE DATA: Assess Opportunities and Constraints																
Resource Protection Needs																
Community Needs																
Management Needs																
Public Survey Conducted																
Public Meeting																
PREPARING THE ACTION PLAN																
Establish Goals, Objectives and Priorities																
Develop Concrete Actions (Tasks)																
Develop and Implementation Schedule																
Public Meeting																
WRITING THE REPORT																
Section Drafts by Subcommittees																
Editing and Finishing																
Town/City Board and DCS Approval																
ONGOING: Continue to Consult the Plan and Update as Necessary																

As you are writing each section, note the places (perhaps highlight with a yellow marker) that a particular action is recommended. Then as you write the Recommendations and Action Plan sections, be sure that each of these actions has been included.

The creation of a thorough Open Space and Recreation Plan may seem difficult at first glance, however involving many local residents and seeking technical assistance will make it less daunting. Many Massachusetts agencies, institutions and environmental interest groups are willing and able to assist you with valuable guidance and information. Many organizations will send a representative to meet with you or direct you to useful websites for references.

How the Planning Requirements and Workbook Work Together

This Workbook has been revised and reissued in 2008. There have been a number of changes in the last few years that need to be incorporated into the open space and recreation planning process. Many of these changes make the planning process easier, particularly regarding the mapping requirements. There are many new data sets available through MassGIS. New legislation provides enhanced opportunities for municipalities to preserve open space, such as the Community Preservation Act and Chapter 61 revisions. Finally, there are a number of improvements in the planning process resulting from new techniques used by communities across the state and country, such as the Urban Land Assessment referred to in Section 5 that was developed by the Urban Ecology Institute and the Trust for Public Land. These model approaches are helpful to cities and towns that are preparing their first Open Space and Recreation Plan and to those updating their plans.

The plan must be written in the exact order as described in the requirements. The goal of this update is not to change the requirements or format of Open Space and Recreation Plans, but to

What is the Mass GIS Data Viewer?

The 43HMassGIS Data Viewer is distributed on CDs or DVDs and is both a set of geographic data for a specific area in Massachusetts (or data for the entire state) and a set of tools to facilitate the use of the data.

There are three versions of the data viewing tools; two require that the user have GIS software and one requiring no additional software. One version of the DataViewer is used with 44HArcView version 9, a comprehensive GIS program available from ESRI. Another version of the DataViewer works with 45HArcView version 3, also from ESRI. These two versions of the DataViewer consist primarily of a few key enhancements to native ArcView 3 or 9, designed to make it very easy to work with MassGIS data while being generic enough to work with any other spatial data supported by GIS. The third DataViewer, the "Runtime" version, requires no additional GIS software. It is a limited version of ArcView3; while some of the functionality of the commercial version of the software has been removed, the Runtime DataViewer can be used for data query, analysis and display, and for creating and printing maps.

What the Data Viewer Contains

MassGIS Data Viewers are available for a particular region (one town, a few towns, a watershed, etc.). DataViewers contain the customized ArcView projects explained above, and these datasets:

- 46Hall point, polygon and vector data that overlap the requested region (except the Natural Heritage and Endangered Species Program data and point elevations, which must be requested specifically),
- 47HUSGS Quadrangle Images,
- digital orthophotos as requested. These include images from the 48Hmid-1990s (black and white), images from 49H2001 (color) and images from 50H2005 (color and infrared).

On-line Mapping Viewers

MassGIS has created several Internet map services, as well as a full on-line DataViewer (OLIVER). These map services can be used to create maps showing a wide variety of map topics relevant to openspace planning, including DEP Priority Resources (21e), wetlands, NHESP Priority Habitats, Title 5 setbacks, the Mass GIS openspace data, several population indices, and orthophotos from 2001 ans 2005. With OLIVER, a map with any combination of the hundreds of MassGIS data layers can be created, These maps can be created for any part of the state and are suitable for viewing and printing.

identify ways in which the planning process could be made easier. Originally developed in 1991, this Workbook also recognizes that many communities have prepared plans in the past and need only update them. Some information found in prior plans does not require updating and can be left as it was in the previous plan. It also gives specific ways that urban communities can prioritize their remaining open space.

The samples from approved Open Space and Recreation Plans that appear throughout this section are included to give you an idea of how to conduct the planning process and write your plan. They are only excerpts and samples from the specific sections to illustrate items addressed in this Workbook, not models to be copied. They also provide opportunities to explain key points in greater detail.

If possible, post your final report on your municipal website. Make sure to have copies available to the public, such as in the library and the city or town hall.

General Mapping Considerations

Throughout this guide, you will encounter sections describing the various maps that are required or recommended (as optional) for inclusion in the final open space plan. (Each "Mapping Considerations" section is preceded by the MassGIS logo.) Maps are very useful in the planning process because they help illustrate geographic and spatial relationships, and can help focus a discussion of land use. If maps are only added to the plan at the end of the process to meet the requirements, a valuable opportunity has been lost.

Maps related to the resources inventoried in Sections 4 and 5 are an extremely important aspect of the plan. Having illustrations of the location of various resources and open spaces helps in understanding how to make judicious land use and siting decisions. Likewise, build-out maps may illustrate which resources may be threatened by future development. These maps need to be consulted throughout the development of the plan, before the Goals, Objectives, and Action Plan are determined.

At the conclusion of your planning process, each town or city board should be provided with a set of maps from the Open Space and Recreation Plan to refer to when making decisions that change the use of land in the community. Be sure to take the necessary steps in the beginning of the planning process to ensure that multiple copies can be created easily and inexpensively.

Some of the information needed to do a local Open Space and Recreation Plan is available from MassGIS. Much of it is available for free download from the MassGIS website at www.mass.gov/mgis/massgis.htm. Maps also can be obtained from your local regional planning agency (see Appendix A for a list). For example, maps are available depicting surface water bodies; parks, refuges and conservation lands; agricultural land; vernal pools and wetlands; water supplies and aquifers; coastal resources; historic and cultural resources; flood hazard areas; and hazardous waste areas.

In addition, a free computer mapping software package, called the "MassGIS DataViewer" is available to communities to help simplify many of the required mapping tasks. Use of this tool is highly recommended (see previous sidebar).

The Open Space and Recreation Plan requires the following maps:

1. Regional Context Map – to illustrate Section 3A
2. Environmental Justice Map – to illustrate Section 3C (if your community has EJ populations)
3. Zoning Map – to illustrate Section 3D

4. Soils and Geologic Features Map – to illustrate Section 4

5. Unique Features Map – to illustrate Section 4B and F

6. Water Resources Map – to illustrate Section 3C

   - Watershed boundary
   - Surface water
   - Wetlands
   - Flood hazard zones
   - Zones of contribution to public supply wells

7. Open Space Inventory Map – to illustrate Section 5

8. Action Plan Map – to illustrate Section 9. Show the effect that successful completion of all actions listed in Section 9 would have on your community. For example, using the Open Space Inventory Map as a base, add in new patterns showing the general location of lands you hope to protect as part of the Action Plan. These areas would have appeared on previous maps as important but unprotected resources. Also show sites on the five-year schedule for capital improvements

In addition to these required maps, the following maps are recommended as optional:

A. Historic Community Maps – to illustrate Section 3B

B. Population Characteristics – to illustrate Section 3C

C. Current Land Use – to illustrate Section 3D

D. Existing Infrastructure – to illustrate Section 3D

E. Maximum Zoning Build-Out – to illustrate Section 3D

F. Plant and Wildlife Habitat – to illustrate Section 4D and E

G. Environmental Challenges – to illustrate Section 4G

MACMAPP

ESRI, together with MassGIS, has established an ongoing grant program that provides the latest version of ArcView, with training and technical support, to municipal conservation commissions in Massachusetts at a much-reduced cost. The Massachusetts Conservation Mapping Assistance Partnership Program (51HMACMAPP) was created to assist conservation organizations, including conservation commissions, in building GIS capabilities.

SECTION 1 – PLAN SUMMARY

Give a brief summary of what is being recommended in the Open Space and Recreation Plan. Mention the overall aspirations of the community that are addressed in the document. This can be an Executive Summary highlighting the critical needs, actions to implement the plan, important issues, and identification of major projects.

Describe these aspirations in general terms, such as "protect rural character of community" or "to provide watershed protection". This overall vision should be reflected in the development of goals later in the process.

This section should be written after the plan is finished. It is very similar to a conclusions section. The purpose of putting it first is to give the reader a quick understanding of your open space and recreation goals and needs and how you intend to meet those goals. The target audience for this section could be key decision makers, so make your point quickly and concisely. Think of it as a half-page summary of the entire process that you could hand to a newspaper reporter or to Town Meeting or City Council members – something that summarizes the main points of the process.

Plan Summary
Salem Open Space and Recreation Plan

The City of Salem is a highly developed and densely populated community with an interesting array of open space and parks remaining within its borders and limited direct access to open space resources in adjacent municipalities. The need to improve and upgrade park facilities, and preserve and protect existing open spaces is a widely recognized and deeply felt by Salem residents.

Changing demographics in Salem over the past decade have altered the needs for and demands on limited public resources for outdoor recreation, physical fitness and sports, such as playing fields, playgrounds, and other active and passive recreational facilities.

The City faces serious management, staffing and financial challenges to address these diverse needs for conservation land, parks, playgrounds and outdoor sports facilities. Although some progress has been made over the past five years to enhance several key sites, and a couple of volunteer Friends groups have been formed to advocate and raise funds for specific parks, it is recognized that more efforts to supplement City resources are needed. However, the City also needs to develop a stronger open space management program and incorporate regionwide solutions, where feasible, to meet the competing demands of many different constituencies.

This document is Salem's first Open Space and Recreation Plan since 1996. It presents an updated inventory of Salem's open spaces, documents open space and recreation needs, and establishes an ambitious program to expand and modernize its park and recreation system. Overall, this Plan reaffirms Salem's desire to meet the following goals:

1. Maintain public spaces and recreational facilities
2. Protect open spaces
3. Develop and implement a capital improvement program
4. Improve public access and awareness

Salem's open space and park system is a precious and limited resource that has been difficult to acquire and maintain and needs to be protected ardently. This Plan presents open space goals, objectives and actions that will guide Salem's open space and recreation philosophy, planning, improvement, maintenance, and management through 2012.

SECTION 2 – INTRODUCTION

A. Statement of Purpose

Describe why the plan was written. Include an update since the last plan citing past and current efforts to protect and enhance open space and recreational opportunities.

A brief description is all that is necessary, but you want to give the reader an idea of the status of open space and recreation planning in the community: is this a first-time Open Space and Recreation Plan or is this the tenth update? Has there been a recent water supply crisis that took everyone by surprise resulting in the realization that comprehensive planning would be better for the future than a narrow band-aid solution for this particular problem? Is there a watershed-wide or subwatershed rationale for protection efforts in a particular area?

B. Planning Process and Public Participation

Describe the process used to develop the plan. Name the primary researchers and writers, people who worked on committees, etc. List the meetings, surveys, public participation, municipal assessments, etc. that contributed to the development of the plan. It would make sense in this section to support the formation of an advisory committee to monitor progress on the plan.

Public participation lies at the heart of any effective planning effort. Most communities undertake the planning and public participation process on their own, without the hiring of a consultant. A consultant could be useful in helping with the public participation process for large communities, where getting feedback from a significant portion of the residents would be daunting work for a volunteer committee. When planning your public participation process, keep in mind that meetings should be held in universally accessible locations and, where applicable, locations that are convenient to public transportation. Make sure to involve a diverse group of residents from your community. Having an online survey or sending surveys home with school children are important outreach tools, but will only ensure that a subset of your residents' opinions will be voiced. The Trust for Public Land has a good reference guide on the "Best Practices in Community Engagement." These are listed in Appendix J.

Listed below are different techniques communities can use to gauge public interest in recreation and conservation and where the perceived gaps are. Read the options and determine which of the techniques will work best in your community. If an Environmental Justice population lives in your community, enhanced outreach is expected. Language accessibility for non-English speaking residents is a key component to citizen outreach. Note that any good planning process will use a variety of these techniques, and some could be combined within a single event (e.g., working-groups as a component of a public forum, covered by the local paper).

- Public Meeting: Under Massachusetts General Law, most meetings held by a municipal board, commission, council, task force, or other body is required to comply with the Open Meeting Law. Notice of meetings must be posted at the City or Town Hall and all interested members of the public must be allowed to attend. As a good rule of thumb, all meetings associated with the development of an Open Space and Recreation Plan should be considered public meetings.
- Public Hearing: A legal term for a particular kind of public meeting, requiring more extensive notice (typically publication in a newspaper at least two weeks in advance), recording of proceedings, minutes, and other formal elements. Not all public meetings need to be public hearings.
- Public Forum: A meeting held to present material and seek additional input. A moderator is needed to frame and coordinate the discussion, but the emphasis should be on the

interaction of the audience (typically viewed as "participants"). Be sure to have a clear agenda for each forum – specific information that will be presented (an open space map, a build-out projection, the results of a survey, etc.), a particular topic that will be discussed, and stick to it.

- Visioning Session and Charrette: Often a committee can use a public meeting to create some shared product – for example, a common vision for a region of the community, or a design of a new recreational facility. Visioning Sessions emphasize brainstorming and open discussion and work well for developing consensus on shared goals and objectives. Charrettes emphasize "hands-on" interaction, typically through drawing or mapping project, and work well for efforts involving design problems.
- Working Group Meeting: Meeting in smaller group (5-10 people) can allow for a more careful and involved treatment of a specific topic. Often the real work of the plan gets done through such small groups: drafting specific language for goals, objectives, and actions; dividing up tasks to research and present; deciding what to include on maps; developing alternatives to consider; and so on. Note that working-group meetings can occur on their own or as part of a larger Public Forum ("break-out groups").
- Survey: A survey can be a good tool to gather input quickly from a wide range of residents. However, most planning surveys are not scientific – for example, only people interested in the issue tend to respond. Nonetheless, they can provide a good base to start from, and they help to define the range of opinions in the public at large. Don't underestimate the time required to tabulate and analyze the results, or the possible costs involved with mailing. Consider mailing only to a random sample, or coordinating mailing with community water bills or annual census forms. Also, be careful not to bias the results through the phrasing of the questions; open-ended questions will provide more useful information (but be harder to tabulate) than strict "agree/disagree" or "ranking" questions. See a sample of a survey in Appendix H.
- Media: Even if the public will not come to you, you can still go to them, through the media. Local papers, public access cable television, school newsletters, and other local media channels offer opportunities to inform the public about the planning process and solicit their input. Beyond the usual meeting announcements in local papers, contribute substantive articles, letters, or guest editorials on the planning process; participate on cable talk shows to discuss the elements of the plan; and invite the media to attend and record or report on your meetings and public events. Be sure to utilize alternative media outlets such as foreign language newspapers, church bulletins, or NGO newsletters to reach Environmental Justice populations.
- Public Events: Host a walk or event at a critical property that is not protected (with the owners enthusiastic permission) or at a protected and cherished property in the community. This could help make the case for protecting open space, and hopefully motivate more volunteers.

C. Enhanced Outreach and Public Participation

Describe the enhanced outreach and public participation process to EJ populations, including specific tools or actions taken to ensure meaningful involvement in the OSRP planning process.

Note: If residents lack English language proficiency, translation services should be provided for both written material (including public meeting notification) as well as at public meetings.

Appendices J and K describe outreach techniques that may be helpful to your community while completing this section of the OSRP.

Statement of Purpose/Planning Process and Public Participation
Peabody Open Space & Recreation Plan

Statement of Purpose

The purpose of this document is to serve as a guide for future management and development of City Recreation and Open Space assets. Municipal resources for improvement and acquisition projects are limited which puts great emphasis on strategy and implementation. The open space plan's inventory and analysis guides the broad goals while synthesis guides the implementation actions. This plan focuses on specific actions to achieve the goals.

This plan, the third in a series of updates to the 1986 Open Space and Recreation Plan, will build on progress since the 1998 update with emphasis on action. In 2002, the City adopted the CPA to fund park development and open space acquisition. This additional funding will insure projects are completed and not just theorized. The completion of the 2005 Plan will provide focus and set achievable goals for the community.

Planning Process

In the fall of 2003 the Department of Community Development and Planning began a comprehensive update to this plan in coordination with the Open Space Plan Advisory Group. The Advisory Group includes each of the various land use, planning, and community boards. Members from the City Council, Planning Board, Conservation Commission, Parks Commission, Community Preservation Committee, and Historical Commission helped to develop this plan along with City staff and members of the general public. The DCDP collected background information and data on the City's resources and open lands, while other City departments contributed inventory information about the water supply, infrastructure, and recreation areas and programs. At a series of meetings in the summer of 2004, the draft Recreation and Open Space Plan was circulated for input by community boards and public comment utilizing the City's website.

The draft Recreation and Open Space Plan was prepared following the guidelines established by the Massachusetts Division of Conservation Services for the preparation of state-approved open space and recreation master plans. Background information was gathered and an inventory of resources completed to provide a basis from which to analyze the City's open space and recreation needs. The formation of goals, objectives, and appropriate actions followed. These goals, objectives, and actions form the substance of a five-year plan for implementation. The plan was further reviewed by staff and municipal boards for comment and revision. A series of public hearings were held during this process and the City's website was used to obtain feedback and survey information.

Public Participation

The City of Peabody favored an inclusionary and dynamic public participation process that maximized public comment on parks, recreation, open space and related topics. As a forum for public comment, the City chose to hold a series of public hearings on the draft plan. Citizens were able to make comments and recommendations to planning staff and could provide additional comments and suggestions using comment sheets and the City's Recreation & Open Space Plan Survey. At a series of six public presentations, in the summer of 2004, planning staff presented the draft plan to the City's various Boards and Commissions, to receive feedback from board members and the general public. These meetings and public hearings were scheduled so as to make it convenient for the greatest number of citizens to attend. Chapter 10 summarizes comments received at the series of public meetings, public hearings, and from survey and comment forms submitted.

SECTION 3 – COMMUNITY SETTING

This section should give a broad picture of your community, examining it in a variety of contexts which illustrate how its character evolved and how it may need to change to address the community's needs in the future.

A. Regional Context

Describe the community's physical location and major watershed address (is it in the coastal plain, foothills of the Berkshires, Connecticut River flood plain?) and what effect location has had on the community's development. (Required Map 1) Describe the community's regional context in terms of resources shared with neighboring communities (such as water resources or a mountain range) and how that has effected the community's development. Also describe its socio-economic context (is it an isolated hill town, upper-income Boston suburb, declining mill town). What effect does the economy have on the community's open space and recreation needs? Specifically include a reference to the watershed(s) in which the community is located and any regional open space planning efforts that have been conducted on a watershed or other regional basis (such as one prepared by the regional planning agency).

Talk extensively with people from neighboring communities to better understand the regional context of your town or city. Obtain copies of their Open Space and Recreation Plans. Additionally, it is important to consult with your regional planning agency to understand the degree to which it has conducted regional planning studies or planning projects for other nearby cities and towns. Local land trusts also should be consulted to determine their involvement in open space planning within the region. This section should describe how land use (highways, shopping centers, recreation areas, water supply, etc.) in adjacent communities affects your community – and how your land use affects them. As an example, how does your community's industrial park (or school, or park) affect your neighbor's public drinking supply? Be objective; there are likely to be both positive and negative effects.

Goals and objectives for the protection of valuable resources (which you'll discuss in Section 8) should address regional resources in neighboring communities that your community may affect (and vice versa), so be sure to keep notes for Section 8. It is also helpful to look at open space and recreation resources located near your community boundary, then check with your neighbor to be certain that their land use is compatible with your protection strategy for the resource. Identify resources of regional significance, such as trails, forests, parks, agricultural lands, bicycle paths, surface water bodies, and aquifers that occupy land in, or travel through, more than one community. Discussions with the other communities should include protection strategies that benefit all the communities sharing the resource.

Another benefit of looking at resources regionally is that neighboring communities may have open space and recreation resources that complement each other. These shared resources, once identified and made accessible will not need to be duplicated for each community.

Regional Context
Burlington Open Space and Recreation Plan

A suburb of Boston, Burlington is located in northeastern Massachusetts midway between Boston and Lowell. As part of Middlesex County, the town is thirteen miles northwest of Boston and twelve miles south of Lowell. It is bordered by the towns of Bedford to the west, Billerica to the northwest, Wilmington to the northeast, Woburn to the southeast and south, and Lexington to the south. Burlington is a member of the North Suburban Planning Council, one of eight Metropolitan Area Planning Council subregions. The NPSC includes nine communities and is currently chaired by Burlington's Planning Director Tony Fields.

Burlington is commonly known as a shopping and entertainment destination, as well as an important regional employer. Additionally, because of its industrial draw and major surrounding roadways, it is a key commuter town. Yet, the Town also contains a large, primarily middle-to-upper income, residential community. These components of Burlington's character materialized from a period of intense growth and activity brought on by the construction of Route 128. Such development brought wealth to the community, but also greatly impacted its available open space. In the latter stages of the suburban development life cycle, Burlington is working to save what open space remains. It is also working to meet future demands of a changing demographic to improve the Town's habitability and sustainability.

Burlington is located at the top of three watersheds: Shawsheen River Bain (western Burlington); Ipswich River Basin (northeastern Burlington); and Mystic River Basin (southeastern Burlington). Although sites along these waterways are prone to flooding, much of the land was built upon prior to regulations limiting such actions. Additionally, based on the existing zoning development laws and despite existing regulations, in many cases the re-development of such land will continue.

Mapping Considerations

Maps can be used to help illustrate the regional context of the community. Rather than developing new maps, consult with your regional planning agency to locate existing maps depicting surrounding communities, water resources, regional transportation networks, and the like.

B. History of the Community

Give a brief summary of the community's history, including the effects of its location as discussed in Section 3A above. Mention the historic and archeological resources that give the community special character. Note: check with the local historical commission. The purpose of this section is not only to broaden understanding of what makes your community interesting from a historical perspective, but also to promote understanding of land use patterns inherited from previous generations. This understanding should inform new ideas that are introduced in your community's Open Space and Recreation Plan.

