PART 6 - LAND MANAGEMENT

Table of Contents

LAND MANAGEMENT

Regardless of how a parcel of land is secured, your conservation organization must then turn its attention to managing the land. At a basic level, the land trust must ensure that the resources and capacity to manage land are firmly in place and remain so for as long as the property is held. For most land trusts this means long-term protection of native biodiversity, or the ecological processes that sustain biodiversity. For other land trusts or conservation organizations, it can mean protection of other land-based resources, such as agricultural land or built heritage.

This part of the manual provides a checklist of items for successful land management with emphasis on the protection of natural heritage. Examples of good land management carried out by other organizations are provided.

Throughout this chapter, the terms “land management,” “land stewardship” and “caring for the land” are used in common to mean managing land primarily for the long-term protection of indigenous biodiversity. More exactly, “management” refers to taking measures to protect areas from negative impacts and carrying out activities that manipulate the environment. While this can mean installing facilities such as trail systems, activities often focus on maintaining diversity through control of populations or eradicating non-native species such as common buckthorn or garlic mustard. Strictly speaking, “stewardship” refers to managing property on someone else’s behalf (NCC, 1998), which emphasizes the societal role of land trusts as organizations that help to protect land for future generations.

The obligations a conservation organization assumes in managing land include:

- collecting or generating baseline information on the property’s history and existing conditions, including its natural heritage;
- determining how the site will be managed, before land securement, and whether your organization can fulfill these needs;
- developing land management plans that meet the organization’s goals and pertain to the unique characteristics of the property;
- building strong partnerships with volunteer stewards who are given clear direction to realize the organization’s expectations and requirements;
- regular monitoring to ensure long-term protection of valued resources.

As is often the case, the group will need to develop its capacity to take on the responsibilities of managing land. Building capacity can involve any number of factors such as tapping into sources of funding, building a dedicated group of volunteers, and securing support within the local community to carry out your desired activities.

6.1 Basis of Land Management

This section covers considerations for land management, usually before land is secured, and why land management is necessary.

6.1.1 First Steps

Setting organizational goals or policies that support future land management, as well as conducting background studies, are critical first steps for future success.

Your organization's letters patent will include objects that set a concise purpose. These objects are essentially a formal statement of goals and objectives that reflect your particular focus to actively secure and manage land. For example, you might list your objects as:

- to preserve, protect, restore, and improve the natural resources and environment of a specific region;
- to acquire, maintain, and preserve lands of ecological, recreational, scenic, agricultural, or open-space interest;
- to encourage and foster an understanding and awareness of the natural resources and environment and their value in enhancing our quality of life;
- to promote and carry out scientific research and data collection on natural resources and the environment, and to distribute findings to the public.

Everyone in your organization should be familiar with your objects or goals, and know where to find them.

> The Nature Conservancy of Canada uses statements such as "protecting areas of biodiversity for their intrinsic value and for the benefit of future generations by securing ecologically significant areas, places of special beauty and/or educational interest through purchase, donations, conservation agreements and other mechanisms."

Your group may adopt policies that serve a similar purpose. Your policies provide a valuable framework within which the group makes decisions on land management and other opportunities as they arise.

Strategic plans or action plans are often developed early in the life of an organization. They indicate the need for conservation action, describe the resources in the geographic area of interest, and set priorities for future action. This document can indicate intentional land securement and management activities, such as:

- accepting donations of land;
- raising funds through various sources, including private donations or government funding programs, to purchase outstanding properties;
- holding conservation easements or other limited interests on natural lands;

- managing lands according to the trust's objectives, which often involves volunteer participation;
- assisting private landowners with management activities;
- encouraging private land stewardship;
- working jointly with other conservation organizations on projects;
- advising or working with government agencies and municipalities; for example, in carrying out evaluations to identify priorities for land protection;
- promoting public awareness and knowledge of natural heritage and good land stewardship; for example, through environmental education programs or providing training and assistance to local organizations.

Both policies and strategic plans or actions plans of your organization often contain information on the how, what, why and where of securing and managing land.

