

Establishment of a Land Stewardship Program in Carlisle

A Report to the
Carlisle Conservation Commission
by the
Land Stewardship Planning Committee

October 2005



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- Fox Hill Management Plan (August 2005 Draft)

Establishment of a Land Stewardship Program in Carlisle

EXECUTIVE SUMMARY

The Land Stewardship Planning Committee (“the Planning committee”), an *ad hoc* subcommittee of the Carlisle Conservation Commission (CCC), is hereby recommending a new stewardship program for Town-owned conservation lands. At present, the Town has 29 such properties (containing 1,068 acres), and their maintenance and oversight has become a significant challenge for the CCC which has many other responsibilities. This program of maintenance and oversight (excluding trails which are well maintained by Carlisle’s Trails Committee) would be carried out by a new CCC subcommittee, referred to herein as the Land Stewardship Committee (LSC). The LSC, which should have 5 – 7 members with rotating terms, would also assign specific LSC members and/or other Carlisle citizens to be Stewards for individual parcels. Similar stewardship programs have been tried in other Massachusetts towns, although with mixed success.

The overarching goal of the LSC would be to manage town-owned conservation land, and other lands as directed by the town, to protect, maintain, and enhance conservation interests. Two guiding principles would be to: (1) organize and coordinate land maintenance and management activities to balance a number of potentially competing interests (e.g., conservation, vs. agriculture vs. recreation); and (2) foster communication with town committees and other organizations with related interests. The LSC will operate under the general direction of the CCC and will communicate with them frequently on matters of priority, funding, Steward selection, and maintenance problems. The LSC will specifically assist CCC in developing funding mechanisms for needed maintenance or desired improvements to conservation lands, and will prepare a formal annual report to the CCC.

It is a further goal of the proposed stewardship program to build a large corps of citizen Stewards who will feel some responsibility and ownership for Carlisle’s conservation lands, and thus protect them for future generations in a time of population growth and development pressure.

The Planning Committee has recommended that the LSC be responsible for a number of specific Core Tasks, including the following:

- Prepare a baseline assessment for each Town-owned conservation parcel
- Establish and maintain – in Town Office - active files on each parcel
- Develop (or update) a management plan for each parcel
- Regularly monitor each property and report on compliance with the management plan
- Develop, each year, a Land Stewardship Action Plan (LSAP) which contains a prioritized list of all needed maintenance and desired improvements
- Where no-cost options (e.g., use of volunteers and Town employees) are limited, develop funding mechanisms for implementing the LSAP, which may involve both public and private funding sources
- Implement the LSAP each year

- Pursue special projects, e.g., relating to environmental education, preservation of agricultural land, inventories of invasive plants, inventories of flora and fauna, and vernal pool certification.

The Planning Committee has prepared detailed guidance for five of the above-listed Core Tasks. In order to better describe these core tasks, the Planning Committee undertook the preparation of a draft Management Plan for one Town-owned conservation parcel, Fox Hill. This planning exercise was very helpful in the preparation of the guidance. The resulting Fox Hill Management Plan (Draft) is being submitted to the CCC with the recommendation that they hold a public hearing to obtain citizen input before finalizing the Plan.

1. Introduction

The Town of Carlisle currently owns, or owns conservation restrictions on, 29 parcels of conservation land totaling 1,068 acres. The management of these lands is the responsibility of the Carlisle Conservation Commission (CCC). However, the CCC is often not able to give sufficient time to land management because of its many other duties, including actions related to wetlands protection. In the fall of 2004, the CCC took action to improve this situation by appointing an *ad hoc* subcommittee, the Land Stewardship Planning Committee (“the Planning Committee”), charging the Planning Committee to: 1) investigate what nearby towns were doing to manage their conservation lands; and 2) propose a system of management, or “stewardship”, for Carlisle’s conservation parcels.

In response to the charge from the CCC, this report provides a proposed framework for the creation and governance of a Land Stewardship Committee (LSC) – as a permanent sub-committee of the CCC – which will manage Town-owned conservation land, and other lands as directed by the Town, to protect, maintain, and enhance conservation interests. To assist it in its activities, the LSC will appoint one or more Stewards to assume oversight and inspection responsibilities for specific conservation parcels. Major responsibilities of the LSC will include:

- Conduct of baseline assessments on each conservation parcel
- Creation and maintenance of a file of documentation on each parcel
- Preparation (and periodic updating) of a management plan for each parcel
- Regular inspections of each parcel
- Preparation of an annual action plan for needed maintenance
- Development of funding mechanisms, including Town Meeting support when necessary, for needed maintenance or desired improvements
- Conduct of needed maintenance
- Foster outreach programs - targeting Carlisle’s youth, naturalists, educators, conservation land abutters and near-by residents - generating enthusiasm for preserving and maintaining Carlisle’s conservation lands
- Annual (minimum) reports to the CCC

In all of its activities, the LSC will work under the general direction of the CCC, and will communicate with it frequently on administrative and maintenance matters. It is expected that the LSC’s assumption of conservation land management activities will allow for more proactive, thoughtful and watchful stewardship of Town-owned conservation land in Carlisle as the Town and surrounding area continues to be developed.

Carlisle is fortunate to have an active Trails Committee. The LSC will work closely with the Trails Committee for all Town conservation parcels that contain trails, or for which trails are proposed.

The Planning Committee undertook a number of tasks in the effort to fulfill the charge from the CCC. The key tasks (with references to sections of this report where results are described) were as follows:

- Investigation of conservation land management practices in nearby towns (see **Section 2**)
- Preparation of guidance (for the CCC) on the formation and governance of the LSC (see **Section 3**)
- Establishment of a set of goals, principles and core tasks for the LSC (see **Section 4**)
- Preparation of guidance for important core tasks the LSC will undertake (see **Section 5**)
- Preparation of a list of the Town-owned conservation parcels and restrictions that the LSC will be responsible for (see **Section 6**)
- Preparation, as a learning exercise (for the third bullet above), of a draft management plan for one conservation parcel, selected to be Fox Hill (see **Section 7** and attached draft Management Plan)

2. Survey of Conservation Land Management in Other Towns

By telephone or in-person interviews, the Planning Committee undertook a survey of conservation land management in seven nearby towns, of which five had active programs: Acton, Bedford, Lexington, Littleton and Weston. (It was learned that Chelmsford and Billerica do not have any formal management, or “stewardship”, plan beyond normal activities by its Conservation Commission.) A summary of the findings is provided in **Table 1**. (For each town with a formal program, a memorandum was prepared. Copies of these memoranda are available in the CCC’s files in Town Office.)