Please note that in order to take a look at your community in a more comprehensive manner, it is recommended that a master plan be prepared. The Open Space and Recreation Plan would be part of that planning effort, but would also be a separate document. Completing a master plan provides a good opportunity to consider a number of factors beyond general land use and open space. This, in turn, allows a city or town to consider making changes to the zoning code to rectify incompatible land-use patterns. For example, industrial zones are often located in or near wetlands because that was where the railroad was a hundred years ago. Perhaps the railroad is gone now, but the zoning code may encourage continued expansion of industry in the worst places possible. River corridors have similar histories. Your job is to discover these things and recommend changes in Sections 8 and 9. Note: you will be discussing current land use patterns again in another part of this section. At this point, look at planning from an

History of the Community
Yarmouth Open Space and Recreation Plan

The Town of Yarmouth is rich in history beginning with English settlers from the Mayflower arrival. The Town is broken into five historic districts to protect and manage the Town's historic resources: 1) Taylor Bray Farm; 2) Northside Historic District; 3) Brya, Thomas Farm Historic District; 4) Yarmouth Campground Historic District, and 5) the South Yarmouth – Bass River Historic District. There are also three National Register Sites in town: the Judah Baker Windmill, Taylor Bray Farm, and the Baxter Gristmill. In addition, Yarmouth shares a regional historic district, Old Kings Highway Regional Historic District; with its neighbors, which encompasses the entire north side of town, north of Route 6.

English settlers first arrived in the 1630s when many generations of Native Americans (the Wampanoag Nation) lived here. At that time, Yarmouth was known as "Mattacheese", meaning planting lands by the sea. In 1638, a Mayflower passenger, Stephen Hopkins, was granted a leave of Plymouth Colony to erect a house in Mattacheese, and cut hay to winter his cattle, provided he did not withdraw himself from the Town of Plymouth. By 1639, three farmers (Anthony Thacher, John Crowse, and Thomas Howes) were responsible for the first permanent settlement of Mattacheese. In 1640, Mattacheese had been renamed Yarmouth, possibly after a seaside town in England, and by this time, 28 families made their home here. Most were farmers, but other worked trades serving the new colonial outpost, including that of a tailor, cobbler, goldsmith, and carriage maker. Many descendants of the Town's first settlers still live in Yarmouth today.

Like the rest of early Cape Codders, Yarmouth settlers were farmers first and fisherman on the side. But, as the population grew, and the soils became depleted by forest clearing a windborne erosion; therefore, more and more Yarmouth citizens looked to the sea for sustenance and profit. In the 1700s, Yarmouth citizens helped to develop the whale fishing industry, first alongshore and then far offshore. In the 1800s, a full scale, multi-faceted maritime economy developed in Yarmouth: North-side sailing fleets communicated daily with Boston, ferrying Cape Cod livestock and produce, and four wharves were built along the Bass River where boatbuilding commenced.

The Bass River, along with Hyannis and Chatham were the major south side ports of Cape Cod in this early 1800s period. Trading brigs sailed between Yarmouth and the British West Indies. Captain Asa Eldridge of Yarmouth was renowned worldwide when he established the record for fastest sailing time in 1854 (dock to dock in 13 days) from New York to Liverpool in the clipper ship "Red Jacket." Ebenezer Sears, a Yarmouth native, was the first captain to round the Cape of Good Hope in an American vessel.

By 1840, Massachusetts provided half of the fishery products of the United States and Yarmouth was part of that effort, particularly in the cod and mackerel fisheries. By 1863, however, changes in fishing technology favored large cities with packing plants and the last of the Yarmouth offshore fishing fleet had been sold. Except for an inshore fishery, Yarmouth retired from the sea, in league with other Cape Cod towns, whose economy and populations declined through the latter half of the nineteenth century. Downturns in the coastal trade, collapse of the whaling industry, and post-Civil War recession were responsible for emigration.

Yarmouth turned back to the land for economic pursuits. Cranberrying, a labor-intensive enterprise capable of employing displaced sailors and Civil War veterans, became the primary agricultural venture. The 1850s and 1860s were a time of "Cranberry Fever" in Massachusetts and Yarmouth's five acres of planted bogs in 1854 grew rapidly to as many as 165 acres planted by 1889. Cranberrying altered the environment in many ways: cedar swamps and other wetlands were displaced to make working bogs, dikes were used to impound streams, adjacent embankments were mined for sand, and isolated ponds were given artificial outlets and their water levels manipulated with flumes.

Yarmouthport continued to serve as the Town's primary business core at 1900, with grocery stores, printing shops, a tailor, a meat market, a bank and an insurance company. The Cape Cod railroad extended to Willow Street at the western edge of Town by 1854, and ten years later, the railroad was extended through Town to Orleans, supplanting sailing as the primary means of regional transport.

The advent of the automobile brought about subtle but inevitable change. By 1920, Yarmouth's population began its rebound from the nineteenth century decline, as the idea of Cape Cod as a summer resort took firm hold. Men found jobs building homes in developments along the southern coastal areas and the foundation of the tourist economy took shape. Yarmouth's character as a seaside resort was entrenched by the 1950s, spurred by the post-World War II boom. Beachfront motels blanketed the south side where warm waters and sandy shores provided excellent swimming and sunning conditions. Route 28 supplanted Route 6A as the Town's new linear commercial core, since there was more room for businesses to grow there and it was proximate to the resorts.

historic perspective; in part D of this section, look to the future land-use planning issues.

The basic facts of your community's history are probably readily available from the Massachusetts Historical Commission and your local historical commission. However, relating historical development patterns to current problems and opportunities may take some creative thinking.

Consider including reduced versions of old maps that illustrate the growth patterns of the community at different points in history. Copies make reasonable "originals" to be mounted onto your final copy. If the budget allows, a screened black-and-white photograph will produce excellent results. Check on the price – it may be cheaper than you think. This would be Recommended Map A.

This is a section that should not require extensive updating when your community is revising its existing open space and recreation plan. To the extent that new information has been made available (i.e. planning documents or cooperative achievements) and it would contribute to this section of the plan, include it.

Mapping Considerations

Existing historic maps of the community are recommended to illustrate this section. Check with your local historic preservation commission or the Massachusetts Historical Commission to see if any exist. The state required community maps to be drawn as early as the 1830's and 1850's, and county atlases were published in the 1870's. Two good internet sources for historic maps are the collection of historic USGS maps at the Dimond Library at the University of New Hampshire (docs.unh.edu/nhtopos/nhtopos.htm) and the Library of Congress Panoramic Map Collection (lcweb2.loc.gov/ammem/pmhtml/panhome.html).

C. Population Characteristics

Describe demographic factors that help identify patterns of need and interest. Consider population trends, density, age, and family income, as well as major industries, employers, and employment trends. The goal is to describe the community's needs for open space and recreation, not just to duplicate census information. It may be quite helpful to map this information. The most recent census data are available at www.umass.edu/miser.

Context and Demographics of Environmental Justice Population(s)

Briefly describe the context and demographics of the environmental justice populations in your city or town (race, income, immigrant populations, and foreign languages spoken). What percentage of the population are children under 18 in the city and in the EJ areas?

Again, the objective is to understand these figures in relation to local and regional open space and recreation resources. You are trying to identify how the resources should be managed to meet the changing needs of the community. Include a map of the Environmental Justice Populations (Required Map 2).

Some of the information on population and trends can be obtained by reviewing past annual reports and calculating how the population has changed. Regional planning agencies are a source of good information. But go beyond this and consider the effects of various changes, such as those listed below:

- Have new recreation facilities been constructed?
- If not, should they be recommended in Section 9: Action Plan? If so, what additional types of facilities are needed based on the demographics?
- How dense is the residential development in the community?

- What is the median family income and how is it likely to affect the recreation needs of the population?
- What are the projections and needs identified by the regional planning agency?

It is also important to understand the employment picture, now and in the foreseeable future:

- Who are the major employers and where they are located in community? Do they contribute to the unprotected, but useable open space in the community?
- What role does agriculture or forestry play in your community?
- What is the likelihood of having new industries move into the community?
- If that is desirable, does the zoning ensure that it be built in the right place?
- If that is not desirable, does the zoning discourage or prevent it?

For example, in a community with an aging population on fixed incomes, the development of extensive walking trails or the addition of sidewalks may be the most needed recreational amenity. Whereas, in another community there may be a population of primarily young families. This community would probably have a much greater need for active recreation facilities such as tot lots and ball fields.

The information discussed above needs to be updated every five years. Population and other demographic shifts can have a profound impact on the needs for open space and recreation opportunities.

Mapping Considerations

Maps can be used to illustrate past and future population changes. This would be Recommended Map B. Good resources for this data can be found at services hosting U.S. Census/TIGER data,

Population Characteristics
Peabody Open Space and Recreation Plan

1. Population Trends – Though the City's population declined slightly in the 1970s (as the baby boom generation entered young adulthood and left childhood homes) Peabody's population began to grow again (though slowly) in the 1980s, as the local and regional economy entered a period of expansion. The City of Peabody's 2002 Master Plan made attempts to predict the growth within the City limits by characterizing patterns of growth through the build-out analysis.

2. Population Density – The population density per square mile of land in Peabody is 3,071, a 4.6% increase from 2000. The housing density is 1,152 units per sq. mile, with 58% of total units as single family. Population and housing density is greatest in the downtown and South Peabody, followed by West Peabody. The density reflects zoning regulations and lot dimensions, particularly lot size. The Downtown is dense due to multi-family condos and apartments. Peabody is nine percent open space, which translates to 20.62 acres per 1000 people. Peabody land 16.4 square miles.

3. Employment Trends – Peabody has a diverse range of employment centers, regional and local, which include Centennial Industrial Park, Designated Development District, the Northshore Mall and the downtown commercial and civic center. The industries are diverse with a mix of commercial trade, services, and manufacturing. Peabody is one of the few cities in eastern Mass to see an actual increase in the number of manufacturing jobs over the last fifteen years. In the past five years Centennial Industrial Park has increased with the addition of 25 new companies increasing the work force within the City. Total employment in Peabody was 26,897, an increase of 1,638 from 1997, but a small decline from the period's peak of 27,056 in 2000.

4. Family Income – The median family income is $65,483 and the median household income is $54,829. Most families of low to moderate income reside in downtown while the least number of families reside in West Peabody. City-wide the largest income bracket, 25% of families, earns between $50,000 and $75,000 per year.

as well as MISER (www.umass.edu/miser/population). Community mapping software packages provided by the U.S. Department of Housing and Urban Development, using MapInfo software, can also be useful for depicting census data.

When using Census data, be careful to take into account the age of the data. Depending on when you are working on your plan, the data may be as much as ten years out of date.

D. Growth and Development Patterns

This section should pick up where the History section ended, and be written with the pertinent facts from the previous section on population in mind. The purpose of this section is to understand and consider how growth pressures may impact open space and recreation. The patterns and trends identified here should be correlated with the plan's goals and actions addressed in subsequent sections.

The required sections below may have been included in a completed master plan. If your city or town has recently prepared a master plan, most of this information can come directly from that plan.

1. Patterns and Trends: Give a brief description of how the city or town developed and grew (e.g., started as a compact village surrounded by farms, roads now lined with "Form A lots." Or, an old mill town surrounded by forest, now experiencing heavy residential growth). Think about the changing functions of open space and recreation lands and how they help to define and preserve the community's character. Continue by considering what current land uses and apparent trends mean for the future. Note where future growth would take place based on your community's zoning and environmental resources. Evaluate the consistency of this growth with your community's desire to protect natural resources and provide recreational opportunities. Mapping current land uses is helpful. (Optional Map C)
2. Infrastructure: Describe the existing infrastructure and the effects it has had on development patterns. The intent is to understand the effects of the community's "gray" infrastructure on its "green" infrastructure, or open space, and to help define and preserve the community's character. For instance, will projected growth be adequately served by the current water supply? How does the water and wastewater infrastructure in your community affect surrounding water resources? (Optional Map D) Include the following infrastructure systems:
   a) Transportation system, including bicycle and pedestrian facilities;
   b) Public or private water supply systems; and
   c) Municipal sewer service or individual septic systems.
3. Long-term Development Patterns: Outline local land use controls and include a current Zoning Map. (Required Map 3) List scheduled and proposed development projects and expansions to the infrastructure then describe the effect this will have on existing open space. Describe what the community will look like with a maximum build-out of the current zoning plan. This will indicate what residual open space will remain if nothing is done. More positively, it will indicate the vulnerable areas needing permanent protection given present trends. Comment on ecological impacts. Mapping long-term development patterns is recommended.

This section that must be updated every five years. Development patterns are sometimes hard to predict because there are a number of factors, such as the economy, infrastructure availability, changes in zoning, and environmental constraints that determine how land is developed. Additionally, increasing amounts of open space may become permanently preserved, which will limit

potential future growth. This will be discussed in more detail in later sections.

Once your plan is completed, you may feel that your community needs to take the steps necessary to implement the vision that is spelled out. Implementation often means making sure that local zoning and other regulations send the right signals to developers by encouraging (or even allowing!) the type of development the community desires, while discouraging growth in areas slated for conservation. Often, Open Space Residential Developments are not even an option in the zoning bylaw. Infrastructure investments and incentives must also be coordinated with the plan. For example, extending sewer lines to a sparsely developed part of town will likely attract more development there, whether it's wanted or not.

Mapping Considerations

A number of maps are needed to comprehensively address the requirements of this section. However, only a Zoning Map is required. It should be available from your Planning Department (many local zoning maps have also been electronically rendered in GIS format by the regional planning agencies, but be sure to check accuracy, especially where recent changes have been made) or from the EOEEA build-out data provided to each municipality.

Optional maps include Current Land Use and Maximum Zoning Build-Out (Recommended Map E), both of which are likely to have been completed by the regional planning agency as part of the EOEEA build-out analysis project (contact MassGIS or the regional planning agency for copies and/or digital data). Historic land use/aerial photographs can also be used to depict changing patterns of development over time. Any existing Infrastructure Maps your Engineering or DPW departments have may prove illustrative as well. Other optional maps include Regional Context and Population Characteristics.

By using subwatersheds as a planning unit, you may be able to identify areas that are not presently impacted by development or pollution. These areas may jump to the forefront for protection, and will be readily seen on map products. An excellent handbook on watershed-based open space planning is available from the Center for Watershed Protection (www.cwp.org). For example, land use maps can be used to estimate the percentage of impervious surface on a stream or pond watershed. The percentage of impervious cover is directly related to water quality. Build-out maps can be used to estimate future impacts to local water resources using a similar technique.

Patterns and Trends
Brookline Open Space and Recreation Plan

From incorporation in 1705 until the mid 1800s, Brookline was largely a rural agricultural community with some light industry. Brookline's evolution to a suburban residential community began during the 19th century as the Boston population expanded and wealthy merchants began to purchase large areas of farmland for elaborate homes. Fortunately, these first developers had the wisdom and wealth to create neighborhoods that can still be used as templates for successfully combining the natural and the built environment. Both David Sears, at Cottage Farm in the 1830s, and Amos A. Lawrence, at Longwood in the 1850s, ensured that buildings were always sufficiently balanced by the presence of trees, parks, and playgrounds. Cottage Farm and Longwood Mall are listed in the State and National Register of Historic Places.

Respect for the local natural environment was not an isolated trend. Brookline continued to benefit from the actions of other enlightened developers and designers, such as Alexander Wadsworth, who built the park-like residential areas of Linden Square and St. Marks Square, and Thomas Aspinwall Davis, a developer who put set-back requirements and use restrictions into the master deeds of his homes.

During the second half of the 19th century, Brookline became the residence of many renowned architects and landscape architects, whose vision and talent left a lasting national as well as local imprint on the cultural landscape.

The early 20th century saw a continuation of the residential trends begun earlier. Major development along Beacon Street and Commonwealth Avenue continued, the grand houses and apartment structures creating an impressive boulevard. Smaller, multi-family dwellings were built as homes for those who worked at the large estates, and additional apartment buildings in North and Central Brookline became residences for the early commuters to Boston. South Brookline maintained a largely rural quality until the end of WWII, when small, suburban development came to several areas. A particularly striking mid 20th century cultural landscape is Hancock Village. Developed as a community for returning soldiers and their families, its small, attached two-story brick buildings are set in and around low puddingstone hillocks surrounded by broad green lawns well-suited to the games of children and neighborly interaction.

Infrastructure
Salem Open Space and Recreation Plan

Transportation
The major regional highways, I-95 and Route 128, are both within 4.5 miles of the city limits. The arterial roads serving Salem are state Routes 1A, 107, and 114, and the Boston Street entrance corridor from Peabody which links with Route 128. Public transit is provided by MBTA buses and commuter rail service to Boston and other North Shore communities. An MBTA-subsidized private bus line also runs within the City. Salem also has a bike trail which connects it to Marblehead.

Water Supply
Salem's primary water source is Wenham Lake which is recharged by the Putnamville Reservoir, the Ipswich River, and Longham Reservoir. Currently an additional reservoir is being considered in Topsfield. Water supplies for Salem and Beverly are administered by the Salem-Beverly Water Supply Board. The total storage capacity of the Salem-Beverly Water System is 3.5 billion gallons. The average daily water use by Salem is 5.143 million gallons, approximately 135 gallons a day per capita. Today, the system's maximum treatment capacity is 24 MGD with possibilities of expanding up to 32 MGD; however, due to a raw water supply problem, expansion capabilities are limited.

Sewer Service
Almost all residences and businesses in Salem are served by the municipal sewer system. No new septic systems are permitted. The Salem sewer system is tied into a regional treatment plant operated by the South Essex Sewerage District serving Salem, Peabody, Danvers, Beverly, and part of Middleton. There are only a handful of remaining septic systems in the city.

Long-term Development Patterns
Greenfield Open Space and Recreation Plan

Since 1957, Greenfield's growth patterns have been guided by zoning regulations. The town currently has eleven different zoning districts to ensure new development occurs in areas of Greenfield deemed appropriate. The town has a legacy of many pre-existing uses, which are no longer allowed by the present zoning regulations. The Greenfield zoning districts are as follows: Urban Residential (RA), Suburban Residential (RB), Rural Residential (RC), Semi-Residential (SR), Health Service (H), Central Commercial (CC), General Commercial (GC), Limited Commercial (LC), Office (O), General Industry (GI), and Planned Industry (PI).

SECTION 4 – ENVIRONMENTAL INVENTORY AND ANALYSIS

Section 4 is an inventory of your community's natural and cultural resources. The analysis should begin to suggest the Open Space and Recreation Plan goals and objectives that will help protect the biodiversity, ecosystems, and ecological integrity of your community. (Note: this environmental data will allow the planning committee to assess the possibility of legal constraints for development in Section 7: Analysis of Needs.)

The Commonwealth of Massachusetts is divided into 27 major watersheds and each watershed is further divided into subwatersheds. The Open Space and Recreation Plan should address basic water and natural resource features locally and from a watershed context. This analysis should begin to inform the Open Space and Recreation Plan goals and objectives that will help protect the biodiversity of your community.

A. Geology, Soils and Topography

1. Discuss the essential structure on which your community is based. Give a brief description of topography, geologic features, and soils, especially prime and significant (statewide) agricultural soils. Consider resources such as sand and gravel deposits, erodable soil types, significant hills, eskers, kettle holes, caves, and cliffs, etc. Much of this information can be obtained from the U.S. Geological Survey (USGS) or the local U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) office, www.nrcs.usda.gov. Contact Massachusetts' statewide NRCS office at (413) 253-4351 for soils map data.

2. Describe the effects these features have on development, drinking water and wastewater issues, recreational opportunities, erosion, etc. Is your only remaining undeveloped land on steep slopes with lots of ledge? How does that affect sewage disposal options? Where might future water supplies be sited? What are your alternatives then for the soccer field you need? Is much of the undeveloped land in your community's old farm fields – lots of till with very little ledge? Such land can be developable. How are those areas zoned? What will be the effects on community character, on traffic, when those changes take place?

Mapping Considerations

The required Soils and Geologic Features Map (Required Map 4) should show soil types grouped by development limitations. You should map those soils that may determine future land use. Some groupings that you might choose are listed below:

- Deep, sandy or gravelly, well-drained and excessively-drained soils, which have implications for both water supply and septic systems.
- Wetland soils (peats and mucks), poorly-drained soils with water table at or near the surface for at least a portion of the year, which has implications for septic systems and the eight interests addressed by the Wetland Protection Act. Note that improving septic technology is increasing the ability to locate septic systems.
- Soils with slow infiltration rates located on steep slopes (>25%), which have implications for erosion.
- Prime agricultural soils.
- Contaminated soils (brownfields).

MassGIS has data sets depicting surficial geology that could be helpful in developing the required maps. You may also wish to consult NRCS maps.

B. Landscape Character

Describe those aspects of the landscape that give your community its own special character. Focus attention on distinctive landforms, unique environments, and areas of particular scenic interest. This can include such things as hills, interesting viewsheds, working landscapes, such as agricultural and forestry areas, historic landscapes, and vacant lands and industrial areas. Consider the impact that changes in development might have on the overall scenic character of the community or on recreational use of various areas, especially underutilized vacant lots. Map the notable areas on Required Map 5, Unique Features Map (this map will also include features mentioned in Section 4, F Scenic Resources).

C. Water Resources

Describe all of the water resources in your city or town, giving particular attention to the availability of recreational access. Coastal communities should contact the Massachusetts Coastal Zone Management Office for information on the Shoreline Public Access program (www.mass.gov/czm/spa2.htm). Known water quality and quantity problems should be identified.

The text should mention existing recreational uses, classification of the water and status in regard to access.

Features to be considered include:

1. Watersheds – map major watersheds and subwatersheds and mention on-going efforts to protect them (local stream teams and watershed associations). The Source Water Assessment Program (SWAP) mapped all water supplies, their areas of contribution, and threats to the water supply. Watershed Assessments and Action Plans and are being completed in the state's 27 major watersheds.
2. Surface water – lakes, ponds, bays, streams, rivers, and reservoirs; Outstanding Resource Waters (ORW); and marine and brackish waters, extent of tidal penetration into estuaries (required on map). Include surface water supplies to water supply reservoirs (required on the map).