Your organization's structure will also reflect its land management activities. In addition to the executive and the board, there may be committees for budget and planning, fundraising, or land transaction. A stewardship committee may also be useful to oversee monitoring and management of lands owned or otherwise secured by the trust.

Sooner or later someone will ask why you are interested in managing land. This is probably best answered in reference to the objects in your letters patent. A commonly accepted answer is to protect indigenous biodiversity and the processes that sustain it, for the long term. Biodiversity draws on a large range of organisms. Such a multi-species system is better able to adapt, by forming new patterns, to its own internal evolution or to environmental shocks and changes (whether natural or anthropogenic) than one containing only a limited range of organisms. The occurrence of a rare species such wild lupine or loggerhead shrike; an unusual habitat type such as alvar, wetland or escarpment; or other significant feature often drives the project. Land is secured and managed to protect and perpetuate native ecosystems and for social-cultural benefits such as recreation, research, education, and personal values.

6.1.2 Linking Land Securement and Management

Your organization will usually have a choice to secure a property or not. There is no such choice for management. All land must be managed responsibly, even if all that is warranted is to visit the property three or four times a year, and do nothing else. Land management, however, is rarely that simple, and other active measures including maintenance and monitoring will likely be necessary. Initially, the decision whether to proceed with securing land will be based on many factors. As with many circumstances in life, some of these factors are in your control, others are less so. Among the many things to consider are:

- the goals and objectives of the organization, i.e., the type of land desired (wilderness, natural areas, cultural landscapes or built heritage);
- whether properties "happen" to become available, or are purposely chosen;

- the financial resources available to pay for start-up and carrying costs (survey, legal and land transfer tax, ongoing maintenance, property taxes, insurance, signage, etc.);
- the strength of the volunteer base, staff or experts needed to properly manage the property;
- overall community support for the project, and the level of support from partners;
- the quality and character of the land itself.

This last point can often be the deciding factor to secure a property or not. Property-management needs can require some creative structuring of your organization's abilities and resources.

For example, as a very young organization, the Lower Grand River Land Trust Foundation acquired the very large, diverse and significant Ruthvan Park estate on the Grand River. This land trust chose to adapt to the situation and accept a large property which required a level of staffing, financial support and partnerships normally reserved for larger and much longer-established conservation organizations. While it took time to adapt, significant partnerships were forged with Parks Canada and other supporting institutions. This land trust has been very successful in protecting Ruthvan Park and carrying out other initiatives in the lower Grand River basin.

In contrast, the FON Nature Reserves Committee visited a biologically and geologically outstanding potential reserve property. The committee quietly decided that while it was a very worthy site, the waterfall, rapids, glacial potholes and karst topography would present hazards to reserve visitors that were beyond the FON's abilities to mitigate. Future management was a consideration in evaluating the site for acquisition. The FON was in the position of considering several other properties at the same time, and chose to manage its time and resources appropriately.

Taking a reasonable risk and accepting a challenge is different from overstepping one's limits.

Table 1 below has been developed to help your organization assess a property according to its characteristics, and what is likely to be involved in its management. This can help you decide on the type of property you are willing to secure by putting in perspective potential management needs. This is intended as a guide only, since many properties have unique requirements.

A reminder here that an initial scoping or information-gathering exercise may be necessary to make an informed decision. This should certainly include a ground-truthing exercise, i.e., visiting the property and noting the significance of the feature(s) to be protected. You might also consider broadening this exercise into a "baseline study." In fact, a baseline document report may be necessary where conservation easements are being put in place. These reports provide a general description of the property upon securement, and often note the type, extent and condition of significant features as well as potential negative factors such as historic and current adjacent land use. The Ontario

Heritage Foundation has available a manual on writing a baseline document report for conservation easements. Baseline information can provide a good starting point for land management and future monitoring. Section 3.4.1 contains additional information on baseline studies.