In addition to the above, the Planning Committee reviewed conservation land management practices in other Massachusetts towns as described by Peter Westover in his book: *Managing Conservation Land: The Stewardship of Conservation Areas, Wildlife Sanctuaries, and Open Spaces in Massachusetts* (Lamb Printing, 1994). This book provides general recommendations on conservation land management and provides some information on specific management practices by different towns and conservation land trusts in Massachusetts. (A memorandum-style summary of pertinent information in this book was prepared and is available from the CCC’s files in Town Office.)

Four of the five towns surveyed by the Planning Committee had a conservation land stewardship program that is essentially a volunteer-run organization. Two (Acton and Lexington) were by committees that reported to their town’s Conservation Commissions. The other two were efforts undertaken privately, with one reporting to the town’s private

Table 1. Conservation Land Management in Other Towns

Town	Stewardship Program?	How Long?	Program Reports to:	No. of Stewards	Trails Committee?	Costs to Town (\$)**		Conservation Acres		No. of Parcels	Notes
						Public	Private	Public	Private		
Lexington	Yes	> 30 yrs	Cons. Com.	> 60	No?	?	?	?	?	?	1
Bedford	Yes	10 yrs	Independent	~ 25	Yes	0	?	729	?	25	2
Action	Yes	10 yrs	Cons. Com.	?	No	~ 5,000	0	1,650+	?	15	3
Littleton	Yes	2 yrs	Land Trust	~ 25	No	1,000	1,000	1,100	350	14+	4
Weston	No*	-	(see note 5)	-	No	~ 12,000	~ 48,000	> 2,000	~ 500	300**	5
Billerica	No							250	?	?	6
Chelmsford	No							1,206	?	?	7

* But Weston has a large, organized management and maintenance program (see note 5).

** Including easements

*** Annual costs (rough)

1. Less than 1/3 of stewards are active. Reorganization efforts are underway. Small group of stewards to be "directors". Steward's manual and land use management manual being prepared. Project list to be generated.
2. Stewardship Program, although independent, interacts with Cons. Com. and newly formed Trails Committee. One steward for each of 25 Town conservation parcels. Minimum requirement is spring & fall site inspections.
3. All properties initially surveyed and brought up to a developed standard (signs, kiosks, maps, blazing, parking etc.) Have also published high-quality trails guide, established website, completed vernal pools certification, and undertaken education projects for children. Will soon start grant applications. Town has 15 major conservation parcels.
4. Stewardship Program officially a part of Littleton Land Trust, but program also works for, and reports jointly to, the Conservation Commission. Core team of ~4 also undertake long list of special maintenance projects. The Steward Program Director indicated that only about 25 - 30% of the stewards undertook the requested duties.
5. Almost all conservation land maintenance, both public and private, is carried out by paid employees of Land's Sake, a private, not-for-profit foundation that also puts emphasis on involving the community, particularly young people, with the land. Many other activities, and fund raising, are undertaken by Land's Sake. This organization reports to the Weston Conservation Commission and Weston Forest and Trails Association (a private, non-profit organization) regarding maintenance work undertaken. Weston is thinking of a Stewardship Program.
6. Billerica does have one employee charged with conservation land management.
7. Conservation acreage includes land held by Chelmsford Land Trust and water district.

land trust (Acton). Town funding for these four towns appears to be very low (less than \$5,000 per year for three of them). Private funding for land management activities is sometimes used to supplement the public funds (e.g., Littleton). Weston is in a class by itself by using paid employees of a not-for-profit group, Land's Sake, to undertake most of its conservation land maintenance. Substantial public (~ \$12,000/yr) and private (~ \$48,000/yr) funds are paid to Land's Sake for this work.

A significant difference between Carlisle and the other towns surveyed is the presence in Carlisle of a Trails Committee which is very active in both trails maintenance and public involvement (for both maintenance and pleasure). In some of the towns surveyed, it appears as if the main duty of the conservation land stewards was trail maintenance.

Where a stewardship program exists, there is typically a core committee and then a supplemental group of Stewards who are assigned to watch over individual parcels. Larger parcels may have two or more assigned Stewards. The core committee members may also designate themselves as Stewards for a parcel, but they also take primary responsibility for all maintenance activities requiring significant physical effort, use of machinery, use of contractors, and expenditure of funds.

It is difficult to predict how successful a volunteer-based stewardship program – whether publicly or privately organized – will be. One town has chosen to use paid workers, although it is reconsidering a volunteer-based stewardship program. Two other towns surveyed described some significant problems with the reliability or performance of their volunteer stewards. Much appears to rely on leadership, with steward recognition also considered important.

3. Guidance for the Formation and Governance of the Land Stewardship Committee (LSC)

The following recommendations were compiled by the Planning Committee to help guide the formation and governance of the LSC:

Initiating the LSC – The Conservation Commission should vote to formalize the decision to form the LSC as a subcommittee of the CCC.

LSC Committee Membership - 5 to 7 members; should include representatives from the Trails Committee, the Conservation Commission, and interested residents. All members should be active contributors. Expertise in wildlife habitat, forestry, or other types of ecology is desired. Communication and leadership skills also needed.

Term – Appointed by vote of the Conservation Commission for staggered terms of 3 years.

Formalities - The LSC members will be sworn in by the Town Clerk.

LSC Member Selection Process – will be conducted by the Conservation Commission by advertising in a publication of general circulation in Carlisle. Expect the selection process to take at least 3 months to complete. The Conservation Commission will review the qualifications of the applicants and choose from among them. (Could include interviews.)

Liaison with the Conservation Commission – The LSC will seek approval from the Conservation Commission of the annual Land Stewardship Action Plan (LSAP) (see Section 4) prior to executing the plan. The LSC will formulate funding requests, which will be approved and subsequently submitted by the Conservation Commission to the funding entity. The LSC will also seek approval of the management plans for each parcel. The LSC will take direction from the Conservation Commission to accommodate high priority issues. The LSC will prepare an annual report on its activities. Only the Conservation Commission has the authority to sign contracts and request funding. In the first year of appointment, it is expected that the LSC will take most of their direction from the Conservation Commission.