Landscape Character
Greenfield Open Space & Recreation Plan

The landscape of Greenfield has played a significant role in defining the character of the town. The Green, Fall and Deerfield Rivers are of particular scenic interest that provide recreation opportunities such as swimming, fishing and boating to Greenfield residents. The numerous river corridors in Greenfield need to be promoted as recreational assets and more planning needs to be performed to determine the most ideal recreational opportunities for residents to enjoy. Additionally the recently completed bikeway in Greenfield, constructed along the Green River from Nash's Mill Road to Riverside Drive, is a scenic bike trail that has become and asset to the cycling community. The Town has recently been looking into the possibility of creating a bike trail extension further south along the Green River.

The mountain ridges that encircle Greenfield offer scenic views and recreational opportunities. Two points of interest built to capture such views are the Poet's Seat Tower on Rocky Mountain and the commercially operated Longview Tower on Shelburne Mountain. The low profile of the Rock Mountain ridge to the east can be observed from Shelburne Mountain and Greenfield Mountain. To the west, views of downtown Greenfield and the fertile fields of the Western Upper and Lower Meadows can be seen from the Poet's Seat Tower, or at many vistas along the Rocky Mountain Ridge. In addition, the Connecticut River Valley to the South can be spotted atop Poet's Seat and along the Rocky Mountain Ridge. There are other vistas located along the ridgeline hiking trails which take advantage of Greenfield's scenic resources as well.

Some of the ridgelines on the west and pieces of the Rocky Mountain ridge on the east are currently unprotected and are valued as scenic views. Development in these areas would limit public access to the numerous magnificent vistas from these high elevations.

3. Aquifer recharge areas (existing and potential drinking water supplies) – Zones of Contribution (ZOC's) to public supply wells, which include Zones I, II, and III. DEP has automated (entered in the GIS data base) ZOC's for communities that have had them delineated. Information about this process is available from the municipal water department, the DEP Drinking Water Program (617-292-5770), and MassGIS (mapping is optional; if information is unavailable, cite the need and include in the Action Plan).

4. Flood hazard areas – use FEMA maps for Zones A and V. You may want to refer to the *National Flood Insurance Program Community Rating System Coordinator's Manual* published in October 1990 by the Federal Emergency Management Agency, particularly the sections on Open Space Preservation and on Acquisition and Relocation. Actions taken in these areas will affect the rates your community pays for flood insurance (mapping is optional; if information is unavailable, cite the need and include in Action Plan).

5. Wetlands – both forested and non-forested wetlands must be mapped. There are several potential sources of mapped wetlands, for example, the USGS 1:25,000 topographic sheets, the National Wetlands Inventory maps, and MassGIS. See Appendix B for information about contacting the DEP Wetlands Conservancy Program (required on map). Another resource is the Wetlands Restoration Program, which is conducting watershed-wide wetlands restoration plans in several of the state's major watersheds. The contact number is (617) 626-1240. If a wetlands restoration plan has been prepared for the watershed, it should be included in this description.

Mapping Considerations

All of these factors, including watershed boundaries, need to be mapped as part of Required Map 6**.** Basic information can be obtained from MassGIS in the form of the USGS 1:25,000 topographic quadrangle, as well as a suite of other water resource maps, such as watershed areas, aquifers, flood hazard zones, and zones of contribution to public water supplies (downloadable online at www.mass.gov/mgis/massgis.htm). MassGIS has a "watershed tools" program for ArcView 3x, also being utilized by several watershed associations across the state, which can map the watershed for any point in your community (for example a lake, pond, or stream). More detail can be drawn from the Massachusetts Department of Environmental Protection's Water Atlas, which you can get from DEP's Division of Water Supply or your local water department.

D. Vegetation

In discussing the vegetation of your community, concentrate on the vegetation's recreation values, such as hunting, intensive recreation, scenic viewing, etc., as well as natural resource protection issues such as biodiversity and ecosystem protection, economic impact, soil stabilization qualities, etc.

DCR's Urban and Community Forestry Program has developed guidance for communities on how to best manage their forests. If a community is to reach the following six goals, they can receive a Massachusetts Sustainable Community Forestry Award from the state:

1. Professionally trained forestry staff – this could be staff that has a forestry degree or is a certified arborist;

2. Development of a local tree protection ordinance and/or evidence of enforcement of MGL Chapter 87 (www.mass.gov/legis/laws/mgl/gl-87-toc.htm);

3. Establishment of an advocacy group in each community – this group could be something as simple as a "tree committee";

4. Development of a Forest Resource Management Plan – this plan would be based on a survey of the forest resource;

5. Tree City USA status – information online at www.mass.gov/dcr/stewardship/forestry/urban/TCUSA-0301.pdf; and

6. Good interagency coordination – municipality's departments must communicate with one another to ensure the health of its trees.

For further information on any of the six goals, please see www.mass.gov/dcr/stewardship/forestry/urban/index.htm.

The following vegetation types should be included:

1. General inventory – mention important plants and plant communities that characterize the area;
2. Forest land – include unusual cover types and large uninterrupted blocks of woodland;
3. Public shade trees, including street trees, cemetery trees, trees in parks, and any other publicly owned and managed trees;
4. Agricultural land – these parcels have both scenic values and may serve as cover for wildlife;
5. Wetland vegetation – important wildlife resource;
6. Rare species, including federal and state listed endangered, threatened and special concern species;
7. Sites having unique natural resources such as barrier beaches, vernal pools, heath land, quaking bogs; and
8. Vegetation mapping projects that have been undertaken on a regional and statewide basis.

EOEEA-wide Forest Protection Efforts

Forest Vision

Although approximately one million acres of forests are protected from development, more than 200,000 individual landowners own the remaining 2.1 million acres. EOEEA has held seven "Forest Forums" with 35 leaders of forest industry and representatives of professional forester, landowner, and conservation organizations. The group endorsed and is working to achieve five goals for the forests of Massachusetts, including: protecting a base of forests, sustaining the economic viability of our forests, striking a balance between working forests and forest reserves, protecting the health of our forests and educating key groups about the values of our forests. Current programs that may be useful in development Open Space and Recreation Plans include:

- Forest Viability – initiated to help forest landowners with planning and implementing innovative sustainable forest businesses in exchange for a twenty-year "no development" covenant;
- Western Massachusetts forest landowners have created the Massachusetts Woodlands Cooperative to foster sustainable forestry via Forest Stewardship Council "Green Certification" and cooperation on processing and marketing of local products (www.masswoodlands.com);
- Areas of "Primary Forests" that have never been cleared for agriculture and may contain unique understory plant associations have been mapped for the state (see Harvard Forest at harvardforest.fas.harvard.edu);
- "Prime forest soil maps" have been assembled by DCR for many parts of the state using NRCS digital soils maps (see MassGIS);
- The UMass Extension Service has created a web site for forest landowners that is a clearinghouse of information on Massachusetts forests (www.masswoods.net);
- Forest Legacy Program – a USDA Forest Service program that offers grants for the acquisition of threatened forest

tracts of statewide significance (www.mass.gov/dcr/stewardship/forestry/other);
- Forest Stewardship Program – a USDA Forest Service and EOEEA program that offers cost-sharing for the cost of forest management plans and implementing sustainable forestry practices to landowners and municipalities (www.mass.gov/dcr/stewardship/service); and
- Guide to Chapter 61 for Municipalities – an excellent guide by the Mt. Grace Land Conservation Trust that includes the extensive amendments to the Chapter 61 Forest Tax Law program in 2007 and guides municipalities through the "Right of First Refusal" process (www.mountgrace.org).

Mapping Considerations

An optional map (Recommended Map F) depicting Plant and Wildlife Habitat is very useful. The state's BioMap includes information from thousands of rare and endangered sites and maps the most significant and viable natural communities surrounding these sites. The BioMap and Potential Vernal Pond maps are available for each municipality. Contact MassGIS for the most current resources available, including data from the Natural Heritage and Endangered Species Program. MassGIS also has a statewide map of large forest blocks and agricultural land.

E. Fisheries and Wildlife

This discussion should be similar to the one in the previous section, that is, an inventory of wildlife species found in the community, with consideration of necessary steps to protect your community's biodiversity and ecosystems. The following items should be included in your description:

1. Inventory – General description of wildlife and wildlife habitats, including shellfish where appropriate (both federal and Massachusetts fisheries agencies have classified and inventoried shellfish beds and are good sources of information);

2. Information on vernal pools – see the Natural Heritage Atlas, described below, for locations of certified vernal pools and maps of potential vernal pools that identify thousands of locations. These maps are available from the Natural Heritage Program;

3. Corridors for wildlife migration – the Department of Fish and Game has prepared guidelines for gathering and mapping ownership and other data for river corridor lands; and

4. Rare species, including federal and state listed endangered, threatened and special concern species – refer to the Natural Heritage and Endangered Species Program's (NHESP) Atlas of Priority Habitats for rare species. This Atlas, updated every two years, also includes maps of estimated habitats, for use with the state wetlands protection regulations, and of certified vernal pools. A list of the rare species known from each city or town is available on the Natural Heritage website at www.mass.gov/dfwele/dfw/nhesp/nhesp.htm. For an analysis of how your community's rare species and natural communities may be important on a statewide basis, see *Our Irreplaceable Heritage: Protecting Biodiversity in Massachusetts*, available from the Natural Heritage Program. Help with interpreting these maps and setting priorities for protection among rare species sites also is available from Natural Heritage by contacting the Habitat Protection Specialists there. Natural Heritage completed the "BioMap" and "Living Waters" projects for each municipality. These documents delineate important priorities for the protection of the biodiversity of Massachusetts. The Natural Heritage program staff can be contacted at (508) 389-6360.

Vegetation
Melrose Open Space and Recreation Plan

The distribution of vegetation closely mirrors topographical and geographical patterns. The three major areas of "non-urban land cover" in order of size are: (1) the southeastern section of the city from Long Pond on the Saugus line west to beyond Towners and Swains Pond, (2) the southwestern corner of the city east to Washington Street, and (3) the Pine Banks Park area north to Boston Rock. Sewall Woods Park and the northwestern corner of Melrose are also mapped as vegetation. In all, there is considerably more area classified as urban land with developed uses than as non-urban land cover.

The City's vegetation resources consist primarily of Northern hardwoods, with oak as the predominate species. The largest area of softwoods is located in Pine Banks, where the white pine and hemlock provide a welcomed contrast to the deciduous hardwood forests.

The other significant non-urban land cover is marsh and wetland vegetation. This area is located in the northeastern part of the city near the power line right-of-way. It is the only cattail marsh of over three acres mapped in Melrose. Included in this vegetation type are two distinct areas: the wooded swamps just north of Long Pond and the wetlands located near the Mt. Hood Golf Course and as far west as Grove Street. The latter area consists of woody plant species that are less than 20 feet in height.

There are three vascular plants that have been listed in Melrose as either threatened or endangered since the turn of last century. They are commonly known as Green Rock-Cress, Shining Wedgegrass, and the Tiny-Flowered Buttercup. According to BioMap and Living Waters, the Middlesex Fells is home to the Lesser Snakeroot and the Small Bur-Reed; both of these are listed as endangered plant species.

Fisheries and Wildlife
Melrose Open Space and Recreation Plan

Wildlife in Melrose is typical of Eastern Massachusetts. The Audubon Society recorded sightings of over 91 different species in and around the City's parks and conservation areas. In recent years, a bald eagle visited Ell Pond on a number of occasions and a red-tail hawk also chose Melrose as its hunting ground. Forested areas in Melrose are natural settings for a variety of wildlife including raccoons, pheasants, rabbits, hooty owls, and foxes. The City's ponds support aquatic life such as eels, bass, red perch, sunfish, oriental carp, hornpout, bullfrogs, snakes, and turtles. Canadian geese and mallards can also be found near the water. The geese in particular have become troublesome in the Ell Pond area.

Wild turkeys have been spotted in and around Melrose. A contributing factor to their current visibility may also be that development of formerly natural areas has displaced wild turkeys and other animals from their natural habitat. As a result, turkeys have been increasingly feeding outside downtown restaurants. There are three certified vernal pools in Melrose and a number of potential vernal pools. These pools are an important resource as they serve as a breeding ground for amphibians and invertebrate animals.

There are no current records of endangered fish or wildlife species within Melrose. However, there are several invertebrates, which live in the Core Habitat of the Middlesex Fells, and are listed by the State as either "Threatened" or of "Special Concern". These species prefer the steep terrain and dry, wooded reas commonly found in the Fells. These species are: Frosted Elfin, Hentz's Redbelly Tiger Beetle, Oak Hairstreak, Orange Swallow Moth, Purple Tiger Beetle, and the Aureolaria Seed Borer.

Mapping Considerations

Again, an optional map depicting Plant and Wildlife Habitat is very useful, although fewer sources exist to provide assistance. Contact MassGIS for the most current resources available, including data from the Natural Heritage and Endangered Species Program.

An excellent map of priority biodiversity areas is the Conservation Assessment and Prioritization System (CAPS) produced by the University of Massachusetts. This tool is available for most of the Berkshires and Connecticut River Valley and uses vegetation mapping and a wide range of other maps to focus in on areas of high value for biodiversity (www.umass.edu/landeco/research/research.html).

The Manomet Center for Conservation Sciences has published a guide to improving wildlife conservation through better Open Space and Recreation Plans. It features a comprehensive review of strengths and weaknesses contained in such plans, sources of local information on wildlife and wildlife habitats, and specific recommendations aimed at improving the effectiveness of open space and recreation plans for conserving wildlife and their habitats. This guide can be found at www.manomet.org/programs/planning/resources/.

F. Scenic Resources and Unique Environments

This section should identify and map (part of Required Map 5**:** Unique Features Map) those areas that contribute to the community's character which was mentioned earlier. These resources may or may not fit neatly into one of the previous categories, but should be valued and discussed here and mapped for their aesthetic importance. These are subjective judgments with no right or wrong determinations. It is up to each community to explain why the resources that fit into this category.

Your own community and the Open Space and Recreation Plan public process is the best resource for mapping these important local features. No state agency or federal bureau knows your local landscape as well as you do and no one is more able to determine what is truly of value to the community. Work with volunteers to survey and map these resources, perhaps as an "overlay" to the other natural features described in this section.

1. Scenic landscapes – include notable areas such as hilltops, stream corridors, open meadows, agricultural landscapes, scenic views and scenic roads. Consult DCR's Scenic Landscape Inventory online at www.mass.gov/dcr/stewardship/histland/landSurveys.htm, as well as local residents.
2. Major characteristic or unusual geologic features and any other resources for potential protection and exploration.
3. Cultural, archeological, and historic areas.
4. Unique environments – include state identified Areas of Critical Environmental Concern. Identify and describe areas or ecosystems that contain a combination of critical resources; for example, areas that include important surface waters (ORW's), wetlands, wildlife habitats (especially Priority Habitats for rare species and Natural Heritage BioMap and Living Waters priority areas; see above), forestlands (including if the community has received Tree City USA standing or if it has received a Massachusetts Sustainable Community Forestry Award, for more information online, see www.mass.gov/dcr/stewardship/forestry/urban/index.htm), or prime agricultural lands. Discuss how and why the resources and their interrelationships are unique or critical. The Massachusetts Areas of Critical Environmental Concern (ACEC) program (www.mass.gov/dcr/stewardship/acec/acecProgram.htm) can be used to protect areas of regional or statewide significance. If there are any designated ACEC lands within

your city or town, they must be identified and described. Information on ACEC's can be obtained from DCR.

Mapping Considerations

Your own community and the Open Space and Recreation Plan public process is the best resource for mapping these Unique Features (Required Map 5). Data on ACEC's can be found at MassGIS.

G. Environmental Challenges

Discuss the environmental challenges in your community and region that influence open space and recreation planning. This section is helpful in seeing where environmental challenges currently exist or may occur. You should look at these environmental challenges from both a local and regional context to see how they may potentially impact open space and recreation planning. Discuss environmental problems in your community and region that will influence open space and recreation planning. Contact DEP, DCR, and the regional planning agency for information (see Appendix A and B for contact information).

Mapping Considerations

Discussion and mapping of Environmental Challenges is encouraged (Recommended Map G). The regional offices of DEP can provide a printout of local 21E sites. Consult Appendix B for references. Some of these features have been mapped by MassGIS and may be available for downloading (www.mass.gov/mgis/massgis.htm). In addition, the MassGIS website has a map service that creates DEP's 21E map for any area of the state: http://maps.massgis.state.ma.us/21e/viewer.htm

1. Hazardous waste and brownfield sites
2. Landfills
3. Erosion
4. Chronic flooding
5. Sedimentation
6. New development
7. Ground and surface water pollution, including both point and non-point sources
8. Impaired water bodies, both in terms of water quality and water quantity (available through DEP)

Other issues that should be discussed, but not available as MassGIS data layers, are forestry issues, including low canopy cover, high numbers of hazard trees, high ratio of tree removals to plantings; invasive species; and environmental equity issues, such as equal access to open space, lack of tree cover, etc.

Environmental Challenges (introduction to section)
Peabody Open Space and Recreation Plan

To ensure residents' safety on recreational and open space lands, this plan considers potential environmental problems that could conflict with recreation and open space goals. Potential environmental problems such as hazardous waste sites, landfills, erosion, chronic flooding, sedimentation, development impact, and groundwater and surface water pollution, have all been evaluated in setting recreation and open space priorities.

SECTION 5 – INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

The inventory describes ownership, management agency, current use, condition, recreation potential, public access, type of public grant accepted, zoning, and degree of protection, for each of these parcels. The information will best be presented in map and matrix form with an accompanying narrative (the list above serves as the column headings). (Required Map 7) All municipally owned conservation and recreation facilities and programs must be included in this matrix. Also, all of these lands must be evaluated for accessibility to people with disabilities (please refer to Appendix G).

Section 5 examines the degree of protection that is afforded to various parcels of land owned by private, public, and nonprofit owners.

- Private lands can be protected in perpetuity through deed restrictions, or conservation easements (yet some easements only run for a period of 30 years and those lands are therefore not permanently protected open space). These private lands are permanently protected lands if the deed is restricted by a Conservation Restriction, Agricultural Preservation Restriction, Historic Restriction, or Wetlands Restriction. Those restrictions running in perpetuity are protected under Article 97 of the Articles of Amendment to the State Constitution.
- Lands under special taxation programs, Chapter 61, 61A, or 61B, are actively managed by their owners for forestry, agricultural, horticultural, or recreational use. The community has the right of first refusal should the landowner decide to sell and change the use of the land, therefore, it is important to prioritize these lands and consider steps the community should take to permanently protect these properties (see Chapter 61 guide at www.mountgrace.org).
- Lands acquired for watershed and aquifer protection are often permanently protected open space.
- Public recreation and conservation lands may be permanently protected open space ("Article 97 land"), provided that they have been dedicated to such uses as conservation or recreational use by deed. Municipal properties may be protected via the Town Meeting Vote or City Council Order to acquire them.

GENERAL NOTES ON SECTION 5

This is one of the most critical sections of the Open Space and Recreation Plan. Existing open space and recreation properties in your community will be identified that are legally protected lands, as well as lands that are essential for natural resource or recreation purposes that are not protected.

Your community may be almost entirely developed. You may feel that there are few opportunities for additional land protection and/or park development in your community. This is the situation familiar to many cities and densely developed towns. Completing the Urban Lands Assessment, which is discussed in Appendix I, will help you identify the remaining priority areas in your community.

Suggested Introduction to Section 5

Define what is meant by open space, what is meant by "protected" property, and why it is so critical to protect vulnerable properties. Explain to your readers that the inventory will include public, nonprofit, and private properties. Some of the land may already be protected open space dedicated to conservation or recreational use and others will be identified for future acquisition

or other protection measures. The section is divided into two subsections, the first on Private Lands and the second on Public and Nonprofit Lands.

Which properties should be included in this inventory?

The primary objective of this section is to consider all valuable open land and identify those parcels that are permanently protected open space, and those that are not protected and therefore vulnerable to adverse development.

Properties to include are:

- Lands that are protected in perpetuity;
- Lands that may have some conservation or recreation interest, but are not protected open space; and
- Lands under any ownership, i.e., by a public entity, nonprofit organization, or private party.

A. Private Parcels

Inventory significant (perhaps due to size) private holdings.

- Agricultural properties – Chapter 61A, Agricultural Preservation Restriction (APR) Program, and other agricultural land, prime or statewide significant agricultural soils. Include lands not currently in agricultural use.
- Forested land – include unusual cover types, large uninterrupted blocks of woodland, large single ownerships of woodland, tree farms and management woodlands, and Chapter 61 lands.
- Areas significant for water resource protection, such as high-yield aquifers, lake shoreline, or river corridors.
- Priority areas for protection of rare species, exemplary natural communities, and associated ecological lands derived from the Natural Heritage Atlas and the Natural Heritage BioMap. Also note that some regional biodiversity assessments have been done and can be consulted.
- Less-than-fee interests – lands encumbered by conservation restrictions, wetland restrictions, watershed protection restrictions, historic preservation restrictions, etc. Contact DCS for a list of conservation restrictions in your community.
- Private recreation lands – some may be classified as Chapter 61B (e.g. private golf courses, marinas, fish and game clubs, ski areas, etc.).
- Estates
- Major institutional holdings – some colleges and private schools may have recreational facilities, hospitals may have extensive open space acreage, etc.
- Other resources – corporate holdings (may already have ballfields on them), landfills planned for closure and available for reuse, brownfield sites, available lands in underserved neighborhoods, quarries with recreational potential, etc.

When discussing private parcels, many may not be protected they are likely to be areas you may decide to try to permanently protect in the course of developing your Action Plan (Section 9). Please note that it is best not to publish the list of owners since it could alienate a potential seller or put the local realtors on notice (keep a list on hand in the office, but do not publish it).

B. Public and Nonprofit Parcels

A descriptive inventory that lists facilities and evaluates conditions, current use, and potentials for greater use of these parcels. Note whether or not the land is protected open space, the amount of public use/access allowed, and the source of funding if the property was acquired or developed with DCS grant assistance (Self-Help, Urban Self-Help, or Land and Water Conservation Fund). The information is best presented in map and matrix form

with an accompanying narrative. The following is a list of the lands to be included in the inventory:

- Public conservation and recreation resources – federal, state, and municipal lands and facilities for conservation and recreational use.
- Nonprofit lands – properties of the local land trusts and similar private nonprofit conservation organizations, described according to features, usage, and potential.
- Other public, unprotected lands – state hospitals, prison grounds, state and federal schools and institutions, etc.