Table 1 Types of Properties and Potential Land Management Needs

less management need → greater management need

	Type I Property	Type II Property	Type III Property	Type IV Property
	Property characteristic			
Property contains entire ecological site	X		X	
Property contains only portion of entire ecological site		X		X
Site of high ecological integrity, and is relatively stable and undisturbed	X	X		
Site with previous ecological integrity but is disturbed, complex in nature, or needs protection from human uses. Active restoration or management is required.			X	X
Ownership: Relative public profile:	single low	multiple owners low	single potentially high	multiple owners potentially high
	Potential land management needs			
Level of management: Material or financial inputs required required:	minimal low	potentially minimal potentially low	potentially complex potentially high	potentially complex potentially high
Stewardship arrangements required:	informal	informal or formal	potentially formal	formal
Need for multiple partnerships: Need for formal management plan:	low will benefit from management plan	potentially low will greatly benefit from management plan	potentially high will greatly benefit from management plan	high will likely require a management plan

The main criteria for minimal management and minimal input are a relatively stable and undisturbed site with low public profile. “Passive stewardship” is appropriate for Type I lands where active management may neither be necessary nor advisable. More active management together with expected higher costs and greater organizational structure are likely to be needed as one approaches Type IV lands. All this, of course, will be tempered by the number of properties your organization manages. A good land-management plan, however, will reflect the above circumstances and help you organize complex issues and opportunities effectively.

While the most common approach is to hold a parcel of land in its entirety for some time, situations may arise where other creative tools and techniques can be employed in order to protect and manage land. These include:

- disposing of lands to a suitable management agency such as a government parks or wildlife agency;
- acquiring and then reselling the land with restrictions (i.e., purchase and saleback, as with the McKinlay-McGinty House in West Flambourough);
- limited, i.e, creative development of land where instead of taking the standard level of profit, land is developed with its natural areas left alone.

These particular activities and other similar activities have in the past been practiced widely in the United States. The potential for these techniques to be used in the settled landscapes of southern Ontario and elsewhere in Canada continues to grow. For a complete discussion of creative tools and techniques for protecting land, *see Creative Conservation*, *Saving America’s Countryside* and *Islands of Green.*

Finally, as with all projects, it is critical to organize land management in a manner that is easy to follow and transferable to others. For example, a simple three-ring binder or multiple file folder containing all relevant documents could be organized for each property. The property binder or folder can contain:

- the land-management plan;
- copy of property survey;
- correspondence;
- expense forms;
- minutes of meetings;
- monitoring reports;
- field work reports;
- other valuable information such as photographs, field notes, copies of ANSI or ESA reports, CA documentation, municipal land-use and zoning designations, or other historic documentation, contact names and numbers, etc.

6.1.3 Partnerships

Before delving into the nuts and bolts of land-management plans, the issue of partnerships must be explored.

Ask yourself why you need partners. You may find two basic types: partnerships you form to secure land and those that carry out the trust's day-to-day activities. Land securement partners can exist at arm's-length and provide specific resources such as funding, goods or services. These partners are typically government or non-government agencies, foundations, community groups or individuals who are looking to help conservation organizations achieve a similar goal. Other similar partners may include corporations and businesses that simply agree with your approach and want to support your work. And, of course, somewhere in this list is the owner of the property in which you are interested.

Other "partners" are your volunteers, including board members, committee members or trust members, often from the local community, who work in task groups or as individuals. Everyone benefits from a sense of belonging and working in partnership with the organization. Self-recognition of abilities and limitations can have positive effects for the whole group. Assign duties that are agreeable with volunteers, rotate mundane tasks if necessary, and provide training that develops their skills.

By providing you with something useful, partners will normally expect something in return. Depending on the partner, this can vary from having to produce something, such as a property-management plan, to performing ongoing monitoring or perhaps simply mentioning their name in your newsletter. All partners must be thanked from time to time, through some form of acknowledgment that suits them. A periodic sense of accomplishment is very important. This allows you to move onto other things and maintain active interest.

Excellent communication between your organization and your partners, whoever they are, is essential in order to address any issues and achieve project goals in an effective and timely manner.

Land management has its own unique partnering opportunities. Funding partners will likely be needed for both land securement and land management. Other partners can provide input and advice on management plans. Land-management activities such as property cleanup and monitoring can be done with the same or another set of partners. For example, neighbours of the secured property can be purposely seconded as partners for the purposes of monitoring and surveillance. In these circumstances it is critical to stay on good terms with neighbours, but also to let them know what your purposes and needs are.