Administrative Assistance to the LSC – The Conservation Administrator will assist the LSC at the discretion of the Conservation Commission.

Land Stewards - The LSC will recruit Stewards to assist in executing the LSC’s activities. The selection criteria for Stewards shall be broad enough to allow the greatest possible participation by Carlisle citizens so as to facilitate education and awareness of issues related to conservation lands in Carlisle. The LSC will notify the Conservation Commission of the Stewards for each parcel. The Stewards will have a term of 1 year, which is renewable by the subcommittee.

4. Goals, Principles and Core Tasks for the Land Stewardship Committee (LSC)

The Planning Committee recommends the following overarching goal, guiding principles and core tasks for the Land Stewardship Committee (LSC). Note that detailed guidance for Core Tasks 1, 2, 3, 4 and 6 is provided in Section 5 below.

Overarching Goal for the Land Stewardship Committee

Manage town-owned conservation land, and other lands as directed by the town, to protect, maintain, and enhance conservation interests.

Guiding Principles

- Organize and coordinate land maintenance and management activities to balance the following interests:
 - Protect the flora and fauna on conservations lands, including protection from invasive species and excessive human use
 - Identify and protect rare and endangered wildlife habitats (including vernal pools and wildlife corridors)
 - Preserve and promote appropriate agricultural and appropriate recreational uses
 - Preserve rural vistas (open fields)
 - Protect water resources, including drinking water sources and surface waters
- Foster a sense of commitment to preserve Carlisle’s conservation lands among residents. This could include, for example:
 - An expanded stewards program where stewards were involved in ecological studies, public education, or just oversight
 - Outreach programs for youth, either educational or recreational
 - Publication of articles about Carlisle’s conservation lands
- Foster communication with town committees and other organizations with related interests:
 - Open Space and Recreation Committee
 - Carlisle Conservation Foundation
 - Conservation Restriction Advisory Committee
 - Trails Committee
 - US Fish and Wildlife Service, Sudbury Valley Trustees, Massachusetts Audubon Society, Great Brook State Park, Harvard University, Estabrook Council, The Trustees of Reservations, Massachusetts Division of Fisheries and Wildlife

Core Tasks

1. Conduct baseline assessments of the Town conservation properties. Inventory properties. Document ownership, ownership history, boundaries, and acquisition conditions. Document present condition and problems that need attention (e.g., signage, trail maintenance, parking, etc.).
2. Establish and maintain active files on each parcel in the Town Hall. These files will contain the baseline assessment documentation for each property. Assure that new relevant documentation (e.g., new conservation or other restrictions, addition of acreage) is added to the file as needed on an on-going basis.
3. Develop or update management plan for each property. Outline overall and specific objectives for each property (e.g., Towle Field – keep open and protect

bobolink habitat; maintain trail network, etc.); recommend enhancements; establish an appropriate monitoring frequency.

4. Regularly monitor each property and report on compliance with the management plan. Walk property boundaries, note changes, encroachments, littering, maintenance needs, trail condition, modifications to trails, etc. Monitor according to the recommendations in the management plan, but not less frequently than once per year.
5. Develop a Land Stewardship Action Plan (LSAP). On an annual basis, create a list of maintenance activities and prioritized list of projects with related funding needs. The list will be based on the management plans and monitoring results for each property.
6. Develop funding mechanisms. Establish a permanent funding mechanism for implementing the LSAP, including developing and maintaining annual operating and capital budgets for the LSAP. Secure Town Budget approvals for the same.
7. Implement the LSAP.
8. Conduct outreach activities. Focus activities generating enthusiasm for preserving and maintaining Carlisle's conservation lands. The core subcommittee will develop and implement an outreach strategy. Target audiences will include school and community groups, and individuals who have a special interest in a particular conservation parcel (e.g., abutters and near-by residents, naturalists, educators).
9. Pursue special projects. Special projects might include investigating economically sustainable projects, such as a forest management program
10. Report annually to the Conservation Commission.

5. Guidance for Selected LSC Core Tasks

Core Task 1: Conduct Baseline Assessments for Each Property

General Comments

This section provides general guidance for conducting a baseline assessment for each Town conservation parcel. Additional guidance may be obtained from various publications including the Land Trust Alliance's book: "Background to 2004 Revisions of Land Trust Standards and Practices".

The basic idea is to gather and organize basic background information about the property, considerations made during its acquisition and its unique characteristics/uses. Most of this information should be available from either the CCC's parcel acquisition files in Town Office or the Town Clerk. In some instances, it may be necessary to consult the Registry of Deeds. The *Carlisle Mosquito* (and its predecessors), abutters, and/or significant users may have useful background information relative to the original justification for a property's acquisition or to its historical uses and problem areas.

Data Gathering and Organization

Step 1 – Locate copies of the following documents:

- a. Property Deed
- b. Plans referenced in the Deed
- c. Town meeting warrant article and certification of vote
- d. Property survey
- e. Existing biological and physical inventories
- f. Newspaper and committee meeting minutes discussing purchase.
- g. Assessor's map for the property
- h. Prior management plans
- i. Aerial photos and topographical maps
- j. Historical and current day photos of significant features and general landscape
- k. Names of abutters, users, and those with detailed knowledge of the property

Step 2 – Prepare Locus Map indicating approximate location relative to other Town Owned Properties.

Step 3 – Organize file folder with above information.

Step 4 – Prepare a brief description summarizing the acquisition history, historical users and significant resources/features of the property.

Step 5 – Prepare an inventory of documentation that was collected and filed.

Step 6 – Conduct a site visit to document current conditions and problems. Examine and take pictures of the following features:

- parking
- signage
- kiosk and posted materials
- trail condition
- invasive species
- signs of inappropriate use
- vegetative encroachment into fields and open space
- encroachments to boundaries
- potential survey markers
- vistas

Step 7 –Document site visit in writing.

Core Task 2: Establish and Maintain Files for Each Property

General Comments

This section provides general guidance for establishing and maintaining the proper files for each parcel in the Town Hall. The purpose is to have a standard, complete set of documents pertaining to each site in one location that is easily accessible. There should be an established mechanism for assuring the new relevant materials are added to the file as needed on an on-going basis.