When discussing public and nonprofit parcels, remember the following:

- Details: Be sure to include whether or not the land is protected open space, the amount of public use/access allowed, and the source of funding if the property was acquired or developed with DCS grant assistance (Self-Help, Urban Self-Help or Land and Water Conservation Fund). The information will best be presented in map and matrix form with an accompanying narrative.

- Examples of federal properties: National Park Service (legally protected), USDA Forest Service Forest Legacy Lands (legally protected), Department of Defense (unprotected open space).

- Examples of state properties: lands held by EOEEA agencies (protected) and those by other state agencies such as Corrections and Mental Health (unprotected lands).

- Municipal – please note that some municipal parkland is not protected open space, such as school playgrounds and ballfields.

- Nonprofit Organizations – conservation organizations such as The Trustees of Reservations and the Massachusetts Audubon Society all can own land that is legally protected open space. Smaller land trust organizations based in your community may also own protected land.

When is property considered to be legally protected open space?

Article 97 of the Articles of Amendment to 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". Furthermore, a 1973 opinion of the Attorney General stipulates that land acquired for these purposes cannot be converted to any other use without the following actions: 1.) a unanimous vote of the local conservation commission that the land is surplus to its needs, 2.) the park commission must vote the same if it is parkland in question, 3.) the matter must be taken up at Town Meeting or City Council and pass by a 2/3 vote, 4.) the community must file an Environmental Notification Form with EOEEA's MEPA Unit, and 5.) the matter must pass by a 2/3 vote of both branches of the Massachusetts Legislature. Finally, if the property was either acquired or developed with grant assistance from EOEEA's Division of Conservation Services (i.e. Self-Help, Urban Self-Help, or Land and Water Conservation Fund), 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 protected by Article 97 are often owned by the municipal conservation commission, recreation commission, water department, or by a state conservation agency (i.e. state EOEEA agencies). Lands purchased for general municipal purposes are not protected by Article 97. Private lands can also be permanently protected lands if the deed is restricted by a

Conservation Restriction, Agricultural Preservation Restriction, Historic Restriction, or Wetlands Restriction.

How do we determine if a property is legally protected open space?

Some publicly owned land is **not** protected, and some privately owned land **is** protected. The job is to find out which properties are protected and which are not protected open spaces.

Research Acquisition History and Deed

Research the acquisition history and deeds for all municipal conservation and parkland and identify those parcels that have affirmative Town Meeting Votes or City Council Orders stipulating that the land is for either conservation or recreation use, and deeds echoing that particular purpose for acquisition. You may discover some surprises as the research uncovers which lands have the most protection as "open space." The deed may stipulate that the land is to be managed by the conservation commission or park commission, or that it was donated to the community with deed restrictions, or for park or conservation purposes. If the property was acquired or developed with DCS grant assistance, the grant agreement should have been recorded as an adjunct to the deed. The authorizing Town Meeting Vote or City Council Order may also be recorded as an adjunct to the deed (*i.e.,* request that the Register of Deeds or Land Court clerk make a marginal reference on the deed or title).

Consider the following:

- Some publicly owned lands can be sold or redeveloped (with local legislative approval) either to private parties or for other public purposes. For example, school playgrounds and ballfields are often not protected parklands and can be built on the next time the school needs an addition.
- Some deed restrictions may only last for a period of years (typically, 30 years) and not in perpetuity.

The Fix - Record a Confirmatory Deed

If you discover that the Town Meeting Vote or City Council Order authorizing the acquisition of a conservation property or park property stated that the land to be acquired was for either conservation or recreation use, but the accompanying deed does not reflect that intent, fix it by recording a corrective deed. Again, it is prudent to record the authorizing Town Meeting Vote or City Council Order as an adjunct to the deed. Check with your local Registry of Deeds for requirements.

What information is necessary for each property?

A matrix with accompanying text and map (Required Map 7) is the best way to present the inventory. For each municipally owned property, be sure to list:

- Name and ownership of the property
- Managing agency (this is not always the same agency that owns the property)
- Current use
- Condition – only mention this for lands owned by your community
- Public access – is it open to the general public, is there a fee
- Access for people with disabilities (see Appendix G)
- Recreation potential
- Zoning
- Protection status – is it protected open space or not
- Type of grant received, if any (i.e. Self-Help, Urban Self-Help, or Land and Water Conservation Fund)

- Deed restrictions – i.e. conservation restriction held by local land trust, right-of-way, etc.

A word about Massachusetts' special taxation programs

Private landowners can manage their properties for forestry, agricultural, and recreational purposes and benefit by a reduced property tax under three distinct special taxation programs. Chapter 61 is for forested lands, Chapter 61A for agricultural and horticultural lands, and Chapter 61B for recreation lands. These owners have taken the initiative to actively manage their property for forestry, agricultural, or recreational purposes, providing significant open space in communities throughout Massachusetts and should be commended. The conversion provisions in each of the statutes provide communities an opportunity to maintain the land as open space. If the property is up for sale for conversion to another use (i.e. sale for residential development instead of to another landowner who will continue the same use), the community has the right of first refusal to purchase the land, or the ability to assign its right to a nonprofit, but must plan ahead to take advantage of this window of opportunity. Inventory and prioritize these properties before a "For Sale" notice is delivered to City or Town Hall. It is also important for Conservation and Park Commission members to note that this notice is delivered to the Board of Selectmen or Mayor, not either commission. An Action Plan item recommendation could be to ensure that the commissions are notified as well. These laws were extensively amended in 2007 to make them more "landowner friendly" and more fair to municipalities. The "window of opportunity" for the Right of First Refusal has been extended to one year after the parcel has been taxed under the Chapter 61 programs (see www.mountgrace.org to obtain an excellent municipal guide to these programs).

What about access to protected public conservation and recreation sites for people with disabilities?

All municipal property and programs must be accessible to people with disabilities. While this can make for interesting design challenges, it is certainly possible to make park and conservation areas accessible without destroying natural resources or aesthetic values. All municipal park and conservation areas and programs must be evaluated as part of this planning effort and additional guidance is provided in Appendix G: ADA Access Self-Evaluation. The data you gather for the Accessibility Report will be reflected in many sections of the Open Space and Recreation Plan. The site evaluations will help determine priorities for renovation and development plans. Any outstanding accessibility issues should be mentioned in the Analysis of Needs (Section 7), Goals and Objectives (Section 8), and Five-Year Action Plan (Section 9).

Mapping Considerations

A map depicting protected and unprotected open space in the community is Required Map 7: Inventory of Open Space. MassGIS maintains a data layer on open space. Your local Assessor's Office or Planning Department may offer some assistance, especially if your community has begun to implement a computer mapping system linked to the assessor's database; each parcel should be associated with an assessor's land use code, which can then be used to generate maps.

If this plan is an update, much of the inventory is likely to remain the same. However, there may be some parcels that were developed, while others may have been permanently protected. Other properties may have become compliant with the Americans with Disabilities Act requirements. Revise the inventory to reflect such changes.

Be sure to differentiate between protected and unprotected property. When mapping private holdings, be sensitive to privacy concerns that the landowner may have. The map can simply show the natural feature to be protected, such as a buffer around a river, instead of individual properties on the river's edge.

Park and Open Space Equity

Identify and prioritize open space and recreation opportunities that would advance environmental equity for EJ populations in your city or town. These opportunities may include vacant lots or brownfield sites. Describe strategies to address park equity.

Identify areas and describe means to more effectively create, restore, and maintain open spaces located in neighborhoods where EJ populations reside. Utilizing a park equity analysis,[2] describe public access to existing parks and open spaces. First, determine where there are "gaps"[3] in park availability within your city or town and then overlay the designated EJ populations (available through www.mass.gov/mgis/massgis.htm) to those areas.

Park Equity/EJ Priority Map is Required Map 2. Include EJ populations, existing parks and open space, and possible open space "opportunity" areas such as vacant lots and/or brownfields, etc. into the map.

[2] Park Equity Model developed by The Trust for Public Land, Parks for People Program described in Appendix I.

[3] Park gaps are identified by assigning service and accessibility areas to each existing park. Walking distance (within one mile) to parks define service areas.

Inventory of Lands of Conservation and Recreation Interest
Introduction
Melrose Open Space and Recreation Plan

The term open space as used in this plan denotes any medium or large parcel of undeveloped land, and all land (developed or not) that is managed primarily for preservation or recreation purposes. Protected open space refers to open space owned by a municipality, a state or federal agency, a non-profit land protection agency, or private entities, and managed primarily for conservation, recreation, or environmental protection. Protected open space is sheltered from development, although there is sometimes the chance that the use of these areas will be changed. Ordinary open space is often NOT protected; for instance, land owned by the school or public works department and privately owned parcels are often relatively easy to develop, even if they have been maintained as open space for a number of years.

Open space makes an important contribution to quality of life. Public recreation areas and open space provide a focus for community life and promote a unique and identifiable community character. Open space can also be an oasis for quiet reflection. In relatively high-density cities like Melrose, parks and open space greatly enhance the quality of residential life.

Open space also has important economic benefits. It protects and enhances the property values of nearby land. Open space also attracts business and investment. Research on this topic suggests that the proximity to recreation and open space is the most important factor in choosing the location of a small business, while quality of life ranks as the third most important factor in choosing the location of a large business.

Additionally, conservation land serves important environmental functions in a city, providing natural rainwater storage and corridors for wildlife. Even small pockets of green space may serve an important function for migratory birds and butterflies. Open space can also reduce runoff and diminish the frequency and severity of flooding. Wooded open space helps to cool the city and improves air quality.

SECTION 6 – COMMUNITY VISION

In Section 6, discuss how the community's overall open space and recreation goals, or visions, were obtained and describe those goals in broad statements.

A. Description of Process

Briefly describe the process used to determine what the citizens of the community value. The process could have been a series of public meetings, surveys, or questionnaires as mentioned in Section 2. These opinions, and the examination of trends and resources, should be used to guide the articulation of your community's overall goals.

B. Statement of Open Space and Recreation Goals

These goals should be stated in very general, broad-brush terms: what is the overall vision for the community and what should it look like? Be careful not to jump to specific objectives or actions yet. Stay at the "big picture" level at this point.

The goals should describe an "ideal" open space and recreation system that would meet the variety of needs that were expressed during the public participation process. They also may have been inferred from facility use, implied by local development policies or any other existing resource protection plans, or as a result of known facility deficiencies (as described in more detail in Section 7).

It is conceivable that the goals of your community may remain unchanged from previous open space and recreation plans. However, it is important to review the input received during the public participation process to determine whether there has been any shift in the public's sentiment.

Description of Process
Ipswich Open Space and Recreation Plan

The planning process for this document was far more extensive than for past open space plans because the town was engaged in intensive community planning during the entire life of the 2000 open space and recreation plan. As described in Section 7, three major reports were produced in that period: the Green Ring Report, the Ipswich Community Development Plan, and the Town Character Statement. The latter two entailed significant public input and all three address open space needs. The CDP, which resulted from years of deliberation by the Growth Management Steering Committee, incorporated the 2000 open space plan as an appendix so the two plans would be formally linked. The TCS was developed in large part through well-attended public workshops. The plan describes open space protection as a major goal of the town's citizens and contains numerous guidelines used in revising the goals and objectives of this open space plan.

The goals of the 2000 open space plan provided a logical starting point for determining the goals of this plan. The 2000-04 action items were analyzed to determine which had been accomplished, which had not, which had become irrelevant, and what new actions were needed. In conjunction with this analysis, the committee considered the guidelines of the TCS, the other reports mentioned above and previous surveys, and revised the seven goals of the 2000-04 open space plan into seven similar goals for this plan.

It is important that, in both the 1994 and 2000 open space plans, the Open Space Committee, with agreement of the appropriate boards and officials, assigned responsibilities for each action item. In general, this has helped to accomplish many of the action items by giving the committee leverage in getting responsible parties to act. It has also vastly improved communications between and among town officials, boards and committees regarding open space issues. In many cases, however, it has still fallen to the OSC to move issues to the front and force decisions. Consequently, action items and assignments are made this time with a more realistic view of what might actually be accomplished, and how the various board see and act on open space issues in relation to their other responsibilities.

Statement of Open Space and Recreation Goals
Burlington Open Space and Recreation Plan

The overall open space vision for Burlington is to improve the Town's current open space system to enhance quality of life; and expand opportunities for active and passive recreation. Achieving this goal includes:

- Increasing the quantity, and improving the quality, of athletic fields and other recreation facilities
- Protecting and utilizing the remaining large tracts of land in Town that are currently unprotected
- Continuing to acquire and/or protect land for conservation, flood storage and water supply protection
- Improving transparency and communication between departments and to the community on open space and recreation issues

We envision a sustainable Town that can meet the habitability needs of the community, including providing a safe, healthy environment and high-quality recreation programs and facilities. This should be realized while simultaneously encouraging smart growth planning for future residential and commercial

SECTION 7 – ANALYSIS OF NEEDS

In Section 7, the implications of all the material that has been presented in the previous chapters are discussed. This chapter should be a systematic examination of what is needed to achieve the community's stated goals.

Analysis of all the data you have collected is the point on which the entire planning process turns. It is during the analysis phase of the process that you examine everything you have learned so far: your community's environmental resources (described in Sections 4 and 5), what the citizens would like the community to become (described in Section 6), and now, where the gaps are (for example the lack of recreational facilities, lack of resource protection, or the need for an acquisition strategy). Review the data and make lists of problems and potential solutions, opportunities, and potential actions that will combine to become an approach to meet your community's stated vision and goals.

Section 7 should describe any shortfall between what the community has today and what it would like in the future for both open space resources and recreational opportunities. Potential actions and potential solutions will be developed during this analysis phase for use in Section 8 – Goals and Objectives and Section 9 – the Five-Year Action Plan.

Summary of Resource Protection Needs
Melrose Open Space and Recreation Plan

The Melrose Conservation Commission acknowledges several conservation needs in the city. They stress the need to continue to protect wetlands and other marginal land from development by linking green areas and buffering city ponds. Members of the commission identified two areas that are especially in need of protection: the southeast region of the City and Ell Pond. Both areas are ecologically diverse and serve as valuable recreational resources. Because of their benefits to both the environment and the community, the southeast corner and Ell Pond require protections from future and existing development.

Several innovative proposals to accomplish such a goal include the development of a Southeast Task Force, the creation of an overlay conservation district, or outright acquisition of land in these areas. The Conservation Commission has discussed the need for an inventory of sensitive areas that may potentially be purchased or placed under a conservation restriction, if the opportunity presents itself in the future. Additionally, the Conservation Commission stated that a Watershed Analysis and Flood Management Study are needed at Ell Pond. The City, the Conservation Commission, and the Ell Pond Improvement Council should continue to reinforce each other's efforts to improve the water quality and hence the recreation potential of this resource.

A. Summary of Resource Protection Needs

Document your statement of needs with data you have collected: the inventory of public and private lands of conservation and recreation interest (the inventory matrix will help here); responses from surveys, questionnaires, and public meetings; and the environmental resources analysis. Work toward protecting large core areas, linked via riparian and upland corridors that will maintain or restore your community's ecological network – your community's "green infrastructure". Note gaps in the wildlife corridors, greenways, linkages to major forest or agricultural resources in adjacent communities, trail networks, and riverways and other surface water bodies. Refer back to the regional or watershed context, with a particular focus on common interests within the watershed. Appendix E, Land Protection Options may also be helpful. If this process generates discussion on solutions, keep notes for Sections 8 and 9.

It is important to note that resource protection can be achieved by a variety of means, not just the purchase of property. Other

options can include limited development, regulatory controls, conservation zoning, implementation of the Community Preservation Act (discussed under Section 9), and cooperative use of recreational facilities on a regional basis.

B. Summary of Community's Needs

Include data on recreation and conservation needs from the Community Setting section, as well as information gathered from surveys, questionnaires, public meetings, and *Massachusetts Outdoors,* the Massachusetts Statewide Comprehensive Outdoor Recreation Plan (SCORP) for demand in your area (www.mass.gov/dcs). Input from your parks and recreation director is important to determine the need for new active recreational facilities and playing fields. The National Recreation and Park Association (NRPA), online at www.nrpa.org, is a useful source of information to identify standards for the amount of open space or playing fields within a community of a given size. Remember to include the needs of diverse populations, such as people with disabilities, language barriers, and the elderly, as well as the frequently overlooked needs of pedestrians and bicyclists.

Note that questionnaires, surveys, and public meetings may document people's desires for various facilities that actually conflict with resource protection needs that you have uncovered. For example, people may call for swimming areas to be opened along a reservoir, while a recent water quality study may have indicated a need to exclude bathing in the reservoir. Be candid – you cannot please all of the people all of the time.

If your community is highly developed, this would be a good opportunity for you to use the Urban Lands Assessment that was discussed in Section 5 and in the Appendix. This will help you determine if the parks in your community are distributed equitably.

You may also discover citizens asking for a facility that already exists. This is frequently true for hiking trails in the more rural communities. In this case, the solution may be to develop improved public outreach, accessibility, or fee structures.

Obviously, this section will require revisions based on new information if the Open Space and Recreation Plan is an update of a previously approved plan.

Finally, summarize any needs identified as a result of the Americans with Disabilities Act (ADA) report findings (see Appendix G).

Summary of Community's Needs
Ipswich Open Space and Recreation Plan

In the years since the 2000 open space plan was implemented, the recreational pressures on lands and facilities in Ipswich have increased along with the population, both residential and visiting. This condition is more pronounced on the North Shore than anywhere else in the state. The current SCORP reveals that northeastern Mass has as many recreational sites and as diverse a set of recreational offerings as any other region in the state while containing the third lowest recreational acreage totals. This concentration continues to put considerable strain on currently available open space and recreational resources in the Northeast and in Ipswich. It suggests the need for a greater number of open space and recreational resources as well as careful and active management. The issue of recreational impact on natural resources straddles the boundary between resource protection needs and recreational needs. The quality of the environment is critical if its full recreational potential is to be realized.

Field-based recreation is a well-document need in SCORP. The Northeast shows a higher preference than elsewhere in the state for activities such as baseball, soccer and playgrounds. The study also reveals that the greatest expressed need among Northeast residents for new recreational areas is for park-based recreation. Field-based recreation continues to place heavy demands on available fields in town. The organizations in Ipswich that run field-based recreation programs coordinate with the town Recreation Department but are not affiliated with it. Thus centralized scheduling and grounds maintenance is problematic. There is presently an ad hoc Recreation Lands Committee made up of representatives from these programs and town officials that is attempting to prioritize potential parcels for field-based recreation use.

C. Management Needs, Potential Change of Use

Mention specific current and future (i.e. if specific recommendations are adopted) management needs, such as staffing or conflicts of use. Are local boards and agencies (such as recreation, open space committee, school, DPW, and conservation commission) communicating? Are certain areas threatened by abutting development? Does your conservation commission receive Chapter 61 right of first refusal notices concurrently with the Board of Selectmen? Also include special opportunities, e.g., a quarry with rock climbing potential, a soon-to-be-closed landfill with scenic and winter sports potentials, a brownfield site with redevelopment opportunities, or other atypical resources. See Appendix F for guidance on developing management plans for specific conservation areas.

Management Needs
Burlington Open Space and Recreation Plan

There is a need to expand the Recreation Department's maintenance capabilities by improving its maintenance management and increasing manpower. The Recreation Department currently maintains all of the Town's parks, playgrounds, athletic field, school grounds, tennis courts, basketball courts, and all other outdoor recreation facilities. There are not sufficient resources to maintain all of these facilities adequately. Invariably, it is the school grounds that suffer most from lack of maintenance, but athletic fields and other recreation facilities are often impacted.

There are also several aspects in the land management of conservation areas that would benefit from improvement. In previous years, resources allowed for a seasonal land management intern position for trail maintenance. This is no longer the case due to dwindling budgets, but the Conservation Department hopes to re-fund such a position in the future. Additionally, there is a need to reactivate the volunteer Land Steward program to assist in monitoring and improving conservation lands. To support these increased land management activities, more equipment would also be beneficial, such as a department hand-held GPS unit to help with mapping, trail construction, and stream management.

The Conservation Department would also like to establish a funding source for land acquisition so the Town has the ability to purchase land when it becomes available. Currently there is a capital budget item established for this, but it has yet to receive funding.

SECTION 8 – GOALS AND OBJECTIVES

In Section 8, the statement of vision and general goals from Section 6 and the data analyses from Section 7 are synthesized to create a comprehensive set of goals and objectives.

Begin by describing how you arrived at these goals and objectives. What did you hear citizens were looking for through the public participation process? Where do municipal employees feel there are holes in the system?

Be careful not to make a long list of planned actions here. Keep in mind the conceptual hierarchy: differentiate between the vision and goals (general concepts), objectives (concrete ideas for accomplishing goals within certain time frames), and actions to be discussed in Section 9 (specific activities that achieve the objectives). Appendix E, Land Protection Options, may help generate ideas and Appendix C, identifies some land trusts.

A goal of ADA accessibility of open space and recreational areas could be addressed here as well.

Please note that the categories developed as sections of the report are not necessarily the best outline for organizing and presenting your objectives. Go back to the community goals and organize your objectives into categories that fit appropriately.

During the planning process, your goals and objectives may be altered several times due to what you discover about your needs. The planning process is always cyclical.

Goals and Objectives (partial listing)
Yarmouth Open Space and Recreation Plan

The following list provides concrete objectives to meet the general goals identified in Section 6 of this Plan.

1. Expand the amount of land that is presented as open space for natural resource protection, recreation activities, quality of life and aesthetics.
    a. Commit unbuildable and suitable Town property to open space.
    b. Increase availability of open space areas for community use.
2. Increase conservation and protection of scenic and environmental resources, rare species, and greenway corridor, wetland, and habitat protection through public/private sector cooperation.
    a. Preserve open space in contributing areas for public water supply.
    b. Enforce higher water quality and quantity standards for stormwater recharge and flood control throughout the community.

SECTION 9 – FIVE-YEAR ACTION PLAN

In Section 9 you establish a year-by-year timetable for specific actions to accomplish the objectives listed in the previous chapter. Through this process, priorities are established based on goals and objectives. The action plan, in addition to establishing priorities, should identify specific tasks, the schedule for accomplishing them, a responsible party for implementing the action, and, where possible, a budget for accomplishing the task. All of this research will be instrumental during public meetings, when you may be trying to justify a Proposition 2 ½ override to acquire land, get approval for zoning changes, or implement the Community Preservation Act.