6.2 **Land Management Standards and the ONTA Land Registry**

The "Principles for the Care and Recognition of Protected Natural Areas" adopted by the Ontario Nature Trust Alliance sets minimum standards for the management of conservation lands. These standards provide a basis for good land stewardship and can be used in developing goals and priorities for land-management activities.

.Principles for the Care and Recognition of Protected Natural Areas
Ontario Nature Trust Alliance, 1997

• Lands will be managed primarily for nature conservation, in which the natural processes of growth, succession and species interaction are generally permitted to proceed without interference. Lands may also be managed for the maintenance of particular features of interest such as particular species or habitats. Deliberate management actions may be taken to sustain such features.

• The management of individual lands will be based on an understanding of the particular character of each property and its role in the surrounding landscape. The most important considerations for the stewards of the site will be the natural features of the property and their long-term maintenance and enhancement.

• Protected lands are part of local landscapes and member groups will involve neighbours and the local community in site planning and other land management activities.

• Member groups will determine the activities they consider compatible with the features of the individual site and endeavour, over time, to document their conservation interests and activities with regard to the site.

• If lands are open to the public, member groups will ensure that any risks to visitors are minimized and lands are appropriately signed.

• Lands will be directly owned or cared for by member groups. If members are stewards of lands for other owners, through agreements, leases, or conservation easements, nominations of the sites to the Alliance registry must have the concurrence of the owner.

• A property registered with the Alliance will normally include notice that the area is recognized as part of the Ontario Nature Trust Alliance Land Registry.

Land-saving organizations are strongly encouraged to become members of the Ontario Nature Trust Alliance and to register their conservation lands with the ONTA Land Registry. In order for lands to be included in the registry, groups must adopt the ONTA's principles for each of their properties and fill out the registration form provided upon request. The forms are then submitted to the ONTA Land Registry task group. Upon review and acceptance, recommendations are made to council to accept the property into the registry. The registry is used to calculate the total area and type of lands protected by various conservation organizations, and to provide future input on meeting conservation targets for the province.

The benefits of registering land can include:
- recognition of the member group at the ONTA annual meeting;
- offer of a sign for the property at a good price;
- receipt of a certificate to each group for registration of property(s);
- listing of the property in the ONTA directory;
- opportunity for the member group to mention its participation in the ONTA Land Registry in its literature, etc.;
- special funding may be available from time to time to cover some land-securement costs;
- learning from others, sharing ideas and accessing resources and help.

6.3 Land Management Plan

This section describes how to prepare a land management plan, the main working document for each of your land trust's properties. Management plans also serve a strong educational role, help reach consensus on making present and future property management decisions, and, of course, help the trust fulfill its organizational goals. At a minimum, the content of the land management plan can be a record of the planning process. Most management plans will contain some additional information. The information listed below is fairly comprehensive. Note that not all of this information need be included in a plan, but producing a well thought-out plan can do wonders when applying for funding and making presentations to other decision-makers.

When a property is secured some activities usually require immediate attention. These can include boundary definition, access control, or any number of other pressing management needs. These activities can be carried out promptly while a management plan is being prepared.

The process for developing management plans, appropriately called "the planning process," helps ensure plans are prepared in a logical, defensible fashion. The planning model presented here is based on the FON land management process. It is designed for use by local stewards and/or FON staff. An annotated version is available from the FON, which explains the process in more detail. A summary of the process is presented first, so you can become familiar with its basic steps before the typical content of a land management plan is reviewed in detail.

6.3.1 Planning Process

Step 1:
Gather and assess information in terms of impacts and threats.

All biological and physical information on the property is assembled and linkages to the surrounding landscape are identified. An area is protected because of features or overriding considerations such as the presence of an endangered species or the presence of a particularly representative or rare habitat. Step 1 ends with taking the available biophysical information and determining the property's most *significant features*. By identifying what is most significant you can best focus your management activities, prioritize and set goals. The flip side to this is mapping the areas most *sensitive to human impacts* and flagging actions to protect these sensitive areas. Significant and sensitive features may often be the same.