Establishing the Files

During the baseline assessment for each property (Core Task 1), several documents will be collected and/or prepared. These documents will include:

- Property deed
- Plans referenced in the deed
- Town meeting warrant article and certification of vote
- Property survey
- Existing biological and physical inventories
- Newspaper and committee meeting minutes discussing purchase
- Assessor’s map for the property
- Locus map indicating the location of the property
- Description of the acquisition history and features of the property
- Inventory of the documentation

A mechanism for tracking the use of the files might be considered. For example, there could be a sign out sheet kept in the file to indicate when someone has borrowed an item. In this way, if there are missing items, there will be a record to help relocate them.

Maintaining the Files

Additional items may be added to the files over time. These would include:

- Draft and/or final management plan
- Periodic monitoring reports
- Records indicating additions/modifications to the property
- Newspaper articles or other communications regarding any issues related to the property
- New conservation or other restrictions

As new documents are added to the file, one should add these items to the inventory list in the file.

A yearly inspection of the files is recommended. Each file for each parcel should be checked to make sure it is complete (i.e., all the documents listed on the inventory sheet are present in the file). Also during this inspection, one should check with the Conservation Administrator and the Conservation Commission Chair to see if there are any other documents that should be added to the file.

Core Task 3: Develop or Update Management Plan for Each Property

General Comments

This section provides general guidance for the development (or updating) of a management plan for each Town conservation parcel. The LSC is free to undertake any alternate approach that it feels will lead to the development of workable management plans.

Some State guidance on the value of conservation land management, and the preparation of management plans, is provided in the publication: *Environmental Handbook for Massachusetts Conservation Commissioners* (by Alexandra D. Dawson and Sally A. Zielinski; 8th edition, 2000, published by the Massachusetts Association of Conservation Commissioners [MACC]). Of particular interest are: (i) Section 10.5: *Management Plans for Natural Areas*; (ii) Section 10.6: *Management and Maintenance Projects*; and (iii) Fundamentals for Conservation Commissioners- Unit 8: *Managing Conservation Land: Inventories, Goals and Conflicts*. The latter item provides a suggested outline for inventory and management plans. Also of interest in the MACC Handbook is Section 18.9 (*Conservation Commission Act*) which discusses the main features of Massachusetts General Laws, Chapter 40, Section 8C, which describes the establishment, powers and duties of conservation commissions in the State. Section 18.9 notes that conservation commissions “may...prepare...plans...which...it deems necessary for its work. Among such plans may be a conservation and passive outdoor recreation plan which shall be, as far as possible, consistent with the town master plan and with any regional plans relating to the area.”

Additional guidance may be obtained from various publications including the book by Peter Westover: *Managing Conservation Land: The Stewardship of Conservation Areas, Wildlife Sanctuaries, and Open Spaces in Massachusetts* (Lamb Printing, 1994). (See the Conservation office for a loan copy.)

The following Town conservation parcels have had management plans (in whole or part) prepared in the past:

- Towle Land: *Site Analysis and Land Use Plan – Towle Conservation Land, Carlisle, Massachusetts*, prepared by Nancy E. Niessen (Associate Commissioner) for her Radcliffe Seminars Program, February, 1979. (36 pages)

- Foss Farm: *Foss Farm Sub-Committee Report and Recommendations*, prepared by a sub-committee to the Conservation Commission (Ella Nuckols, Chair), August 17, 1985. (16 pages)
- Greenough Land: *Greenough Conservation Land Management Plan*, prepared by the Carlisle Conservation Commission, 1992. (22 pages)
- Cranberry Bog: A number of documents have been prepared, including: (1) *Management Plan for the Chelmsford/Carlisle Cranberry Reservation* (funded by EOE A and the Bay Circuit Program), Jan. 1990, revised April 1990; accepted by Town Meeting in May 1990, contingent upon receipt of \$1,000,000 in Self-Help Grant funds from the State which were not received; and (2) a 1995 management plan for the cranberry bog by Carlisle Cranberries, Inc. (Mark Duffy) that covers the 20-year lease agreement for the agricultural use of the bog.
- Fox Hill: *Fox Hill Management Plan* (Draft) prepared by the Land Stewardship Planning Committee; August 2005 (19 p).

Copies of these reports are available in the files maintained by the CCC in Town Office. As might be expected from the different authorship, preparation dates, and property features of the plans prepared, there is little uniformity of focus or content amongst these plans. Nevertheless, they provide useful information on site-specific baseline conditions (including uses of the land), potential problem areas, and prudent management practices.

The management plans to be prepared by the LSC will, necessarily, rely on the information collected for the baseline assessment for each parcel (Core Task 1).

Prior to initiating the process to create a management plan for any parcel, if appropriate (most likely for larger, actively used parcels), involve other Town Committees, organizations and the public with significant interests in the parcel. The involvement may be in the form of open meetings, solicitations for input in the Mosquito, or other means. The Trails Committee's input must be obtained for any parcel that contains trails, or for which a trail system is anticipated.

Westover (op. cit.) suggests that Towns start with a simple plan for each parcel, leaving time and room for future changes. Guidance in Westover's book is the basis for the six-step planning process described below.

Preparing the Management Plan

Step 1 – History and Description of Site

Review the documents assembled during the baseline assessment (Core Task 1) and update them as necessary. Using the collected information, thoroughly describe the property using as many elements or features as are pertinent:

- 1) Prepare a base map of the property showing key elements or features.
- 2) Describe current uses (and possible future uses) by humans and wildlife
- 3) Describe parcel's history and legal points (including leases on land or buildings)
- 4) Describe key issues and problems to be addressed

- 5) Describe the parcels size, access, parking areas, kiosks and other signs, trails, dams, buildings and other physical features
- 6) Describe environmental features such as wildlife habitat, hydrology (streams, ponds), wooded and open (field) areas, soils, geology, topography, species inventory (especially rare or endangered if known), etc.
- 7) Identify key abutting properties, if any are of note

Step 2 – Develop Overall Management Objectives

Describe the overall objectives for management of the parcel, considering such factors as:

- Legal restrictions (including deed restrictions, State Self Help requirements, and CCC Rules and Regulations)
- Conservation interests (e.g., wildlife habitat protection, watershed or stream protection, invasive species eradication, wildlife corridors)
- Cultural and aesthetic values (e.g., vistas, stone walls)
- The need, if any, for public access and parking
- Current and future potential use by the public (active and passive recreation, and education)
- Current and future potential use by licensees or the Town for agriculture and forestry
- Known maintenance requirements (including problem areas)

In deriving the overall objectives, give special attention to possible conflicts between the factors listed above. Use this assessment to prioritize the relevant factors.