An Action Plan Map (Required Map 8) showing the desired results of your action plan should be included in this section. This can be a completely new map or it can be made by using a copy of the Inventory of Open Space Map (Required Map 7) with an overlay of clear acetate or mylar that highlights the areas needing additional protection, maintenance, etc. Please note that it may not be prudent to single out specific parcels for acquisition, but rather to highlight the general area. An example may be to shade the area along a river or trail corridor (a general buffer zone) rather than to identify specific landowners.

Specific projects required ensuring accessibility to all areas pursuant to ADA should be listed.

Again, avoid a long list of actions presented in a random order. With thoughtful organization, you can be sure that all important goals and objectives are being addressed and listed by relative priority. Probably the most effective organization is by goals and objectives, rather than by month. This way you can see whether you are giving preference to certain objectives at the expense of others. The sample below illustrates one way to do this.

There needs to be some flexibility assumed with the timetable. For example, a property may be put on the market earlier than anticipated. The Action Plan should allow early action if opportunities arise out of sequence.

Each year, the community (perhaps your newly-formed Open Space Committee or Community Preservation Committee) should evaluate implementation activities of the previous year and revise the Action Plan accordingly. To the extent that certain action items may not have been implemented from the previous plan, they should be carried over and re-prioritized if they are still relevant. This will make the formal five-year update an easier task. The update process is summarized in Appendix D.

It is recommended that as part of the five-year action plan, some entity be established to oversee management and implementation of the open space and recreation plan. As discussed above, it could be the existing open space committee or a new committee established pursuant to the Community Preservation Act as discussed below. Some communities have appointed a special committee comprised of representatives from several departments, boards and citizen committees. The goal is to have one group that has the responsibility of ensuring communication, coordination, and implementation.

Open Space Acquisition Priorities

Any open space acquisition scheme – whether to preserve one acre or 10,000 – needs to address the issue of prioritization. Before any parcel is to be purchased, before any money is sought for preservation, the community must assess the natural values, recreation potential, and importance of the land to the community (both objective and subjective measurements) and determine in advance which lands are the highest priorities to preserve. Such an approach contrasts sharply with the piecemeal, ad hoc decision-making processes that so often determine open space acquisitions.

Given the large acreage of land currently either in Chapter 61, 61A or 61B, it is important to establish criteria that will assist your city or town in prioritizing parcels that become available. This right of first refusal also can be transferred to a non-profit conservation organization, so it is important to know how to work cooperatively with these organizations. Thus, communities have another option if municipal purchase is unlikely.

Tax title land falls into a similar category. Once such parcels have been identified, they can be evaluated to determine whether they should be preserved or sold.

Open Space Acquisition and the Community Preservation Act

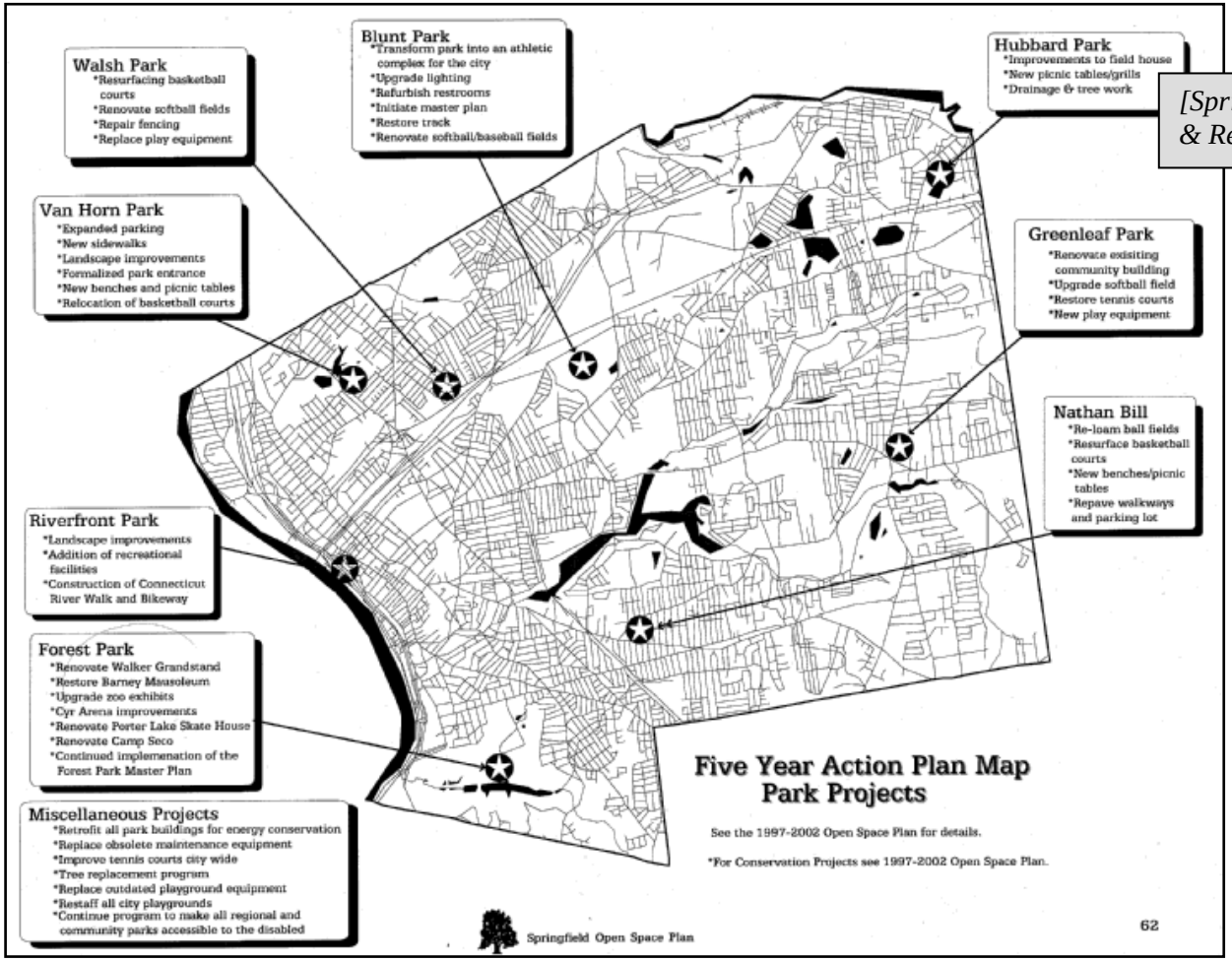
The Community Preservation Act (Chapter 267 of the Acts of 2000) provides communities with a tool to fund open space and recreation land acquisitions, as well as park development projects. The Act provides a local option for municipalities to adopt property tax surcharges of up to 3% to fund open space acquisition, affordable housing, and historic preservation activities. Communities adopting such measures will also qualify for state matching funds from the Department of Revenue's Community Preservation Trust Fund.

Guidelines are available from EOEEA to describe the process by which a municipality can implement the Act (www.communitypreservation.org). The basic process is outlined below:

1. The Town Meeting or City Council adopts the CPA (may be initiated by a petition drive);
2. The exact amount of property tax surcharge (up to 3%) is set;
3. The CPA is submitted to local voters as a ballot question;
4. A Community Preservation Committee is appointed;
5. The Committee conducts a public process to recommend CPA projects;
6. The Town Meeting or City Council authorizes spending on particular projects (on an annual basis, at least 10% each must be used for affordable housing, historic preservation, and open space/recreation projects); and
7. The community notifies the Department of Revenue that the CPA has been adopted and qualifies for a yearly State CPA grant (in the first 5 years of the law, over $180 million has been distributed to cities and towns, with all matching at the 100% level during these years).

Mapping Considerations

A single, easily reproducible map can help to focus discussion and provide a good illustration of the five-year action plan (Required Map 8). A street map, open space map, orthophotograph, or other standard "base map" can be overlain with text and symbols illuminating the overall goals of the plan (e.g., "protect and develop trail network"; "preserve water resources"; etc.). Illustrate the effect that successful completion of all actions set forth in this section would have. Special symbols can be used to denote unique or treasured resources, or areas to be acquired. Don't try to cram too much information onto this one map: treat it as a summary, hitting only the most important aspects.



[Springfield Open Space & Recreation Plan]

SECTION 10 – PUBLIC COMMENTS

First, distribute your draft Open Space and Recreation Plan to the Planning Board, chief elected official, and your regional planning agency (see Appendix A). Letters of review from these groups and individuals must be included in the final plan submitted to DCS. Letters of review from boards of health, appeals and recreation, and conservation commission are desirable. If any of these groups recommends changes, consider revising your draft, and respond respectfully.

The Approval Process

The only "approval" required for your plan is from the Division of Conservation Services. An approved plan makes your community eligible to participate in DCS grant rounds for a period of up to five years. DCS approval is limited to a review of the required elements and format of the plan. It is the public participation and comments that are critical to securing local "approval" of the plan. We do need to see letters of review from the chief municipal officer in the community (mayor, chair of the board of selectmen, or town manager), planning board, and regional planning agency.

You may concurrently submit one copy of your draft to DCS for review while other municipal boards review the report. (The required letters of review must be provided to DCS with the final plan.) DCS will most likely require changes, so do not have multiple final copies printed until DCS issues a letter of approval.

Formatting and Publishing Your Final Report

All final, approved plans must be bound, legible, and include numbered pages and a table of contents. The cover and title page must be dated. The plan must follow the format of EOEEA's *Open Space and Recreation Plan Requirements* as they may be amended. Maps must be included with the plan, perhaps reproduced as an 8½" by 11" or 11" by 17" foldout version for each of the maps included in the plan. (Larger sized maps are recommended for presentation use, but printing multiple copies for each report may be too costly.)

Once the plan is approved by DCS, final copies should be provided to DCS, all community boards and agencies. Provide your local library with at least two copies for general reference. If the option is available, it is a good idea to publish the plan on your local municipal website in addition to making hard copies available for review at the library.

SECTION 11 – REFERENCES

Cite all the reference documents you used and experts you contacted in preparing your community's Open Space and Recreation Plan.

APPENDIX A: REGIONAL PLANNING AGENCIES

The regional planning agencies offer a variety of services, including mapping. Call your regional planning office to find out what kinds of services they provide.

Berkshire Regional Planning Commission
1 Fenn Street, Suite 201, Pittsfield, MA 01201; (413) 442-1521
www.berkshireplanning.com

Cape Cod Commission
3225 Main Street, P.O. Box 226, Barnstable, MA 02630; (508) 362-3828
www.capecodcommission.org

Central Massachusetts Regional Planning Commission
35 Harvard Street, Worcester, MA 01609-2801; (508) 756-7717
www.cmrpc.org

Franklin Regional Council of Governments
425 Main Street, Suite 20, Greenfield, MA 01301; (413) 774-3167
www.frcog.org

Martha's Vineyard Commission
P.O. Box 1447, Oak Bluffs, MA 02557; (508) 693-3453
mvcommission.org

Merrimack Valley Planning Commission
160 Main Street, Haverhill, MA 01830; (978) 374-0519
www.mvpc.org

Metropolitan Area Planning Council
60 Temple Place, Boston, MA 02111; (617) 451-2770
www.mapc.org

Montachusett Regional Planning Commission
R1427 Water Street, Fitchburg, MA 01420; (978) 345-7376
www.mrpc.org

Nantucket Planning and Economic Development Commission
16 Broad Street, Nantucket, MA 02554; (508) 228-7237

Northern Middlesex Council of Governments
Gallagher Terminal, Floor 3B, 115 Thorndike Street, Lowell, MA 01852; (978) 454-8021
www.nmcog.org

Old Colony Planning Council
70 School Street, Brockton, MA 02301; (508) 583-1833
www.ocpcrpa.org

Pioneer Valley Planning Commission
26 Central Street, Suite 34, West Springfield, MA 01089; (413) 781-6045
www.pvpc.org

Southeastern Regional Planning and Economic Development District
88 Broadway, Taunton, MA 02780; (508) 824-1367
www.srpedd.org

APPENDIX B: STATE AND FEDERAL AGENCY CONTACT LIST

COMMONWEALTH OF MASSACHUSETTS

- **Department of Housing and Community Development** offers programs, housing, and funding to communities to serve those with low to moderate incomes and provides information on Smart Growth.
  www.mass.gov/dhcd
  100 Cambridge Street, Suite 300
  Boston, MA 02114
  Phone: (617) 573-1100
- **Executive Office of Administration and Finance, Division of Capital Asset Management** provides information about all state-owned land located within a municipality.
  www.mass.gov/cam
  One Ashburton Place
  Boston, MA 02108
  Phone: (617) 727-4050
  Fax: (617) 727-5363
- **Executive Office of Energy and Environmental Affairs (EEA)**
  EEA includes the following environmental offices and agencies.
  www.mass.gov/envir
  100 Cambridge Street, Suite 900
  Boston, MA 02114
  Phone: (617) 626-1000
  Fax: (617) 626-1181
  - **Division of Conservation Services** awards grants to municipalities for conservation and park land acquisition, and park construction. Also provides assistance with the development of Open Space and Recreation Plans, and to municipalities, land trusts, and private landowners regarding approval of conservation restrictions.
    www.mass.gov/envir/dcs
    Phone: (617) 626-1010
  - **Coastal Zone Management**'s mission is to balance the impacts of human activity with the protection of coastal and marine resources.
    www.mass.gov/czm
    251 Causeway St., Suite 800
    Boston, MA 02114-2119
    Phone: (617) 626-1200
    FAX: (617) 626-1240
  - **MassGIS** has created a comprehensive, statewide database of spatial information for environmental planning and management
    www.mass.gov/mgis/massgis.htm
    251 Causeway St., Suite 500
    Boston, MA 02114-2119
    Phone: (617) 626-1000
    Fax:(617) 626-1249
- **EEA: Department of Conservation and Recreation**
  www.mass.gov/dcr
  251 Causeway St., Suite 600
  Boston, MA 02114-2104
  Phone: (617) 626-1250
  - **Area of Critical Environmental Concern Program**
    www.mass.gov/dcr/stewardship/acec/index.htm
    Identifies and analyzes critical resource areas for designation as Areas of Critical Environmental Concern (ACEC).
  - **Greenways and Trails Programs**
    www.mass.gov/dcr/stewardship/greenway/index.htm
    Works to promote and support the creation of greenways and trails at the local, regional, and state level.

- **Lakes and Ponds**
  www.mass.gov/dcr/waterSupply/lakepond/lakepond.htm
  Works with local groups and municipalities to protect, manage, and restore these valuable aquatic resources.
- **Historic Landscape Preservation Grant Program**
  www.mass.gov/dcr/stewardship/histland/overview.htm
  Provides grants and technical assistance for the preservation of municipally owned historic landscapes listed or eligible for listing on the State or National Register of Historic Places.

- **EEA: Department of Environmental Protection**
  www.mass.gov/dep
  1 Winter Street
  Boston, MA 02108
  Phone: (617) 292-5500
  - **Wetlands Protection Program/Wetlands Conservancy Program**
    www.mass.gov/dep/water/resources/protwet.htm
  - **Bureau of Resource Protection**
    www.mass.gov/dep/about/organization/aboutbrp.htm
    - Municipal Services
    - Nonpoint Source Pollution Program
    - Water Quality and Wetlands program
  - **Network of Home Composters Workshops**
    www.mass.gov/dep/recycle/enforcement/comwkshp.htm
  - **Drinking Water Program**
    www.mass.gov/dep/water/drinking.htm
- **EEA: Department of Fish and Game**
  www.mass.gov/dfwele
  251 Causeway Street, Suite 400
  Boston, MA 02114
  Phone: (617) 626-1500
  - **Massachusetts Riverways Program:** Staff provides technical assistance and outreach to communities, citizen groups and others on various aspects of river, stream and watershed protection, restoration and stewardship. Visit online for information on the Adopt-A-Stream Program and the River Restore Program.
    www.massriverways.com
  - **Education Programs**
    www.mass.gov/dfwele/dfw/education/education_home.htm
  - **Massachusetts Natural Heritage and Endangered Species Program**
    www.mass.gov/dfw/nhesp/nhesp.htm
- **EEA: Department of Agricultural Resources (DAR)**
  Contact the Bureau of Land Use for information on the Agricultural Preservation Restriction Program that protects prime farmland, and the Farmland Stewardship Program that leases state owned farmland to local farmers statewide.
  www.mass.gov/agr
  251 Causeway Street, Suite 500
  Boston, MA 02114
  Phone: (617) 626-1700
  Fax: (617) 626-1850

- **Massachusetts Historical Commission** identifies, evaluates and protects the Commonwealth's important historic and archaeological resources.
  www.sec.state.ma.us/mhc
  220 Morrissey Boulevard
  Boston, MA 02125
  Phone: (617) 727-8470
  Fax: (617) 727-5128

- **University of Massachusetts at Amherst**
  - **UMass Extension** offers research and educational opportunities including workshops, conferences, distance education, training events, consultations, and applied research.
  Draper Hall
  40 Campus Center Way
  UMass

Amherst, MA 01003-9244
Phone: (413) 545-4800
Fax: (413) 545-6555
www.umassextension.org

- **The Center for Rural Massachusetts** works to integrate traditional land use planning with natural resource conservation and the promotion of working landscape strategies.

109 Hills North
Amherst, MA 01003
Phone: (413) 545-0153
Fax: (413) 545-1772
www.umass.edu/ruralmass

FEDERAL AGENCIES

- **United States Department of Agriculture, Natural Resources Conservation Service** Provides technical information pertaining to the conservation, maintenance, and improvement of our natural resources and environment.
  451 West Street
  Amherst, MA 01002
  Phone: (413) 253-4350
  www.nrcs.usda.gov

- **United States Department of the Interior, National Park Service** works to preserve the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.
  www.nps.gov
  - **River and Trail Conservation Assistance Program** provides community assistance to help conserve rivers, preserve open space, and develop trails and greenways.
    www.nps.gov/rtca
  - **Land and Water Conservation Fund** provides matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities.
    www.nps.gov/lwcf

  National Park Service
  Northeast Region
  US Customs House
  Stewardship and Partnership
  200 Chestnut Street
  Philadelphia, PA 19106
  Phone: (215) 597-9195

APPENDIX C: LAND TRUSTS AND NONPROFIT ORGANIZATIONS

Land Trust Alliance promotes voluntary land conservation across the country, provides resources, leadership, and training to the nation's 1,500-plus nonprofit, grassroots land trusts to help them protect important open spaces.

Land Trust Alliance
1660 L St. NW, Suite 1100
Washington, DC 20036
Phone: (202) 638-4725
Fax: (202) 638-4730
www.lta.org

Massachusetts Land Trust Coalition is an informal association of Massachusetts land trusts and conservation organizations.

Massachusetts Land Trust Coalition
18 Wolbach Road
Sudbury, MA 01776
Phone: (978) 443-5588
Fax: (978) 443-2333
www.mltc.org

Examples of Other Environmental Organizations in Massachusetts

American Farmland Trust	www.farmland.org
Appalachian Mountain Club	www.outdoors.org
Association for the Preservation of Cape Cod	www.apcc.org
Bay Circuit Alliance	www.serve.com/baycircuit/
Berkshire Natural Resources Council	www.bnrc.net
Coalition for Buzzards Bay	www.savebuzzardsbay.org
Environmental League of Massachusetts	www.environmentalleague.org
Essex County Greenbelt Association	www.ecga.org
Massachusetts Association of Conservation Commissions	www.maccweb.org
Massachusetts Audubon Society	www.massaudubon.org
Nashoba Conservation Trust, Inc.	www.nashobatrust.org
The Nature Conservancy	www.nature.org

New England Forestry Foundation	www.neforestry.org
New England Wild Flower Society	www.newfs.org
Sudbury Valley Trustees	www.sudburyvalleytrustees.org
Trust for Public Land	www.tpl.org
The Trustees of Reservations	www.thetrustees.org
Urban Ecology Institute	www.urbaneco.org
Valley Land Fund	www.valleylandfund.org
Walden Woods Project	www.walden.org
Wildlands Trust of Southeastern Massachusetts	www.wildlandstrust.org

APPENDIX D: PREPARING AN OPEN SPACE AND RECREATION PLAN UPDATE

What is an Open Space and Recreation Plan Update?

An update is what its name would have you believe: it is an up-to-date Open Space and Recreation Plan. It is a complete plan containing all the components of an Open Space and Recreation Plan. The difference between an Update and a municipality's previous plan is that an update builds on the previous plan by revising those sections that no longer accurately reflect the character, needs, and goals of the community.

What Does an Update Contain?

An update contains all the components of the previous plan, modified to reflect a current picture of the recreation and conservation needs and goals of the community and to provide a clear direction for the next five years.

What Sections Need to be Updated?

Assuming that the most recent plan is based on the current planning requirements, the sections that need to be updated are those that have changed since the previous plan. Otherwise, a new plan is necessary and must be prepared pursuant to the current requirements. For example, sections such as demographics, goals and objectives, and the five-year action plan must be revised. Sections such as topography and history are not likely to have changed and therefore do not need to be rewritten, although they do need to be included. Some sections may not need revision unless some change has taken place: for example, Growth and Development Patterns should be revised if major transportation upgrades or new development has taken place or is planned (it is very likely that this will require an update); Water Resources should be updated to reflect wells that have been contaminated, new wells that may have been added, or if an inter-basin transfer is contemplated. A new survey must be completed for an Open Space and Recreation Plan Update.

The following is a general guide to the need for rewriting each section. Only your committee can determine whether a particular section needs to be rewritten due to changed circumstances.

Section	Subsection	Must Be Revised	May Need Revision	No Change Necessary
1: Plan Summary		X		
2: Introduction	Statement of Purpose	X		
	Planning Process/Public Participation	X		
3: Community Setting	Regional Context		X	
	History of the Community			X
	Population Characteristics	X		
	Growth & Development Patterns		X	
4: Environmental Inventory and Analysis	Geology, Soils, and Topography			X
	Landscape Character		X	
	Water Resources		X	
	Vegetation		X	
	Fisheries and Wildlife		X	
	Scenic Resources and Unique Environments		X	
	Environmental Challenges		X	
5: Inventory of Lands of Conservation and Recreation Interest	Private Parcels		X	
	Public and Nonprofit Parcels		X	
6: Community Goals	Description of Process	X		
	Statement of Open Space and Recreation Goals	X		
7: Analysis of Needs	Summary of Resource Protection Needs	X		
	Summary of Community's Needs	X		
	Management Needs, Potential Change of Use	X		
8: Goals and Objectives		X		
9: Five Year Action Plan		X		
10: Public Comments		X		
11: References		X		

APPENDIX E: LAND PROTECTION OPTIONS

Open space and resource protection is becoming increasingly complex – in terms of both the pressures impacting landowners and the many options available to protect land. Careful consideration and a creative approach are often required to determine the proper techniques, or combination of techniques, to be employed in each case.