Step 3 – Identify Management Units for the Property

Divide the property into management units. The following are examples of management units:

- | | |
|--------------------------------------|--|
| - Fields (including roadside vistas) | - Forested areas |
| - Trails (w/ associated bridges)* | - Kiosks and other signs |
| - Garden plots | - Dams |
| - Water bodies (ponds, streams) | - Entrances and parking lots (incl. gates) |
| - Special wildlife habitat areas | - Buildings |
| - Horse riding areas | - Agricultural areas (under lease) |

*Trails are listed for completeness. It is understood that management and maintenance of trails on the Town’s conservation land will generally be the responsibility of the Trails Committee. However, the Trails Committee must be requested to provide input to the management plan that specifically addresses the trails on a parcel.

Prepare a map of the property that shows the locations of the management units.

Step 4 – Prepare the Management Plan for Each Unit

Lay out objectives and plans for each management unit:

- a. Objectives (based on the prioritized factors evaluated in Step 2)
- b. Plans (including the timing and/or frequency of listed actions)

For each unit covered, include – as appropriate – a brief discussion of the problems, and the solutions being proposed.

Select a frequency of inspection needed for the property (and key units or items to be inspected). Indicate if the standard inspection form that the Steward will fill out (see Core Task 4 guidance) is adequate, or needs to be modified for this property.

In addition to the above, describe near- or long-term management plans or possibilities for issues that are important to the property but which are not covered under any of the discussions for individual management units. Examples include:

- Current or future potential Stewards for the property
- Concerns of (or with) abutters or users
- Changes in property use
- Inventories of flora, fauna, and special habitats (e.g., vernal pools)
- Control of invasive plant species
- Obtaining grants for studies or activities on the property

Step 5 – Prepare a Financial Plan

The plan should include cost estimates for each management unit, and a summary cost estimate (annual) for the whole parcel. Data on past costs incurred should be summarized, if available.

Step 6 – Management Plan Approval Process

At a minimum, review is to be by the Carlisle Conservation Commission (CCC). Even for small, isolated parcels that get minimal use, it is recommended that the CCC allow for public review of, and input to, the draft management plan. This may be done by holding a discussion and hearing at a regularly scheduled CCC meeting (with advance announcement of the proposed hearing). For major parcels, or major plan changes, the CCC may elect to hold a more formal public review, and to submit the draft to selected Town Committees and organizations for their review. The Trails Committee must be included for any parcel with trails. A record should be kept of the review and approval process, and a summary included in the management plan report (see below).

After review, prepare a revised management plan. One copy is to be placed in the property file. Additional copies are to be provided to the property Stewards, to other members of the CCC and LSC, and to Gleason Public Library. The electronic file for the document should also be retained (one copy in the property file in Town Office).

Each year, the plan should be reviewed by the LSC (or designated Stewards) to see if revisions should be made. A more formal review, with appropriate revisions, should be made approximately every five years.

Management Plan Outline

A suggested outline for the written management plan, given below, follows the steps described above for the preparation of the plan:

- Executive Summary
- 1. Introduction
- 2. Description and History of Site
- 3. Overall Management Objectives
- 4. Management Units for the Property
- 5. Management Plan
- 6. Financial Plan
- 7. Review and Approval Process (to be written after CCC review and acceptance).

Core Task 4: Periodic Monitoring and Reporting on Each Property

General Comments

This section provides general guidance for monitoring and reporting on the condition of each property. Each of the properties will have a recommended monitoring frequency established in the property management plan. Note that the recommended monitoring frequency may differ for different management units within the property. Monitoring should be conducted according to this recommendation.

Monitoring

Before setting out to visit the property, assemble and review the following documents:

- Property survey or plot plan
- Baseline assessment description of the property condition and special features
- Draft or final management plan
- Any past monitoring reports (including photographs, if pertinent)

At least once a year, walk the boundaries and as much of the inner portions of the property as practical. Be on the alert for encroachments by abutters while walking the boundaries. Other (perhaps more frequent) inspections can concentrate on known areas of concern, e.g., parking lots and other high use areas. Photograph and take notes of things that vary from previous accounts of the property features. Note new trails, presence of trash, illegal dumping, or other activities that are not within the allowable activities established by the management plan. Note changes in the physical features as compared with the baseline report and past monitoring reports. For example, note encroachments of vegetation or changes in streams, wet areas or fields.

Reporting

Following each inspection, the Steward is to complete a form such as the one given on the following page (**Exhibit 1**). The form is to be submitted to the LSC as soon as practicable after the inspection. Note that the form requests that you also submit: (1) a copy of the property map showing the approximate route of the inspection tour; and (2) copies of any photographs taken.

Core Task 6: Develop Funding Mechanisms

General Comments

This section provides general guidance for the establishment of funding mechanisms for implementing the Land Stewardship Action Plan (LSAP). This includes developing and maintaining annual operating and capital budgets, requesting long term capital funding, securing Community Preservation Act funds and obtaining funds via other sources. The LSC is free to undertake any alternate approach that it feels will lead to adequate funding for its projects as long as it complies with town regulations.

Because the LSC acts under the direction of the Carlisle Conservation Commission (CCC), *all budgetary requests and grant applications should be presented to and approved by the CCC before proceeding.*

The Budgeting Process in Carlisle

For Carlisle's Boards and Committees, the annual budgeting process begins in the fall in any given year and concludes at the May Town Meeting or at the ballot box for tax overrides. The fiscal year for the town is July 1 through June 31 of any given year. Begin working with the CCC in the fall of the previous year to determine which funding mechanism to pursue for each funding request. The following sections detail the possible funding mechanisms.

Annual Operating and Capital Budget Requests

The CCC has an established budget to cover yearly expenses. There is an existing "Land Management" line item that may be used for year land management expenses.