Some of the available options are described briefly below. This is intended as an overview only: binding decisions should not be made without first consulting the appropriate advisor – whether it be for financial, legal, or other reasons. State and local governments and nonprofit conservation groups are good sources of additional information and guidance.

General Tips for Approaching Landowners

1. Know why you want to protect it – To select the most appropriate protection strategy, it is important to know your objectives. For example, it may be determined that preservation of a specific viewshed and public pedestrian access are the primary objectives for a given tract. Having identified the objectives, you can explain to the landowners why you are interested in protecting their land. Determining the objectives also enables you to select the optimum strategy.
2. Know what the owners want – It is also essential to determine the desires and objectives of the property owners, and incorporate them into your proposed protection strategy. These concerns and desires may relate to numerous issues, including liquidating the equity that exists in the property; current or future tax burdens (including real estate, income and estate taxes); and family concerns regarding the future land uses on the property.
3. Know the property itself – Become familiar with the property before meeting with the owner. By demonstrating a sound knowledge of the physical characteristics of the property, you are likely to gain the respect of the landowner.
4. Be prepared to suggest several options – Spend enough time studying the situation before contacting the owners to be prepared to suggest several possible approaches to them.
5. Build trust and stay in touch – Once you are clear about your own objectives and the probable objectives of the landowners, it is time to approach them regarding protection of their land. At this point it is important to acknowledge the importance of trust in your relationship with the landowner. By demonstrating a knowledge and appreciation of the significance of their property, having a clear understanding of what they want to achieve, and a sound strategy to achieve it, a good foundation for trust is developed. By maintaining regular communication and monitoring specific circumstances affecting ownership and staying in touch over time, you can be properly positioned to react quickly if necessary. It is often at times of family distress or other need for property transfer that an opportunity to acquire, or otherwise protect, a parcel of critical importance exists. The existence of mutual trust often makes the difference between a successful or failed effort.

By taking the time to think through these issues ahead of time, and then discussing them with the landowners, you increase your chances of a successful encounter.

Specific Protection Techniques

The following is a brief description of several ways that you can meet your resource protection objectives. These descriptions are not intended to make you an expert in their use, but rather to familiarize you with some of the most important issues to consider in each.

Transfer of Title: This is the most traditional, simple and sure means of protecting a given tract: the fee-simple interest is purchased by, or donated to, someone who wants to preserve the property. Although there are numerous variations on the use of this technique, this section will address the three most common: donations, sales and transferring title subject to attached conditions.

Donation: A landowner may give his land to the community or a nonprofit land trust; that is, donate the fee interest. This is also called a complete charitable transfer or outright gift of title. There are also somewhat more complicated arrangements. The landowner may opt to donate the property subject to a life estate, which allows him to live on the property for the rest of his life. Or, she may decide instead to donate property while retaining certain rights in the land (removing firewood, having general access rights, or retaining rights to keep a particular view open). However, these restrictions may reduce property value, and thus the tax savings.

Advantages of a donation:

1. Sometimes, certain indirect costs, such as appraisal, title, survey, hazardous waste inspection, recording fees, etc., must be borne by the grantee. However, even in these cases, since there is no purchase price, precious acquisition funds can be saved for another effort.
2. Donations, particularly complete charitable transfers, generate maximum allowable tax savings for a given property transfer. It is worth proposing, though you may not know which landowners are in a financial position to benefit from the tax consequences of a donation. Each landowner will need to consult an attorney or accountant familiar with these tax laws. However, for those to whom it is beneficial, it is one of the best ways to obtain significant capital gains and estate tax savings.
3. Donations can become contagious within a given area. That is, as more conservation donations are made, more people become aware of the numerous benefits to the donor. The benefits to the receiver are obvious while the benefits to the giver often are not. The public recognition and appreciation for the donor's generosity and public-spiritedness can be significant. Some landowners may enjoy the idea of a public park bearing their name.

Sale: In real estate terms, sale is the transfer of ownership for a price. Groups involved in the acquisition and holding of land range from federal, state, and local environmental agencies to certain nonprofit conservation groups and others. Funding sources include the sale of municipal bonds, dedicated annual funds, conservation trust funds, real estate transfer fees, grant programs, and charitable contributions. While acquisition at market value is the most traditional type of sale, there are several creative alternatives to be considered.

Bargain Sale: This approach combines the partial donation of a property with the sale of it. A bargain sale occurs when a parcel is sold for less than its market value. The difference between the market value and the bargain sale price represents the amount of donation. There are two main advantages to this approach: the grantor receives income from the sale and also gains tax benefits from the reduced sale price. The grantor must obtain an appraisal that the IRS will accept, in order to receive the hill tax advantages of the bargain sale.

Advantages of Bargain Sale

1. Can be a "win/win" situation: landowner benefits from sale income and tax advantage, and community acquisition funds are conserved.
2. Minimizing the purchase price enhances the chances of a successful re-sale to another conservation group to ensure long-term protection.
3. May help to leverage additional bargain sales and outright gifts within a given neighborhood or region.

Transfer with Restrictions: This technique is often used when a landowner must sell the property but wants to govern the future use of the land. In this case, the owner may choose to attach various restrictions to the deed prior to the sale. These determine the activities that can and cannot take place on the land in the future. Although this may reduce market value of the parcel somewhat, and IRS tax benefits, the owner does gain income and achieve other objectives as well. Future owners are obligated to abide by the restrictions.

Limited Development: This technique involves the sale of a portion of a parcel of land for development to subsidize the protection of the rest. It is probably the most controversial, and risky, approach to land protection. However, in the right circumstances (a healthy market and insufficient acquisition funds), this tool may be used with very positive results. It works best where there is a portion of the parcel that is not environmentally-sensitive and can be sold for carefully planned development. The following example may help illustrate limited development, and was successfully used by the Towns of Harvard, Grafton and Westford:

> *A conservation group wants to preserve a parcel that contains endangered species in the rear portion. The owners are moving out of the area and the property is on the market. The asking price is more than the conservation group can come up with. However, they know of several buyers interested in house lots along the road. The conservation group buys the entire property, but immediately sells the road frontage lots (the most expensive part of the parcel), thereby needing to use less from their acquisition fund to protect the endangered species.*

This technique can also be used when a landowner, perhaps a nonprofit land trust, faces unmanageable carrying costs for a parcel. In this case, the owner can identify an "insignificant" portion and sell it, reducing the carrying costs and providing funds to pay future costs. Although this points out why this technique sparks controversy, it can sometimes be the only way to avoid selling the entire parcel.

Advantages of Limited Development:

1. Can be the only way to afford to protect a parcel.
2. Good way to incorporate other community objectives, such as affordable housing, into the scheme.
3. Provides flexibility when developing a conservation strategy for a particular parcel.

Deed Restrictions and Easements: Ownership of property in the United States encompasses numerous rights relating to the various uses of that property. The full array, or "bundle" of rights is commonly referred to as the fee-simple interest or fee-simple estate. The granting of a restriction or easement is an example of a less-than-fee interest since both parties, the grantor and grantee, are holders of separate portions of the original bundle as a result of the conveyance. As described above, a deed restriction is a right to restrict the owner's use that is transferred to another party, so the owner is prevented from exercising one or more of the bundle of rights normally associated with a fee-simple estate. One form of deed restriction is a conservation restriction.

Often the terms restriction and easement are used interchangeably. However, many professionals in the fields of land and resource protection consider there to be a distinction. An

easement is considered to involve a "positive" granting of rights or permitted uses. For example, a public access easement grants the right to use a trail; a construction easement grants the right to use a given area, generally adjacent to the permanent easement area, to facilitate construction within the permanent easement area; a utility easement grants the right to bury a gas line. A restriction is considered to be a "negative" granting of rights. For example, an agricultural preservation restriction gives away (or sells) the right to develop the land; a historic preservation restriction gives away or sells the right to modernize at will.

A conservation restriction (CR) is a legal document that embodies those limitations on land use that a landowner agrees to impose on his or her property in favor of a named grantee, not to undertake specified acts that they would presumably otherwise have the right to do. The restricted activities often involve the right to develop or subdivide the property. CRs are granted to Conservation Commissions and other government bodies, as well as to non-profit land trusts and conservation groups. In turn, these entities (grantees of CRs) agree to monitor and enforce the terms of the CR.

The scope and nature of the CR is very flexible, allowing for "custom tailoring," based on the particulars of a specific property and the desires of the landowners, to ensure an identified conservation objective. The restrictions are generally in perpetuity (forever), and consequently are recorded at the Registry of Deeds. The restriction becomes attached to the title, which remains with the landowner (grantor). Anyone who purchases this title (the property) in the future, automatically becomes subject to the same set of restrictions. CR's are authorized in Chapter 184, Sec. 31-33, of Massachusetts General Laws and those held by land trusts and municipalities must be approved by the Secretary of Energy and Environmental Affairs. Be certain to get adequate legal guidance in drafting your CRs.

Since CRs are designed for perpetuity, it is important to identify things that could happen in the future and prepare for them. It is largely the anticipation of impacts <u>in the future</u> that determines the effectiveness of the CR to protect the property. In other words, if the community receives the CR, but files the document away, doesn't map the location of the property, and doesn't pay attention when new landowners violate the conditions of the restriction, the CR is ineffective. Inspection and enforcement are essential and are the responsibility of the grantee. Or, if a small nonprofit land trust receives the CR and no successor is named, what will happen to the property if the land trust goes out of business in 10 years?

A CR can be structured in various ways. They range from a very simple, one-page document to an enormously complex, multi-party "instrument". Fortunately, most fall somewhere in-between. The following is provided as a very general guide to some essential elements of CRs:

1. Grantor's clause – states who parties are (must be all owners)
2. Legal description of property and whether the CR covers all or a portion of the property
3. Statement of purpose(s) and objectives(s)
4. Listing of prohibited uses
    a) to ensure conservation objectives
    b) whatever is NOT prohibited is assumed to be allowed.
5. Reserved rights (permitted uses)
    a) to the grantor or a third party
6. Monitoring and compliance
    a) This is critical. Access to the property by the grantee for monitoring on a regular basis is essential. Enforcement of the terms, as a result of regular monitoring, becomes the "teeth" of the restriction.
7. IRS-required clauses, if applicable
8. Signatures

a) Co-holding (more than one grantee) is often a good idea to share the responsibility of monitoring and enforcement. However, coordination between co-holders needs to be maintained over time to ensure that these important duties are carried out fully and consistently. A successor grantee is also a good idea, especially if a nonprofit is the grantee - to be prepared if something happens to the nonprofit.

b) Includes acceptance and approval

9. Subordination agreement signed by mortgage company, if applicable
10. Exhibits, including legal description, plan, assessors map, or sketch plan
11. Conservation Commission certification

For a more detailed description of conservation restriction format and construction, please refer to The Massachusetts Conservation Restriction Handbook, EOEEA Division of Conservation Services, 2001, or The Conservation Easement Handbook, 2nd Edition, by Elizabeth Byers and Karin Machetti Ponti, Land Trust Alliance and Trust for Public Lands, 2005, as revised by Model Conservation Easement and Historic Preservation Easement, 1996, by Thomas S. Barrett and Stefan Nageel, Land Trust Alliance.

The advantages of using a CR include:

1. They are often flexible enough to incorporate many desires and concerns of both the grantor and the grantee.
2. The title remains with the landowner (grantor). This allows for continued use of the land within the restriction called out in the document.
3. They can be donated - a definite advantage to the grantee and there is usually a tax benefit to the grantor.
4. The purchase price (if not donated) to the grantee is less than the fee-simple interest for a given parcel. The value (cost) of the CR being the difference between the value of the property without the restriction and its value with the restriction.
5. The municipal tax assessor may endorse a lower evaluation (and hence, tax assessment) for a property that is subject to a CR. Unfortunately, this is not done consistently across the Commonwealth.

Another useful resource for is the Land Conservation Options: A Guide for Massachusetts Landowners, by Essex County Greenbelt and The Trustees of Reservations, June 1998.

State Programs that Help Protect Resource Areas

Wetlands Conservancy Program

The Department of Environmental Protection's Wetlands Conservancy Program is mapping the state's wetlands using aerial photography and photointerpretation to delineate wetland boundaries. The Program produces maps identifying wetlands that are one quarter acre or larger in size. DEP uses these maps to document the extent and condition of the state's wetlands and to improve coordination among regulatory programs on wetland and water quality issues.

The Program supplies this vital resource information to communities. When the maps for a city or town have been completed, DEP gives a set to the conservation commission. Commissions have found the maps useful in creating local wetland inventories, cross-checking permit application plans, and assisting in enforcement. The wetland maps also are a valuable planning tool for other municipal boards, planning agencies, landowners, and consultants. Additional copies of the maps are available for purchase. (Note: wetland delineations developed in this inventory

are photointerpreted and do not substitute for the delineation information required under the wetland regulations.)

The Program also is mapping eelgrass beds along the coast. These important wetland resources serve as nursery areas for finfish and shellfish, filter pollutants, and buffer the shoreline from waves. Since these habitats are negatively affected by pollution, they are good indicators of water quality along the coast. This valuable resource information is being shared with communities and other state agencies. For more information, contact the Wetlands Conservancy Program, Wetlands Protection Program, Department of Environmental Protection, 1 Winter Street, Boston, MA 02108 or (617) 292-5695.

Areas of Critical Environmental Concern Program

The purpose of the Areas of Critical Environmental Concern (ACEC) program is to identify and protect critical resource areas throughout the Commonwealth. There are several categories of resources that can be included in an ACEC, ranging from wetlands and wildlife habitats to farmland and scenic landscapes. The program works through a nomination, review and designation process that can be initiated by municipal boards and commissions. An ACEC designation directs state environmental agencies to administer programs and review projects under their jurisdiction to protect and preserve the resources of the ACEC. A designation is intended to complement local zoning and actions, and create a planning and management framework for long-term resource preservation. A brochure describing the program is available. For further information, contact the Department of Conservation and Recreation, Division of Resource Conservation, 251 Causeway Street, 7th Floor, Boston, MA 02114 or call at (617) 626-1394, or visit online at www.mass.gov/dcr/stewardship/acec/acecProgram.htm.

Massachusetts Endangered Species Act

Over the last several years there has been criticism of the implementation of the Massachusetts Endangered Species Act (Chapter 131A) due to the lack of process and timelines for review of projects. This reform was implemented after extensive discussion with both the environmental and development communities with a goal of developing a consensus. The new regulations implemented by the Division of Fisheries and Wildlife provide stronger protection for endangered species while responding to criticism. The Division has reorganized staff and filled eight additional positions (possible with new ESA fees) specifically to enhance endangered species review and hold to new deadlines set in the regulations. Updated priority habitat maps make the information more accurate and allow more efficient and thorough reviews of ESA projects. Beyond these administrative improvements the regulations were enhanced to:

- Add provisions for off site mitigation and conservation planning This innovation allows DFW to be pro-active…the resource of the Commonwealth cannot be preserved if we are only responding to development project…off site mitigation gives us the tool to define our conservation goals
- Draw a clear distinction between different regulatory frameworks (i.e. Significant Habitat vs. Priority Habitat)
- New or revised definitions (Priority Habitat, Take etc.)
- Provision for voluntary pre-screening of project sites that are not in Priority Habitat

APPENDIX F: MANAGEMENT PLANNING FOR MUNICIPAL CONSERVATION AREAS

General Land Use Objectives

General objectives for a specific property can be determined from Sections 6, 7, and 8 of the Open Space and Recreation Plan. If more specific objectives for the use of a conservation area are needed, a committee may be formed to develop land use objectives. The committee could have members from the Conservation Commission, the Recreation Department, the Water Commission, abutters, and representatives from various user groups.

Examples of general objectives include:

- use of area as wildlife sanctuary or water resource protection area – with "hands-off" management approach;
- use of area as municipal forest – from which city or town may derive income from timber management; and
- use of area for recreational purposes, such as swimming, picnicking, boating, fishing, hunting, trail use, playing field use, etc.

If the conservation area is large enough, objectives similar to these could be incorporated in different sections of the same property.

Inventory of Resources

A great deal of information can be derived from Section 4 of the Open Space and Recreation Plan. The detail needed for an inventory can be determined from the land use objectives. In general, the more intensive the management that is needed, the more detailed the inventory must be. Gear the inventory to the objectives. For example:

- If it is to be a water resource protection area, the water department may want to take baseline data from test wells, or water quality and quantity data from lakes, ponds, streams, and rivers.
- If the community intends to initiate timber management, the inventory should include a detailed forest stand analysis. It may be advisable to contract with a forester to obtain this information and to develop silviculture recommendations. A list of local loggers and sawmills should also be compiled. For further information, contact DCR Bureau of Forestry online at www.mass.gov/dcr/stewardship/forestry/index.htm.
- If the area is to be used for recreational use, a more thorough inventory may be needed, including:
  - Ground water, surface water, and vegetated wetlands.
  - Soil types and slope. Natural Resource Conservation Service (www.nrcs.usda.gov)
  - Recreational resources and patterns of use (How many people are using the area, and for what purposes? Are there any conflicts between user groups?) Information gathered during the compilation of the Statewide Comprehensive Outdoor Recreation Plan (www.mass.gov/envir/dcs/global/publications.htm) or on-site user surveys may be useful for this portion of the inventory;
  - Structures, roads, utilities, equipment, vehicles, personnel and management funding sources and levels.

Important components of any inventory, regardless of intended land use, include locations of rare and endangered plant and animal species habitat, and locations of known or potential historical and archeological sites. Contact the Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program at (508) 389-

6360, the Massachusetts Historical Commission at (617) 727-8470, municipal historical commission, or other local experts.

Development of Management Recommendations

- Police and Fire Department should be consulted concerning plans for rescue operations and fire control. In the case of heavily-used areas, evacuation plans may be useful.

- When community or regional water supply is involved, recommendations should include directions for regular testing of water quality and quantity and remedial action to mitigate contamination or drought situations.

- Recommendations for trail use may include separating conflicting user groups and relocating trails away from wetlands, steep slopes, highly-erodeable soils and other sensitive resources. Parking and signs must be strategically located.

- Recommendations for swimming areas may include suggestions for upgraded access, limiting numbers of users to prevent degradation of resources, water testing schedule and staffing levels.

- Recommendations for wildlife and fisheries management in areas that are open for hunting and fishing can be developed with the help of the DFG Division of Fisheries and Wildlife (Pittsfield, (413) 447-9789; Belchertown, (413) 323-7632; West Boylston, (508) 835-3607; Acton, (508) 263-4347; Westborough, (508) 389-6300; Buzzards Bay, (508) 759-3406).

- Recommendations for using volunteers to help with trash pick-up, trail maintenance, etc. are a valuable addition to a Management Plan. You might also develop a program to enlist frequent users of the facility to monitor the area and report violations of rules and regulations to municipal officials.

- Specific management recommendations should be developed for fragile areas. Rare and endangered specific habitats and archeological sites are examples of this type of resource. Separation of different resource areas by sensitivity and significance can facilitate resource protection.

- The Department of Agricultural Resources (www.mass.gov/agr) and the USDA's Natural Resource Conservation Service (www.nrcs.usda.gov) would be helpful resources.

- Of particular concern for areas that are heavily used by the public is the variable nature of funding levels. A management plan may include alternatives for management based on different funding levels.

APPENDIX G: ADA ACCESS SELF-EVALUATION

Under Federal Law, no qualified handicapped person shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subject to discrimination under any program or activity that receives Federal financial assistance. A key mechanism for ensuring compliance with this requirement is the ADA (Americans with Disabilities Act) Self-Evaluation, which is a required component of all Open Space and Recreation Plans.

The ADA Self-Evaluation determines how accessible a community's conservation and recreation programs and properties are to people with disabilities. It is a useful diagnostic tool for the community to recognize any shortcomings of the existing programs and develop a plan to remedy them. In addition to making sites accessible, these ADA improvements also result in more comfortable and safer parks, trails, and conservation and recreation programs.

The Massachusetts Office on Disability is a tremendous resource. They are located at One Ashburton Place, Room 1305, Boston, MA 02108, phone (617) 727-7440, V/TTY (800) 322-2020 or fax at (617) 727-0965, or visit them online at www.state.ma.us/mod.

GENERAL OVERVIEW

What is a handicap?

- A physical or mental impairment that substantially limits a major life activity such as caring for oneself, performing manual tasks, walking, seeing, speaking, hearing, breathing, or learning, is a handicap. In addition, people who have a history of a handicap or are regarded as having a handicap are also protected under the law.

Who is a qualified handicapped person?

- Terminology: The preferred term is "people with disabilities". Please use this term in the plan.
- Employment: The individual can perform the essential job functions with or without reasonable accommodation.
- Programs, Activities: The individual meets essential eligibility requirements.

What is a reasonable accommodation?

- Reasonable accommodations can include renovating a building to make it accessible, restructuring a job by changing the work schedule, buying specialized equipment, and hiring others as readers or interpreters.

What is an "ADA Self-Evaluation"?

- The self-evaluation is a detailed assessment of the administrative and employment practices of the recreation department and conservation commission. It also includes a site-by-site inventory of all recreation and conservation areas and buildings, programs or services and a transition plan if any changes are necessary to make these public facilities, programs, or services accessible.

What is included in the inventory?

- This inventory only involves properties under the jurisdiction of the conservation commission and recreation department (or Board of Selectmen if there is no recreation commission or department). (This is *not* for the town or city hall, library, etc.) Included are the buildings, facilities and equipment (swimming areas, tot lots, etc), programs, and services. Programming may include a learn-to-swim program, guided hikes or tours, etc. Services include technical assistance for permitting process administered by the conservation commission.

What is Programmatic Accessibility?

- A key phrase is that the programs offered must be accessible when "viewed in their entirety." This means that not every

existing facility, or portion of it, is completely accessible. Perhaps your park and recreation department offers the following activities: swimming, hiking, picnic areas, and play equipment. Not *all* activities at every location may be accessible but *some* pools, trails, picnic areas and play equipment *must* be made accessible within your system. Changes can include:

- structural changes;
- relocating services to accessible buildings;
- providing auxiliary aids such as audio tapes and sign language interpreters for your presentations;
- providing home visits; and
- delivering services to an alternate site that is accessible.

How do we make improvements?

- The self-evaluation and transition plan must be written with the assistance of individuals with disabilities or an organization representing the disabled community. A transition plan is required if structural changes are necessary. The plan must: (1) identify physical obstacles; (2) describe necessary changes; (3) schedule those changes; and (4) identify the responsible individual.

REQUIRED ELEMENTS OF AN ADA SELF-EVALUATION REPORT

The following three sections are required for all ADA Self-Evaluation reports, as part of a community's first Open Space and Recreation Plan or subsequent updates.

Part 1: Administrative Requirements

1. Designation of an ADA Coordinator

Attach official designation of employee responsible for ADA coordination with name and position title, and signed by the chief municipal officer.

2. Grievance Procedures

This is a procedure for the general public to follow in the event that a complaint must be made.

3. Public Notification Requirements

Employees and the public must be notified that the community does

SAMPLE GRIEVANCE POLICY

For the General Public

EQUAL ACCESS TO FACILITIES AND ACTIVITIES

Maximum opportunity will be made available to receive citizen comments, complaints, and/or to resolve grievances or inquiries.

STEP 1:

The Town Manager will be available to meet with citizens and employees during business hours.

When a complaint, grievance, request for program policy interpretation or clarification is received either in writing or through a meeting or telephone call, every effort will be made to create a record regarding the name, address, and telephone number of the person making the complaint, grievance, program policy interpretation or clarification. If the person desires to remain anonymous, he or she may.

A complaint, grievance, request for program policy interpretation or clarification will be responded to within ten working days (if the person making the complaint is identified) in a format that is sensitive to the needs of the recipient, (i.e. verbally, enlarged type face, etc).

Copies of the complaint, grievance, request for program policy interpretation or clarification and response will be forwarded to the appropriate town agency (i.e. park commission, conservation commission). If the grievance is not resolved at this level it will be progressed to the next level.

STEP 2:

A written grievance will be submitted to the Town Manager. Assistance in writing the grievance will be available to all individuals. All written grievances will be responded to within ten working days by the Town Manager in a format that is sensitive to the needs of the recipient, (i.e. verbally, enlarged type face, etc.). If the grievance is not resolved at this level it will be progressed to the next level.

STEP 3:

If the grievance is not satisfactorily resolved, citizens will be informed of the opportunity to meet and speak with the Board of Selectmen, with whom local authority for final grievance resolution lies.

not discriminate on the basis of disability. Notification must be in a format that is accessible such as large print, simple language and in an auditory form. An "EOE" clause must also be included in any recruitment materials or publications. Please submit copies of these documents and evidence that notices were also made for the visual and learning impaired.

4. Participation of Individuals with Disabilities or Organizations Representing the Disabled Community

Completion of the Self-Evaluation must involve people with disabilities. You will need their help on Part II (the Inventory).

Part II: Program Accessibility

Part II, the Program Accessibility, is an Inventory and transition plan that includes the buildings, recreation facilities and equipment (swimming areas, tot lots, etc), programs, and services under the jurisdiction of the conservation commission or recreation department. This also includes lessees or concessionaires.

Facility Inventory

Complete a separate inventory for each facility under the jurisdiction of the recreation department or conservation commission. You will need to photocopy several copies of the inventory so that you submit one inventory per site, or design your own format as long as all aspects of the site are covered.

Common recreation equipment is listed on blank inventory sheets in this handbook for your use. If your facility has equipment not mentioned in this inventory, please include it. You can design a form for this section that better fits your needs, just be sure to include all of the equipment or activities offered at the site and complete one form per site. The blank inventory forms also provide technical assistance on architectural standards.

Transition Plan

A transition plan is required if structural changes are necessary. The plan must: (1) identify physical obstacles; (2) describe necessary changes; (3) schedule those changes; and (4) identify the responsible individual. The self-evaluation and transition plan must be written with an individual or organization representing the disabled community.

Part III: Employment Practices

Please have the ADA Coordinator for your community sign a statement attesting to the fact that the city or town's employment practices are in compliance with the Americans with Disabilities Act. The following major categories must be included in this statement: Recruitment, Personnel Actions, Leave Administration, Training, Tests, Medical Exams/Questionnaires, Social and Recreational Programs, Fringe Benefits, Collective Bargaining Agreements, and Wage and Salary Administration.

Tips for Compliance

1. New techniques and technologies are being developed and approved all the time. New developments offer the combined benefits of expanding access to an ever widening group of people, providing choices in developing a transition plan, and reducing the cost of compliance and retrofitting.
2. Consult the experts. Many State and Federal agencies and non-profit advocacy groups exist to work with you to provide access. Treat yourself, and fellow volunteers, to a field trip to DCR's Dunn Park in Gardner to enjoy a state of the art facility.
3. Keep a positive attitude. Some may adopt a negative perspective towards ADA requirements, view them as forcing costly and unnecessary improvements to retrofit existing facilities, when the money could be "better spent" elsewhere. Keep in mind that the goal is to provide opportunities to all of the community's residents, so that all may enjoy the "common wealth." These new visitors could increase the overall community support for your existing facilities and future plans.
4. Be creative. If cost is a problem, look for "low-tech" solutions. Often, program-based solutions may provide inexpensive fixes in place of costly structural retrofits.

Alternatively, additional sources of funding may be available for ADA compliance projects.

5. Adopt a long-term perspective. Even if improvements are expensive now, the community will benefit from them for many generations. Amortized over this extended timeframe, the cost of most ADA requirements becomes quite reasonable.

Facility Inventory **LOCATION:**

ACTIVITY	EQUIPMENT	NOTES
Picnic Facilities	Tables & Benches	Located adjacent to accessible paths
		Access to Open Spaces
		Back and Arm Rests
		Adequate number
	Grills	Height of Cooking Surface
		Located adjacent to accessible paths
	Trash Cans	Located adjacent to accessible paths
	Picnic Shelters	Located adjacent to accessible paths
		Located near accessible water fountains, trash can, restroom, parking, etc.
Trails		Surface material
		Dimensions
		Rails
		Signage (for visually impaired)
Swimming Facilities	Pools	Entrance
		Location from accessible parking
		Safety features i.e. warning for visually impaired
	Beaches	Location from accessible path into water
		Handrails
		Location from accessible parking
		Shade provided
Play Areas (tot lots)	All Play Equipment i.e. swings, slides	Same experience provided to all
	Access Routes	Located adjacent to accessible paths
		Enough space between equipment for wheelchair
Game Areas: *ballfield *basketball *tennis	Access Routes	Located adjacent to accessible paths
		Berm cuts onto courts
	Equipment	Height
		Dimensions
		Spectator Seating
Boat Docks	Access Routes	Located adjacent to accessible paths
		Handrails
Fishing Facilities	Access Routes	Located adjacent to accessible paths
		Handrails
	Equipment	Arm Rests
		Bait Shelves
		Handrails
		Fish Cleaning Tables
Programming	Are special programs at your facilities accessible?	Learn-to-Swim
		Guided Hikes
		Interpretive Programs
Services and Technical Assistance	Information available in alternative formats i.e. for visually impaired	
	Process to request interpretive services (i.e. sign language interpreter) for meetings	

LOCATION

PARKING			
Total Spaces		*Required Accessible Spaces*	
Up to 25		1 space	
26-50		2 spaces	
51-75		3 spaces	
76-100		4 spaces	
101-150		5 spaces	
151-200		6 spaces	
201-300		7 spaces	
301-400		8 spaces	
401-500		9 spaces	
Specification for Accessible Spaces	*Yes*	*No*	*Comments/Transition Notes*
Accessible space located closest to accessible entrance			
Where spaces cannot be located within 200 ft of accessible entrance, drop-off area is provided within 100 ft.			
Minimum width of 13 ft includes 8 ft space plus 5 ft access aisle			
Van space – minimum of 1 van space for every accessible space, 8 ft wide plus 8 ft aisle. Alternative is to make all accessible spaces 11 ft wide with 5 ft aisle.			
Sign with international symbol of accessibility at each space or pair of spaces			
Sign minimum 5 ft, maximum 8 ft to top of sign			
Surface evenly paved or hard-packed (no cracks)			
Surface slope less than 1:20, 5%			
Curbcut to pathway from parking lot at each space or pair of spaces, if sidewalk (curb) is present			
Curbcut is a minimum width of 3 ft, excluding sloped sides, has sloped sides, all slopes not to exceed 1:12, and textured or painted yellow			
RAMPS			
Specification	*Yes*	*No*	*Comments/Transition Notes*
Slope Maximum 1:12			
Minimum width 4 ft between handrails			
Handrails on both sides if ramp is longer than 6 ft			
Handrails at 34" and 19" from ramp surface			
Handrails extend 12" beyond top and bottom			
Handgrip oval or round			
Handgrip smooth surface			
Handgrip diameter between 1¼" and 2"			
Clearance of 1½" between wall and wall rail			
Non-slip surface			
Level platforms (4ft x 4 ft) at every 30 ft, at top, at bottom, at change of direction			

LOCATION

SITE ACCESS, PATH OF TRAVEL, ENTRANCES			
Specification	*Yes*	*No*	*Comments/Transition Notes*
Site Access			
Accessible path of travel from passenger disembarking area and parking area to accessible entrance			
Disembarking area at accessible entrance			
Surface evenly paved or hard-packed			
No ponding of water			
Path of Travel			
Path does not require the use of stairs			
Path is stable, firm and s lip resistant			
3 ft wide minimum			
Slope maximum 1:20 (5%) and maximum cross pitch is 2% (1:50).			
Continuous common surface, no changes in level greater than ½ inch			
Any objects protruding onto the pathway must be detected by a person with a visual disability using a cane			
Objects protruding more than 4" from the wall must be within 27" of the ground, or higher than 80"			
Curb on the pathway must have curb cuts at drives, parking and drop-offs			
Entrances			
Primary public entrances accessible to person using wheelchair, must be signed, gotten to independently, and *not* be the service entrance			
Level space extending 5 ft. from the door, interior and exterior of entrance doors			
Minimum 32" clear width opening (i.e. 36" door with standard hinge)			
At least 18" clear floor area on latch, pull side of door			
Door handle no higher than 48" and operable with a closed fist			
Vestibule is 4 ft plus the width of the door swinging into the space			
Entrance(s) on a level that makes elevators accessible			
Door mats less than ½" thick are securely fastened			
Door mats more than ½" thick are recessed			
Grates in path of travel have openings of ½" maximum			
Signs at non-accessible entrance(s) indicate direction to accessible entrance			
Emergency egress – alarms with flashing lights and audible signals, sufficiently lighted			

NOTES

LOCATION

STAIRS and DOORS			
Specification	*Yes*	*No*	*Comments/Transition Notes*
Stairs			
No open risers			
Nosings not projecting			
Treads no less than 11" wide			
Handrails on both sides			
Handrails 34"-38" above tread			
Handrail extends a minimum of 1 ft beyond top and bottom riser (if no safety hazard and space permits)			
Handgrip oval or round			
Handgrip has a smooth surface			
Handgrip diameter between 1¼" and 1½"			
1½" clearance between wall and handrail			
Doors			
Minimum 32" clear opening			
At least 18" clear floor space on pull side of door			
Closing speed minimum 3 seconds to within 3" of the latch			
Maximum pressure 5 pounds interior doors			
Threshold maximum ½" high, beveled on both sides			
Hardware operable with a closed fist (no conventional door knobs or thumb latch devices)			
Hardware minimum 36", maximum 48" above the floor			
Clear, level floor space extends out 5 ft from both sides of the door			
Door adjacent to revolving door is accessible and unlocked			
Doors opening into hazardous area have hardware that is knurled or roughened			

NOTES

LOCATION

RESTROOMS – also see Doors and Vestibules			
Specification	*Yes*	*No*	*Comments/Transition Notes*
5 ft turning space measured 12" from the floor			
At least one Sink:			
Clear floor space of 30" by 48" to allow a forward approach			
Mounted without pedestal or legs, height 34" to top of rim			
Extends at least 22" from the wall			
Open knee space a minimum 19" deep, 30" width, and 27" high			
Cover exposed pipes with insulation			
Faucets operable with closed fist (lever or spring activated handle)			
At least one Stall:			
Accessible to person using wheelchair at 60" wide by 72" deep			
Stall door is 36" wide			
Stall door swings out			
Stall door is self closing			
Stall door has a pull latch			
Lock on stall door is operable with a closed fist, and 32" above the floor			
Coat hook is 54" high			
Toilet			
18" from center to nearest side wall			
42" minimum clear space from center to farthest wall or fixture			
Top of seat 17"-19" above the floor			
Grab Bars			
On back and side wall closest to toilet			
1¼" diameter			
1½" clearance to wall			
Located 30" above and parallel to the floor			
Acid-etched or roughened surface			
42" long			
Fixtures			
Toilet paper dispenser is 24" above floor			
One mirror set a maximum 38" to bottom (if tilted, 42")			
Dispensers (towel, soap, etc) at least one of each a maximum 42" above the floor			

NOTES

LOCATION

FLOORS, DRINKING FOUNTAINS, TELEPHONES			
Specification	*Yes*	*No*	*Comments/Transition Notes*
Floors			
Non-slip surface			
Carpeting is high-density, low pile, non-absorbent, stretched taut, securely anchored			
Corridor width minimum is 3 ft			
Objects (signs, ceiling lights, fixtures) can only protrude 4" into the path of travel from a height of 27" to 80" above the floor			
Drinking Fountains			
Spouts no higher than 36" from floor to outlet			
Hand operated push button or level controls			
Spouts located near front with stream of water as parallel to front as possible			
If recessed, recess a minimum 30" width, and no deeper than depth of fountain			
If no clear knee space underneath, clear floor space 30" x 48" to allow parallel approach			
Telephones			
Highest operating part a maximum 54" above the floor			
Access within 12" of phone, 30" high by 30" wide			
Adjustable volume control on headset so identified			
SIGNS, SIGNALS, AND SWITCHES			
Specification	*Yes*	*No*	*Comments/Transition Notes*
Switches, Controls and Signs			
Switches and controls for light, heat, ventilation, windows, fire alarms, thermostats, etc, must be a minimum of 36" and a maximum of 48" above the floor for a forward reach, a maximum of 54" for a side reach			
Electrical outlets centered no lower than 18" above the floor			
Warning signals must be visual as well as audible			
Signs			
Mounting height must be 60" to centerline of the sign			
Within 18" of door jamb or recessed			
Letters and numbers a t least 1¼" high			
Letters and numbers raised .03"			
Letters and numbers contrast with the background color			

NOTES

LOCATION

SWIMMING POOLS – accessibility can be via ramp, lifting device, or transfer area			
Specification	*Yes*	*No*	*Comments/Transition Notes*
Ramp at least 34" wide with a non-slip surface extending into the shallow end, slope not exceeding 1:6 with handrails on both sides			
Lifting device			
Transfer area 18" above the path of travel and a minimum of 18" wide			
Unobstructed path of travel not less than 48" wide around pool			
Non-slip surface			

LOCATION

SHOWER ROOMS - Showers must accommodate both wheel-in and transfer use			
Specification	*Yes*	*No*	*Comments/Transition Notes*
Stalls 36" by 60" minimum, with a 36" door opening			
Floors are pitched to drain the stall at the corner farthest from entrance			
Floors are non-slip surface			
Controls operate by a single lever with a pressure balance mixing valve			
Controls are located on the center wall adjacent to the hinged seat			
Shower heads attached to a flexible metal hose			
Shower heads attached to wall mounting adjustable from 42" to 72" above the floor			
Seat is hinged and padded and at least 16" deep, folds upward, securely attached to side wall, height is 18" to the top of the seat, and at least 24" long			
Soap trays without handhold features unless they can support 250 pounds			
2 grab bars are provided, one 30" and one 48" long, or one continuous L shaped bar			
Grab bars are placed horizontally at 36" above the floor line			

LOCATION

PICNICKING			
Specification	*Yes*	*No*	*Comments/Transition Notes*
A minimum of 5% of the total tables must be accessible with clear space under the table top not less than 30" wide and 19" deep per seating space and not less than 27" clear from the ground to the underside of the table. An additional 29" clear space (totaling 48") must extend beyond the 19" clear space under the table to provide access			
For tables without toe clearance, the knee space under the table must be at least 28" high, 30" wide and 24" deep.			
Top of table no higher than 32" above ground			
Surface of the clear ground space under and around the table must be stable, firma nd slip-resistant, and evenly graded with a maximum slope of 2% in all directions			
Accessible tables, grills and fire rings must have clear ground space of at least 36" around the perimeter			

References and Resources

Organizations

Adaptive Environments, 180-200 Portland Street, Suite 1, Boston, MA 02214. (617) 695-1225 (v/tty). Online at www.adaptenv.org.

American National Standards Institute, 1819 L Street, NW, Washington, DC 20036. (202) 293.8020; Fax: (202) 293.9287. Online at www.ansi.org.

The Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111. (202) 272-0080 (v), (202) 272-0082 (tty), (202) 272-0081 (fax). Federal standards online at www.access-board.gov/adaag/html/adaag.htm.

Massachusetts Architectural Access Board, One Ashburton Place, Room 1310, Boston, MA 02108. (617) 727-0660 (v), (617) 727-0019 (tty), (617) 727-0665 (fax). State standards online at www.state.ma.us/aab/aab_regs.htm.

Massachusetts Office on Disability, One Ashburton Place, Room 1305, Boston, MA 02108. (617) 727-7440 or (800) 322-2020 (voice and TTY), (617) 727-0965 (fax). Online at www.mass.gov/mod.

National Center on Accessibility, 501 North Morton Street, Bloomington, IN 47404-3732. (812) 856-4422 (Voice), (812) 856-4421 (tty), (812) 856-4480 (Fax). Online at www.ncaonline.org.

Publications

36 CFR Part 1191: Americans with Disabilities Act Accessibility Guidelines; Recreation Facilities. U.S. Architecture and Transportation Compliance Board. Federal Register (September 3, 2002). Washington, D.C. www.access-board.gov/recreation/final.htm

36 CFR Part 1191: Americans with Disabilities Act Accessibility Guidelines; Play Areas. U.S. Architecture and Transportation Compliance Board. Federal Register (November 20, 2002). Washington, D.C. www.access-board.gov/play/finalrule.htm

ADA Transition Plan Workbook. Massachusetts State House Bookstore, State House, Room 116, Boston, MA 02133.

Americans With Disabilities Act Resource Guide for Park, Recreation, and Leisure Service Agencies, First Edition. Lynn M. Casciotti, Editor. National Recreation and Park Association, Arlington VA, 1992.

Americans with Disabilities Act, Public Law 226, 101st Congress. U.S. Government Printing Office, July 26, 1990.

Designing Sidewalks and Trails for Access: Review of Existing Guidelines and Practices. Barbara McMillen (editor). U.S. Department of Transportation, 1999. www.fhwa.dot.gov/environment/sidewalks/index.htm, www.fhwa.dot.gov/environment/sidewalk2/index.htm

Everyone's Nature: Designing Interpretation to Include All. Carol Hunter. Falcon Press Publishing Co., Inc., Helena, Montana, 1994.

Play for All Guidelines: Planning, Designing and Management of Outdoor Play Settings for All Children. Robin Moore *et al*. MIG Communications, 1992.

Reasonable Accommodation: Profitable Compliance with the Americans with Disabilities Act. Jay W. Spechler. St. Lucie Press, Delray Beach FL, 1996.

Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People. American National Standards Institute, Inc., New York, 1980.

The Americans with Disabilities Act: A Review of Best Practices. Timothy Jones. American Management Association Membership Publications Division, New York, 1993.

Universal Access to Outdoor Recreation: A Design Guide. PLAE, Inc., Berkeley CA, 1993.

Universal Trail Assessment Coordinator Training Guide. P. Axelson *et al*. Pax Press, Santa Cruz, 1997.

APPENDIX H: MODEL OPEN SPACE AND RECREATION PLAN SURVEY

The Sutton Open Space Planning Survey

The Town is in the process of updating its 1991-1996 Recreation and Open Space Plan. An update is necessary to qualify for State reimbursement programs for acquisition and protection of important open space. This survey is being conducted as part of the update in order to understand the needs and concerns of the citizens of Sutton regarding open space and recreational facilities.

"Open Space" in this survey is defined as "public and privately owned undeveloped lands which are important for a variety of reasons, including recreation, agriculture, forestry or simply because of their scenic qualities and their contribution to the overall character of the town" Faced with significant growth now and in the future, open space planning will help us preserve open space while allowing development to occur that maintains the character of the town.

Please take a few minutes to answer all of the applicable questions. Thank you for your help!