It may be possible to add additional yearly operating and small to medium sized capital budget requests (those less than \$10,000) to the CCC budget. This type of request should be worked out directly with the CCC before the yearly budgeting cycle so that the CCC can carry the request along with its own items through the budgetary process.

The CCC budgeting process includes creating the yearly budget and then obtaining approval from the Board of Selectman and Finance Committee in that order. The Finance

Committee then includes the CCC budget as part of the town budget which is presented for approval at town meeting.

Community Preservation Act Funding

Community Preservation Act (CPA) funding should be considered for all one time capital expenses that meet CPA restrictions. Considering that one of the CPA goals is for “acquisition, creation, preservation, rehabilitation, or restoration of open space” and the fact that the State matches Carlisle’s deposits into this fund (as of this writing), pursuing CPA funding for Land Stewardship projects is encouraged.

With CCC approval, CPA funding requests should be made to the Carlisle Community Preservation Committee (CPC). The CPC has developed a project submission form that needs to be filled out for all submissions. Please contact the CPC for details. Forms should be submitted in January, or at a time designated by the CPC, so that there is time for the CPC to review, revise, and approve all submissions.

The LSC will be asked to present their proposal(s) at a CPC meeting as part of the approval process. If the CPC approves the proposal, they will shepherd it through the town warrant process. The CPA specific warrant will be voted on by the town at town meeting and the LSC may be required to justify the request to the town at that time.

More information on the Community Preservation Act can be found at these web sites:

<http://commpres.env.state.ma.us/>
<http://www.communitypreservation.org/>

Long Term Capital Requests and Special Warrant Articles

Capital requests that exceed \$10,000 should be directed to the Long Term Capital Requests Committee (LTCRC), a subcommittee of the Carlisle Finance Committee. They also have developed a project submission form which should be filled out as part of the submission process. Please contact the LTCRC during the fall for details. Forms should be submitted in January leaving time for the LTCRC to review, revise, and approve all submissions. The LSC will be required to present their proposal(s) at a LTCRC meeting.

Capital requests that are approved by the LTCRC will be included in the town meeting warrant. The LTCRC and Finance Committee are responsible for compiling the warrant but it will become the responsibility of the LSC to present the warrant at town meeting.

Town warrants that are approved at town meeting and that are satisfied by funds contained in the town budget are considered “passed”. But if the funds can only be raised by an override to the proposition 2 ½ budget then the warrant becomes a special warrant article and is included on the ballot at the yearly election following town meeting. If the

special warrant article is approved by the town via ballot then the warrant “passes” and the funds become available for use during the upcoming fiscal year.

Feasibility Studies

Another budgetary item to discuss is feasibility studies. Before recommending large purchases or costly projects, a feasibility study may be necessary. Seeking funding for a feasibility study follows the same policies as discussed above for capital expenditures.

“Friends of the Carlisle Land Stewardship Committee” Concept

The CCC and the LSC are official town committees and because of this they can not participate in fund raising activities. The CCC or LSC can collect fees for licensing a field to a farmer or for garden plot use at Foss Farm, but they can not hold fund raising events or participate in fund raising activities. (However, donations may be made to the Conservation Gift Fund.) This is where the “friends of” concept comes in. If an organization such as this is formed it can become the fundraising arm for the LSC and hold fundraising events or solicit donations from private sources.

Grants

Obtaining grants is another funding mechanism that should be considered. Organizations that provide grants require project details be submitted to their organization for approval. Since the LSC will become familiar with submitting projects for town budgetary approval, seeking grants from offering institutions is a natural extension of this work.

Sources of Grants and Other Private Funding

A last source of funding is through private sources. One local organization is the Carlisle Conservation Foundation and the associated Carlisle Land Trust. Founded in 1960, the Carlisle Conservation Foundation (CCF) is a private, non-profit organization whose purpose is to receive, acquire and protect open land as well as to promote conservation in Carlisle. The Carlisle Land Trust was formed and is operated to benefit and carry out the purposes of CCF. Contact them directly for grant opportunities; their website is the following:

<http://www.carlisleconservationfoundation.org>

Other Carlisle organizations have received funding from the following foundations:

<http://www.carlislefoundation.org/>
<http://fieldspond.org/welcome.html>

Many other funding organizations exist, spending some time searching the internet will likely yield more than a few other possibilities. Consulting other Carlisle boards for funding ideas is also highly encouraged!

6. Inventory of Carlisle's Conservation Properties

The LSC will be responsible for all conservation lands or restrictions owned by the Town. As of January 1, 2005, there were 29 such parcels totaling 1,068 acres. They are listed, along with some descriptive information, in **Table 2**. The approximate location of each parcel is shown in **Figure 1**.

**Table 2. Town Conservation Lands
as of January 1, 2005**

#	Land Name	Location	Acres	Protection*				CR	Sheet-lot(s)
				A	B	C	D		
1	Benfield Parcel A <i>(CPA acquisition-CR required, but not done yet)</i>	off South Street	25.68	x				no	Map 5:7-4
2	Bisbee Land	Lowell Street	34	x	x			no	Map 4:24A-0
3	Buttrick Woods Open Space	Lowell Street	14	x	x			yes	Map 4:20A
4	Carr Land	off Bellows Hill Road	6.1	x	x			yes	Map 2:12
5	Cranberry Bog	Curve Street	151	x	x			no	Map 30:2; Map 31:15
6	Davis Corridor	Bedford Road to Estabrook Woods	126	x	x	x		yes	Map 2:1,2A,5,6,7,8,10-X; Map 9: 15,26
7	Deacon Land	off Baldwin Road	7.5	x	x			yes	Map 2:13-0. Map 9:38A, 38B
8	Fisk Meadow	off Lowell St.	11.6	x	x			no	Map 27:60
9	Foss Farm <i>(55.2 ac on Assessors' maps)</i>	Bedford Road	57	x	x	x	x	no	Map 11:5
10	Fox Hill	Bedford Rd./Stearns St.	11.22	x	x			no	Map 14:9-17
11	Gage Woodland	off Lowell St./Ember Lane	14	x				no	Map 31:2
12	Great Brook Open Space A	off Rutland Street	3.67					no	Map 26:18G
13	Great Brook Open Space B <i>(not Town Owned)</i>	off Rutland Street	2.05					no	Map 26:18H
14	Greenough Land <i>(255ac on assessors' maps)</i>	Maple Street	242	x	x	x	x	no	Map 12:2; Map 13:87 Map 24:3
15	Hart Farm	off Curve Street	13.5	x	x			no	Map 28:12Y
16	Heidke Parcel	adj. to Town Forest	8.19	x	x			no	Map 24:28
17	Hutchins Field	Curve Street	16	x	x	x		APR	Map 28:2
18	Ice Pond Parcel	adj. to Great Brook Farm State Park	7.5	x	x			yes	Map 26:6K
19	Macone Property	off Brook Street	3	x	x			no	Map 13:8
20	MacAfee Land	adj. to Great Brook Farm State Park/ Carlisle Pines	15	x	x			no	Map 29:4
21	Malcolm Land	Stearns Street	23	x	x	x		no	Map 9:25,27,28
22	Mannis Land	off Aldershot Lane	28	x	x			no	Map 36:22,37,38,39

**Table 2. Town Conservation Lands
as of January 1, 2005**

23	Robbins Field	Curve Street	18.45	x	x	x		APR Map 28:8A,9A,10A
24	Rockstrom Land	off School Street	7.55	x	x			yes Map2:14-4
25	Sachs Greenway	off Baldwin Road	9.3	x	x			yes Map 2:10-9; Map 2-10X
26	Swanson Land	off Curve Street	20	x	x			no Map 28:9
27	Swanson Family Land	Tall Pines Lot 10	3	x	x			no Map 29:6-10
28	Towle Land	Westford Street	112	x	x	x	x	no Map 15:23,24,25,45
29	Town Forest	East Street	78	x				no Map 23:66
	Total Acres		1068					
	Protection - Properties subject to permanent protection because:							
	A- Acquired by vote of Town Meeting and permanently protected under Article 97 of the Massachusetts Constitution (and voted by Town Meeting to be managed by the Conservation Commission).							
	B- Acquired for conservation under MGL Ch 40 s.8C, or created as open-space through the Carlisle Conservation Bylaw, or by gift.							
	C- Acquired with Commonwealth of Massachusetts Self-help funds (or with state APR funds).							
	D- Acquired with Commonwealth Self-help funds and the Federal Land and Water Conservation Fund.							
	(APR= Agricultural Preservation Restriction)							