OPEN SPACE:

1. Do you feel there is a need to preserve open space and natural areas in Sutton? Yes No

5 - Very Important
4 - Important
3 – Neutral
2 – Less important
1 – Not important

2. How important is it to you to preserve:

Buildings of historical or architectural interest	5	4	3	2	1
Places of historical value	5	4	3	2	1
Farmlands	5	4	3	2	1
Open spaces to meet our water and conservation needs	5	4	3	2	1
Open space to meet our active recreational needs	5	4	3	2	1
Open space for aesthetics or passive recreation	5	4	3	2	1

3. To preserve Open Spaces in town, would you:

Contribute some land to the town/state/land trust	yes	no	not sure
Donate money to buy land	yes	no	not sure
Rewrite your deed to limit future development of your land	yes	no	not sure
Sell land to the town at a "bargain price"	yes	no	not sure
Sell or contribute a conservation restriction to protect Your land from future development	yes	no	not sure
Sell some land to the town at fair market value	yes	no	not sure
Vote for a town-supported land acquisition program	yes	no	not sure
Other (specify)_____	yes	no	not sure

4. What Town actions do you favor to preserve open space?

___ Combination of public & private action
___ Receipt of conservation restrictions
___ Town purchase of land
___ Zoning for open space conservation
___ Mandatory dedication of open space by developers

5. What State actions do you favor to preserve open space?

___ Outright purchase of land
___ Purchase of development rights
___ Property tax reduction programs for farm, forest and recreation land

6. Are you satisfied with the places for children and youth to play and recreate in town? yes no not sure

7. Are you satisfied with the places available in town for recreational use by adults? yes no not sure

8. Are you satisfied with the general condition of these facilities? yes no not sure

9. Please check the top five recreational facilities you feel are needed:

___ Bike trails
___ Conservation areas
___ Children's play areas
___ Family picnic areas
___ Softball field
___ Baseball field
___ Basketball courts
___ Hiking & skiing trails
___ Ice skating rink
___ Large park with many facilities
___ Local neighborhood parks
___ Outdoor amphitheater
___ Public access to water bodies
___ Recreation center building
___ Soccer field
___ Swimming pool
___ Tennis courts
___ Library
___ Other (specify) _____

10. How often do you visit the following for recreation ?:

___ Marion's Camp	5	4	3	2	1
___ Water's Farm	5	4	3	2	1
___ Purgatory Chasm	5	4	3	2	1
___ School facilities	5	4	3	2	1
___ Veteran's Field	5	4	3	2	1
___ Unity Park	5	4	3	2	1
___ Town Common	5	4	3	2	1
___ Hough Road Fields	5	4	3	2	1
___ Town Lakes	5	4	3	2	1
___ Other :_____	5	4	3	2	1

Visits per year:

5 - 15+
4 – 10-15
3 – 5-10
2 - 1-5
1 - Never

GENERAL:

11. Do you consider Sutton: (Please circle most appropriate answer)

A rural town
A bedroom community
A suburb of Worcester
A town in transition

12. What type of business would you like to see in Sutton?

___ Working farms
___ Grocery/Food
___ Home business
___ Light industry
___ Tourism
___ Heavy industry
___ Offices
___ Services
___ Retail stores(large)
___ Retail stores (small)
___ Restaurants
___ Other: _____

APPENDIX I: URBAN LANDS ASSESSMENT

The Trust for Public Land Greenprinting models

The Trust for Public Land has developed a set of tools that can make park creation and land conservation initiatives easier. These GIS tools, called Greenprinting, use a transparent mapping and modeling process to engage municipal governments and residents in thoughtful, place-based planning focused on short-term actions and long-term goals. Below are three models developed by The Trust for Public Land's award-winning national GIS team. These models analyze citizens' access to existing parks, particularly for sensitive populations; opportunities to connect or enlarge existing parks; and parcel best suited for purchase of fee or development rights to meet a municipality's conservation, recreation, and other community goals. For more information on any of the models, or to speak with a staff person from The Trust for Public Land about Greenprinting for your community, please contact The Trust for Public Land's New England Regional Office at (617) 367-6200.

Park Equity model

The Park Equity Model analyzes public access to existing parks and open spaces. The model incorporates a two-step approach: 1) determines where there are "gaps" in park availability across the landscape, and 2) constructs a demographic profile to identify gaps with the most urgent need for parklands.

The basic template for this model measures the need for parks based on several assumptions:

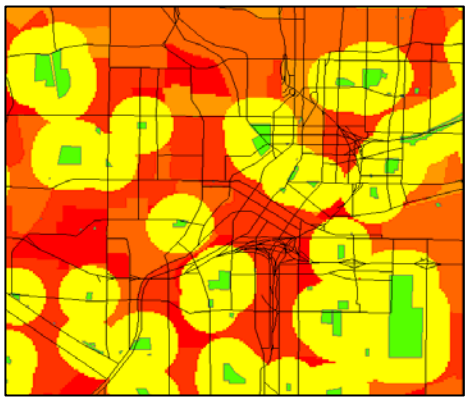
- This model is used to assess park need in urban/suburban areas but can be modified to reflect need in other locations.
- The model uses walking distance to parks to define park service areas. While best defined for urban/suburban areas, the model can be modified to reflect different modes of transportation such as automobile or public bus.

Park gaps are identified by assigning service and accessibility areas to each existing park. Service areas can be customized for each park, based on park type, size, amenities, and carrying capacity. The model designates areas that are outside all park service areas as gaps in park accessibility.

Demographic profiles from US Census 2000 blockgroup data are used to determine park need. Common variables considered for assessing park need include percentage of children under 18, population density, percentage of citizens of color (defined as Black/African American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, another race, two or more races, and of Hispanic or Latino origin), and percentage of low-income families.

The model can be run using two methods to access need:

1. Relative weights can be assigned to each demographic variable to reflect local demographic priorities.
2. Demographic data can be classified and ranked so that need scores on a scale of 0-5 correlate with low to high need for each class within each demographic need indicator. For example, if an area has a score of 5 (high need), the recipient knows the specific range of values in each demographic indicator that correlates with that score (i.e. 75-100% of that area is comprised of children under 18 and 75-100% of households in that area are considered low income).



Sample Park Equity model output

Overlaying park gaps with park needs produces a park equity priority map, with high community value assigned to those areas with both insufficient park coverage and highest demographic need.

In this example of the Park Equity model output, the yellow areas represent the service areas around the parks. The orange to red areas indicate an increasing need for parks and open spaces based on the demographic indicators.

Park Connectivity model

The Park Connectivity model identifies areas that are best suited for connecting parks and open space to each other, or for expanding existing parks, by assigning a relative development "cost" to land types. Using the MassGIS's land use layer, each type of land is given a cost based on assumed ease of connection (see table below). It would be more difficult to connect existing parks and open spaces across highways, for example, than across orchards or golf courses. Thus, parcels classified as highways have higher cost and parcels classified as orchards and golf courses have lower cost. The model works outward from each park, identifying and prioritizing adjacent land that has the lowest costs.

MA GIS land use categories and sample connectivity cost

CODE	COST	ABBREV	CATEGORY	DEFINITION
1	80	AC	Cropland	Intensive agriculture
2	80	AP	Pasture	Extensive agriculture
3	20	F	Forest	Forest
4	80	FW	Wetland	Non-forested freshwater wetland
5	99	M	Mining	Sand; gravel & rock
6	20	O	Open Land	Abandoned agriculture; power lines; areas of no vegetation
7	2	RP	Participation Recreation	Golf; tennis; Playgrounds; skiing
8	15	RS	Spectator Recreation	Stadiums; racetracks; Fairgrounds; drive-ins
9	15	RW	Water Based Recreation	Beaches; marinas; Swimming pools
10	50	R0	Residential	Multi-family
11	50	R1	Residential	Smaller than 1/4 acre lots
12	50	R2	Residential	1/4 - 1/2 acre lots
13	50	R3	Residential	Larger than ½ acre lots
14	80	SW	Salt Wetland	Salt marsh
15	60	UC	Commercial	General urban; shopping center
16	90	UI	Industrial	Light & heavy industry
17	5	UO	Urban Open	Parks; cemeteries; public & institutional green space; also vacant undeveloped land
18	80	UT	Transportation	Airports; docks; divided highway; freight; storage; railroads
19	99	UW	Waste Disposal	Landfills; sewage lagoons
CODE	COST	ABBREV	CATEGORY	CODE
20	99	W	Water	Fresh water; coastal embayment
21	90	WP	Woody Perennial	Orchard; nursery; cranberry bog
22		-	No Change	Code used by MassGIS only during quality

checking

The additional categories include the following:

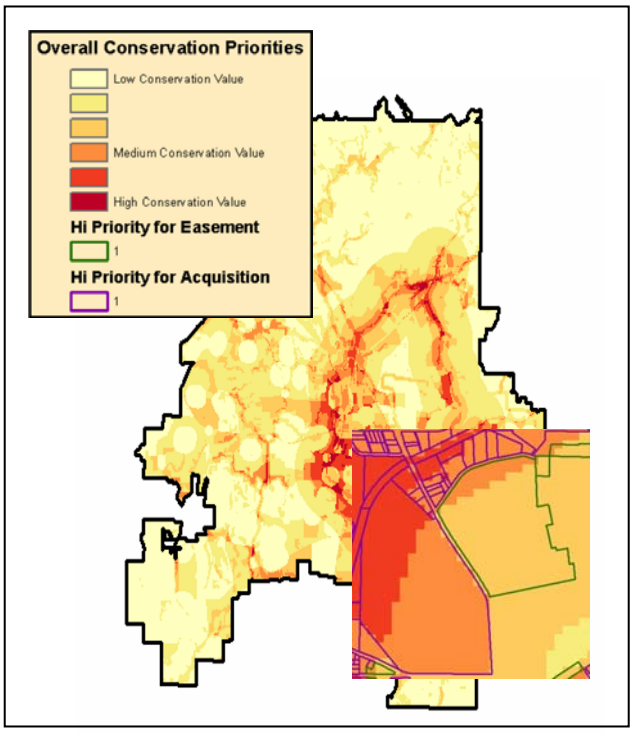
CODE	COST	ABBREVIATION	CATEGORY
23	90	CB	Cranberry bog (part of #21)
24	20	PL	Powerlines (part of #6)
25	15	RSB	Saltwater sandy beach (part of #9; no longer used)
26	2	RG	Golf (part of #7)
27	80	TSM	Tidal salt marshes (part of #14; no longer used)
28	80	ISM	Irregularly flooded salt marshes (part of #14; no longer used)
29	15	RM	Marina (part of #9)
30	99	-	New ocean (areas of accretion; part of #20)
31	5	UP	Urban public (part of #17)
32	80	TF	Transportation facilities (part of #18)
33	5	H	Heath (part of #17)
34	5	CM	Cemeteries (part of #17)
35	90	OR	Orchard (part of #21)
36	90	N	Nursery (part of #21)
37	20	-	Forested wetland (part of #3; no longer used)

Easement and acquisition analysis

The Easement and Acquisition analysis identifies high-priority parcels best suited for acquisition or easement negotiation. It is used to develop property-specific strategies following the goal development and prioritization of an Open Space and Recreation Plan, TPL Greenprint, or other community planning process.

The Easement and Acquisition analysis layer helps to focus on property-specific priorities and characteristics. It provides insight on appropriate conservation strategies by distinguishing between those properties that are more suitable for acquisition or for easement negotiation.

In this example, the map shows results from a TPL Greenprint. The inset shows results from an Easement and Acquisition analysis. Areas outlined in purple are identified for acquisition. Areas outlined in green highlight properties



Sample easement and acquisition output

that are more appropriate for easement negotiation. Notice the contiguous bands of high community value that characterize the properties identified for easement.

Acquisition parcels are properties where at least 60% of the property is rated as having high community value.

Easement parcels are properties with contiguous bands of high community value, covering 10% to 60% of the parcel.

Once these properties and the relative benefits of conserving them have been identified, a community can effectively plan for the time needed to assemble funds, determine the ownership or easement-holding entities, and prepare for stewardship of the property.

For more information on any of the above models, or to speak with a staff person from The Trust for Public Land about a Greenprint for your community, please contact the New England Regional Office at (617) 367-6200.

APPENDIX J: BEST PRACTICES IN COMMUNICATION

The Trust for Public Land
Community Engagement and Facilitation Best Practices

WHY do it? What are the benefits of community engagement?
1) Decisions better reflect community values
2) Greater commitment and willingness from the community to support implementation

WHEN should I do it?
1) Community wants to create a publicly-supported vision for parks, open space, and recreation
2) Community "buy-in" (decision acceptance) is needed to finance or implement land protection and park creation strategies.

WHEN should I **not** do it?
1) When there is a clear need and opportunity and buy-in isn't necessary for implementation
2) If decisions that have already been made have buy-in because they have been tested with widely-trusted stakeholders
3) If public education or marketing alone is the primary goal. In this case, the community assumes that substantive decisions have already been made and will not participate.

HOW do I do it?

Best Practices in Community Engagement

1) Work with a carefully selected representative stakeholder group
   a) Creating a stakeholder group that reflects the whole community is critical.
   b) Inviting the general public is OK, but only in addition to invited stakeholders
   c) Selection for the stakeholder group should be based on
      i) who is influential with specific segments of the population. If you only have time to engage with a fraction of the population, those who you invite to participate must be influential *and* represent diverse community values
      ii) whose buy-in will be needed to implement the plans

2) Focus on values
   What do people cherish most? What do they hope to leave behind for their children or younger siblings? What is most

important to them? Actively help participants articulate their interests, not merely their positions.

3) **Model respectful inquiry and exploration**
   Use a calm question like "What do you mean by that?" to understand someone's point.

4) **Build on local expertise and existing initiatives**
   a) Build on clearly defined problems or opportunities that are salient and already the focus of public attention
   b) Involve leaders of related initiatives and local technical experts
   c) Coordinate planning to overlap whenever possible

5) **Create shared knowledge**
   a) Pool local and outside knowledge and expertise. Share knowledge of best practices so the community can contribute in a thoughtful and meaningful way.
   b) Come to agreement on current conditions, issues, or challenges.

6) **Organize a technical group**
   a) Keep highly technical discussions for a technical audience. Share the overall results in updates or at community meetings.
   b) Create public sessions with teams of experts when possible. This is a good strategy for attracting additional participants, learning about and testing new ideas, gathering feedback, and exploring ideas with neutral experts.

7) **Move beyond meetings**
   Get out of the meeting room and onto the land whenever possible. Visit sites, walk potential greenway trails, and meet in fun places.

8) **Use visual tools**
   Have relevant maps and other visual tools to focus discussion and reinforce the facts of the meeting. Allow participants to manipulate and create maps whenever possible.

9) **Have substantive opportunities for input *every* time you engage with citizens**
   The purpose and goals of a meeting should always be clear and important. If not, cancel the meeting.

10) **Tell stories**
   Stories are the best way for people to communicate in groups. They are also very good for putting context to technical or

scientific data.

11) Explicitly articulate outcomes

At the start of the process and before each meeting, articulate the desired outcomes as clearly as possible. Commit to achieving those outcomes. Use time constraints as a motivator for consensus. At the end, always summarize key decisions and state next steps.

12) Maintain momentum and create strong endings

Don't allow the process to wander too long or drift off. Have a clearly defined ending. Combine final meetings with celebrations, public announcements, or important guests to close the process. Thank people for their participation and consider inviting them to participate in further planning or implementation. Summarize what's been learned and what needs to happen next to ensure implementation.

APPENDIX K: ANALYSIS OF 160 MUNICIPAL OPEN SPACE AND RECREATION PLANS (2001-2006)

Introduction to Municipal Open Space and Recreation Plans

States must maintain a current Statewide Comprehensive Outdoor Recreation Plan to qualify for federal Land and Water Conservation Funds. Similarly, communities in Massachusetts are required to prepare a municipal Open Space and Recreation Plan, also approved for a five-year period, to maintain eligibility for state Self-Help, Urban Self-Help, or federal Land and Water Conservation Fund assistance. Currently there are 160 approved plans, making 46% of the state's communities eligible for these discretionary funds administered by the Division of Conservation Services (DCS).

Why Write an Open Space Plan?

While DCS approved plans are an eligibility requirement for participation in the grant programs, communities often prepare these plans regardless of the availability of grant assistance. The factors that affect open space are identified and examined during the planning process, and strategies the community may use to protect and enjoy natural resources and open spaces are developed. Protecting open space can provide profound economic benefits by helping to avoid the costly mistakes of misusing or overwhelming available resources.

Open space plans allow a municipality to maintain and enhance the benefits of open space and protect the "green infrastructure" of the community. Planning for this "green infrastructure" of water supply land, working farms and forests, viable wildlife habitats, parks, recreation areas, trails, and greenways is as important to the economic future of a community as planning for schools, roads, water, and wastewater infrastructure.

Planning Requirements

All projects funded through DCS are partnerships between state and local agencies, and are based on recommendations the applicant community makes independently in its Open Space and Recreation Plan. DCS maintains planning requirements and a companion workbook that guides communities through the planning process, both are available online at http://www.mass.gov/envir/dcs/openspace/default.htm.

How Plans are Prepared

Communities write plans using volunteer groups, municipal staff, consultants, or some combination of these approaches. The project is often undertaken by an Open Space Committee comprised of volunteers and municipal staff (if staff exists). The data suggests that the number of communities with approved plans is linked to the number of communities with committees. DCS

provides technical assistance in guiding communities through the planning requirements and the actual process of preparing a plan and obtaining final approval.

Analyzing the Current Plans

Each plan is useful to each community but collectively, the currently approved plans provided valuable information on regional and statewide trends for the SCORP 2007 update. Even though communities follow the DCS Workbook, each plan takes an approach that is suited to the uniqueness of the community. After analyzing several plans, a methodology was devised for assembling and comparing like data from several sections of the municipal plans.

Each plan was analyzed to create a spreadsheet and summarize the results in a short report. The data collected in the spreadsheet tabulated Public Participation, Parks & Recreation Demand, Common Goals and Objectives, and Action Recommendations. The information was also broken down by region so that more specific inferences could be drawn. The summary focuses on Public Input, Regional Demand and Action Recommendations.

Getting Public Input – What Works Best?

Meaningful public participation is required for municipal plans, although each community may decide exactly how they obtain this input. Public participation lies at the heart of any planning effort. If a plan is to truly represent the range of views and hopes of the community, the public must be actively involved in developing it. Some of the techniques used in these plans include public meetings and forums, surveys, visioning sessions, working group meetings, and effective use of the media for education and outreach. Excellent plans use a variety of these techniques, and some are combined within a single event (e.g., working-groups as a component of a public forum, covered by the local newspaper). Of the 160 plans currently approved by DCS, the public input statistics are impressive:

- 70%, or 112 plans, were compiled using some form of Open Space Planning Committee;
- 223 public meetings were held; and
- 55,516 individuals responded to surveys.

Due to the poor attendance that is usually associated with public meetings, they should not be relied upon solely for the determination of public demand in a municipality. Towns and cities held a total of 223 public meetings in which the preparation of the Open Space and Recreation Plan was discussed. Although this was often a good way for towns and cities to showcase the plans' goals, objectives and plans of action, other forms of public input need to be sought.

An overwhelming majority of plans, 106 in total, conducted public surveys to help establish community demand. The average response rate was 23% of the number of total surveys sent out. This was a significant number of citizens making their voices heard. A combination of public surveys developed and analyzed by volunteer committees and/or consultant groups seemed to be the ideal

combination as a way to gauge community demand. It is difficult to determine whether outside consultation or community volunteer committees are more effective in determining public demand. However, the assistance of a professional group to gather input from citizens and assemble it in an easy to understand format is useful to help the community determine its goals, objectives and necessary actions.

Regional Demand

Regionally, rural areas voiced a strong demand for preservation of agricultural and rural character, whereas the Metropolitan and Cape and Islands regions had almost no similar demand statement. The smallest region in population, the Berkshire Region, had 100% rate of demand for agricultural preservation. Similarly, regions with a higher demand for agricultural protection also had an increased demand for forest protection.

The Metropolitan Boston Region had the overall highest demands for ice skating, skateboard parks (by a very close margin), basketball and playgrounds. Dense populations and limited space could help to explain the demands for recreational facilities that don't take up as much space as larger playing fields, but there was still significant demand for those facilities, too. Paved trails for biking, skating and walking were the most popular demands in all regions. The demand for dirt trails was much lower in the western Berkshire Region than in the other six regions.

The Metropolitan Region reflected the lowest concern for the protection of its drinking water. As Metropolitan Boston is supplied by reservoirs far outside the region, this makes sense. Managing development was also not a high priority community demand, nor was it very high in the Berkshire region. Suburban communities did have a higher demand for managing development. The desire to avoid urban sprawl and unmanaged growth in transitioning communities could be an explanation for this trend.

Action Plan Recommendations

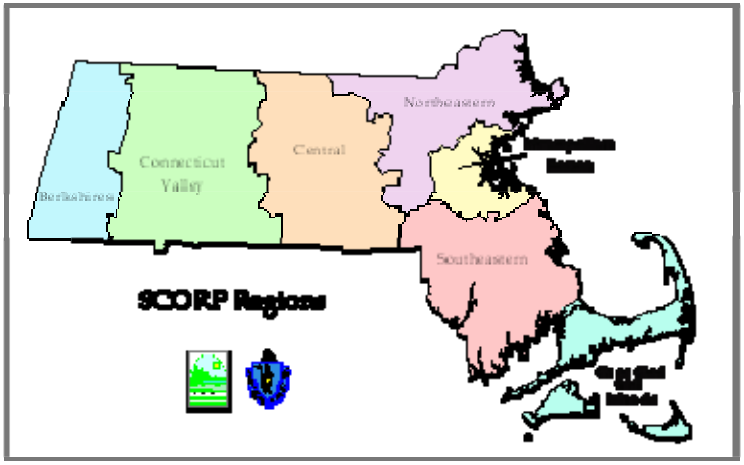
Municipal Policy and Plan Implementation

When plans recommended state actions, or joint ventures between communities, they often called for forming some kind of financial partnership with a state agency, typically for a conservation or recreation project for the town or city. In the Action Plans of rural towns, a number of them sought a way to become involved in the state's Agricultural Preservation Restriction (APR) Program. At least 35% of towns and cities planned to preserve agriculture and farming. Some Action Plans and public demand reports also called for a property tax reduction for farmlands as a preservation method. Preserving water supplies was a very popular action in both cities and towns, as well as environmental education. The highest priority goal common to all of the plans was also water based, to protect rivers, streams, ponds and wetlands. Action plans also often sought funding from the state through Urban Self Help grants and other types of funding from the federal government. A number of towns (17%) called for either the use Community Preservation Act (CPA) funds or to consider adopting a CPA. Often when joint municipality projects were mentioned in the plans,

they recommended working with surrounding towns and cities to form a regional network of trails or link existing trails and open spaces regionally.

Recreation Facilities

Towns and cities which updated plans every 5 years did not have as high of a demand for new field based recreation facilities. They were more concerned with maintaining recreation facilities. Almost 20% of the action plans called for additional recreation site signage. This action was usually linked with increasing environmental education and public awareness. Many towns and cities wanted to make sure that citizens knew as much as they could about their parks and open space opportunities either through street signs, brochures or some kind of public information sessions. The reason for this action may be because in many public surveys conducted to establish demands, citizens stated that they were unaware of many recreational opportunities within the towns and cities and some facilities were highly underutilized.



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