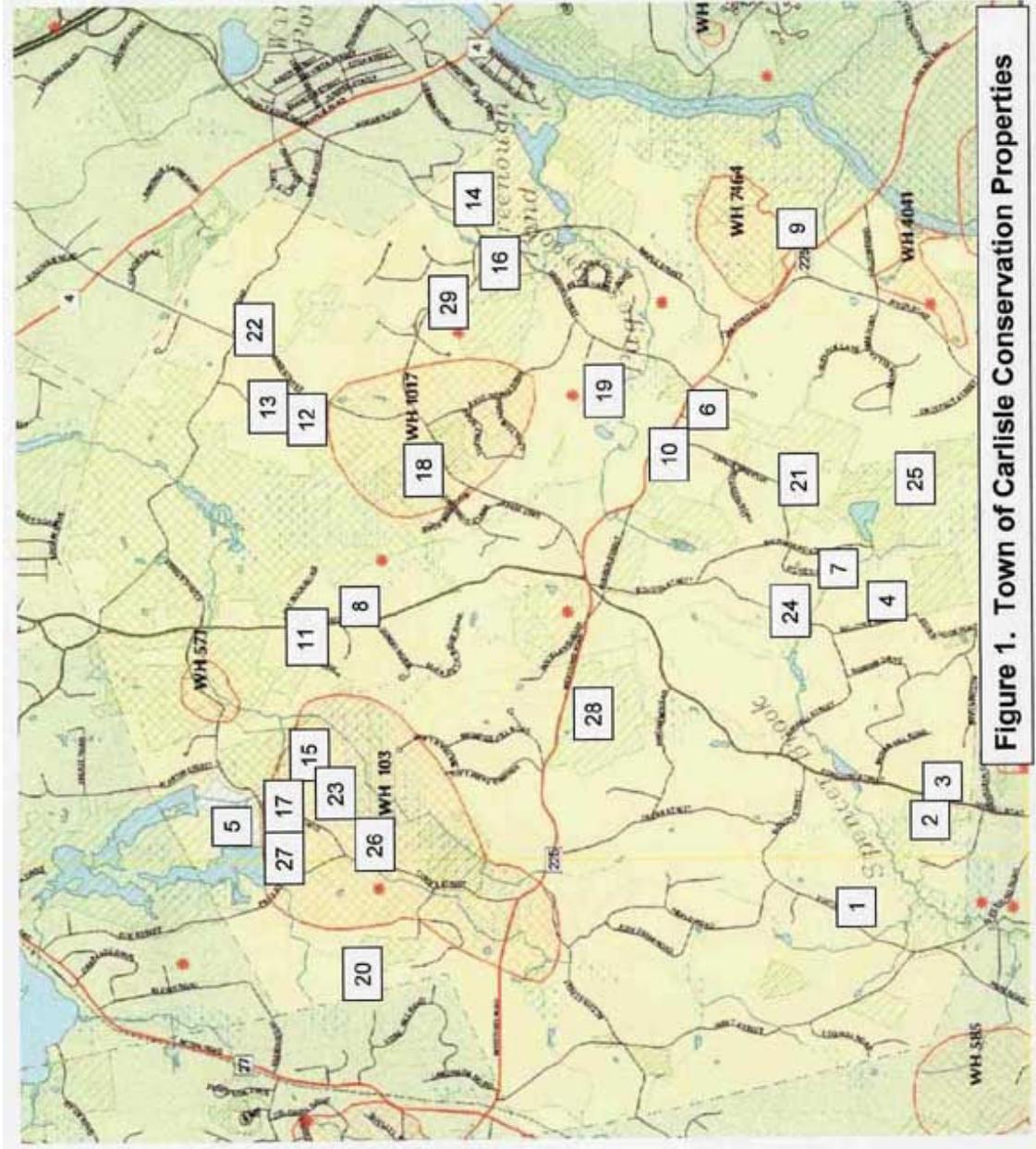


Figure 1. Town of Carlisle Conservation Properties

7. Overview of Fox Hill Management Plan

As part of its learning experience, the Planning Committee undertook the preparation of a draft management plan for one of Carlisle's conservation parcels: Fox Hill. This 11.22-acre parcel is located about 2/3 of a mile east of the Town center, at the intersection of Bedford Road and Stearns Street. The Town acquired the land in 1981 after authorization at a Special Town Meeting in 1980. Key attributes of the land include: (1) two connected agricultural fields (~ 8 acres) which have been used for hay production for at least two decades; (2) vistas across one field from Bedford Road and from abutting properties on Stearns Street; (3) forests with wetlands (including a seasonal stream and areas of seasonal ponding); and (4) a great diversity of habitat for wildlife. In addition to the agricultural use of the fields, nearby residents use the property for walking and horseback riding. To facilitate walking across the property, a nearby resident commonly mows a path from the Stearns Street entrance to the western boundary of the site. Except for two entrances, the site is completely surrounded by stone walls. There is no parking lot at the site, although some limited parking is available at both the Bedford Road and Stearns Street entrances. No management plan had previously been prepared for this parcel.

A significant concern at the site is loss of the fields by encroachment of the forest. There is evidence from aerial photographs that the fields used to be much larger in the past. Other concerns include maintenance of the vista from Bedford Road, keeping the two entrances open (and free of erosion), preserving the forest and wetlands for wildlife habitat and watershed protection, encroachment or improper use by abutters, and allowing for limited (passive) recreational use.

The guidance presented above in Section 5 was followed in the preparation of the management plan; and, in turn, the learning experience of preparing the plan provided feedback to improve the guidance. The specific guidance followed included:

- Core Task 1: Conduct Baseline Assessment for Each Property
- Core Task 2: Establish and Maintain Files for Each Property
- Core Task 3: Develop or Update Management Plan for Each Property
- Core Task 4: Periodic Monitoring and Reporting on Each Property

Following the above listed guidance, a baseline assessment was undertaken to supplement the information that already existed in the files maintained by the CCC. The supplemental assessment included the following:

- Inspections of the property (by individual members of the LSPC and the committee as a whole), with photos being taken during one inspection
- Conversations with several persons who were either abutters, near-by residents, or other interested parties (including one who had mowed the Fox Hill fields for over 10 years)
- Review of the *Carlisle Gazette* articles relating to the purchase of the land
- Review of the CCC meeting minutes related to the purchase of the land
- Obtaining an aerial photo (taken in April 2001) of the property

The additional information gathered was placed in the Fox Hill files maintained by the CCC.

Based upon (conservation-mandating) legal restrictions associated with the purchase of Fox Hill, and on the current uses of the land, the overall management objectives are:

1. To preserve the two fields: (a) for agricultural use (preferred); (b) for habitat for flora and fauna; and (c) for the vistas afforded (especially from Bedford Rd.)
2. To preserve the woodlands (excluding those encroaching on the fields) and wetlands in their natural state for wildlife habitat protection and watershed protection.
3. To allow for limited passive recreation such as walking and horseback riding.

For a discussion of these objectives, see Section 3 of the Management Plan.

For purposes of the management plan, the Fox Hill property is considered to contain the following management units:

- The two hay fields (currently under a three-year lease ending December 1, 2007)
- The remainder of the property that is forested, portions of which contain wetlands
- The two entrances (off Bedford Rd. and Stearns St.)
- The mowed path across the fields
- The stone walls which surround the property

The key elements of the management plan for each of the management units are as follows:

- Fields – Current use to be controlled by 3-year lease to a Carlisle farmer who will use the fields for hay production to feed a dairy goat herd. Excess bales will be sold. The rights and limitations of this use are detailed in CCC's *Agricultural License Agreement* and its *Exhibit A: Required Agricultural Practices and Special Restrictions*. The existing limits of the fields are to be marked, and future encroachment of the forest estimated by observations of the staked line and other means, if possible (e.g., historic and future aerial photos).
- Forest and included wetlands – To be left as is for wildlife habitat and watershed protection. Only portions encroaching on the fields, or hindering the view from Bedford Road, are to be cut back. The ponding waters near Bedford Road should be evaluated to see if they can be certified as vernal pools.
- Bedford Road and Stearns Street entrances – To be kept clear and – primarily for the Stearns Street entrance – protected against erosion. The “Fox Hill” sign at the Bedford Road entrance needs to be kept visible. Consider adding sign listing “not allowed” activities.
- Mowed path across field – An agreement with the nearby resident who mows the path should be formalized so that the interests of the Town and the farmer are protected.

- Stone walls (and perimeter of site) – Inspect periodically for abutter encroachments.

The management plan also recommends that two or more Stewards be assigned to the site, one of whom should be a nearby resident. A LSC member should be a second steward, and the current licensee (Trish Smith) should also be asked if she would be willing to act as a steward. In addition, it would be useful to have a qualified individual undertake an inventory of major flora and fauna at the site. As an initial effort, an inventory of invasive plants would be valuable.

Fox Hill should be inspected by a Steward at least three times a year. At least one inspection a year should include a complete check of the site's boundary and stone walls, looking especially for stone wall alterations or abutter encroachments onto the conservation land. At least one evaluation a year should include a focus on assessing the extent of forest encroachment into the fields. The entrances should be inspected each time.

No maintenance costs are necessary in the immediate future for Fox Hill. While many future "costs" may be eliminated by use of volunteers, the Trails Committee or Town employees (e.g., DPW), some future costs may be associated with the following:

- Replacement of the "Fox Hill" sign if it becomes damaged
- Installation of new signs listing "not allowed" activities
- Removal of brush along the Bedford Road border to maintain the view from the road (removal required on both sides of stone wall)
- Removal of brush and trees along the edges of the fields where encroachment is considered excessive
- Mowing of the walking path across the site
- Conducting an inventory of flora and fauna
- Assessment of ponding in wetlands for vernal pool certification

Aside from maintenance costs, the CCC should assume about \$70 in office costs related to Fox Hill over the next year. This will include costs for photocopying, printing and distribution of the final Management Plan, and printing of photographs.

The current Fox Hill Management Plan is a draft. The Planning Committee recommends that the CCC hold a public hearing to obtain public comments on the draft, and that a revised and final plan be subsequently prepared and published. As recommended in guidance for Core Task 3, management plans should be reviewed and updated approximately every five years.