Step 2:

Set working goals and objectives.

A goal may be to maintain natural processes and habitats based on pre-European settlement conditions to preserve important habitats. Or, management may focus on protecting one species. Or, the site may be used primarily for environmental education to heighten awareness and protect the surrounding ecosystem. A clear purpose is essential.

Have clear goals and know your tools. Don’t confuse conservation tools with goals. For example, community involvement is almost always essential but it should not be your main goal—your trust likely exists to protect a specific landscape, habitat or species. That is your goal. Working with the community is the tool you might use to accomplish that goal.

In Step 1, impacts and threats are identified. But after a goal or goals are set, the impacts and threats should be revisited. What might have been a problem before may be less of an issue after a goal is set. One FON reserve is periodically flooded, scouring out a fen. It was an major erosion concern. Once a plan was written it was found that this was a natural disturbance, and in fact an essential process.

Objectives are action-oriented to meet your goal. For example, an objective may be to carry out a prescribed burn of remnant tall grass prairie or to reforest part of a woodland block to create more interior forest habitat in time.

Step 3:
Determine strategies and actions.

How are you going to meet your objectives? Strategies or actions are devised and implemented on the ground. In the case of a prescribed burn, an appropriate strategy would involve contacting the MNR prescribed burn team, as well as the local fire department and neighbours, obtaining the required permits, scheduling the event, setting in place an emergency plan, and conducting the burn on the appropriate day using qualified personnel. In most cases, however, volunteers will carry out less dangerous but essential tasks such as monitoring or trail maintenance.

Step 4:
Monitor and report.

Lastly, how will you monitor your success in implementing actions and how will you monitor the ecological health of the property? In the first case you want to know if you’ve effectively met your objectives. You may find you can do more, or you’ve set yourself too much work. In the second case you are trying to determine the health of your property. By monitoring both you can judge how effective your actions are. It is important to keep records and to include the results of monitoring within the plan, or as a follow-up document. Monitoring is complete when the results are brought full circle into revising your working goals and objectives, and carrying out the next round of management activities based on previous work.

Keeping a good record of the planning process will be very helpful in developing a sound management plan.

6.3.2 Content of the Land Management Plan

The following sample content is a guide. Ideas for implementing the plan are also provided when appropriate.

Background:
This section describes the property and how it can fit within the overall scope of your trust's activities. This will cover:

> It is recommended that descriptions of biodiversity features use the classification system for habitat/vegetation associations indicated in the Ecological Land Classification System. Also indicate the conservation status (i.e., environmental designations) assigned to individual species. This information is available from the Ontario Natural Heritage Information Centre in Peterborough, Ontario.

- The name of the property, its location (lot and concession, township and county and/or UTM coordinates).
- A description of historic, current and proposed land use and any history of disturbance (such as agriculture, logging, aggregate extraction, dumping, flooding, fire or disease, etc.).
- Original surveyors' records can be a big help in knowing what was and possibly what could be again.
- Which management issues need to be addressed, such as the state of current knowledge, effectiveness of current management, use of the property by visitors, plant poaching, state of repair of fences, boardwalks, trails, parking, adequate signage or interpretive information, effect of surrounding land uses or infrastructure.
- You may also need to become familiar with the status of any legal agreements, liability insurance and other management costs for buildings, facilities, utilities, etc.
- A statement on possible future securement of adjacent land may be appropriate, notably when the ecological site extends beyond the existing property boundary.
- As a matter of protocol, special organizational needs for stewardship can be indicated, such as whom the custodian or land stewardship group is and what their responsibilities are, or will be.
- Additional information on the property might be reviewed at this point, but not necessarily included in the plan. This can include the deed, with description of the property boundary, historic surveys, location of any easements, flood and fill lines, local land-use zoning regulations and any recent Official Plan amendments, taxation, improvements and other human influences.

Inventory and Analysis:
This is Step 1 of the planning process indicated above.

You will want to gather all previous studies such as botanical studies, wetland evaluations, etc., that have been prepared for the property. This might include ANSI or ESA studies, other casual records of significant features that warrant protection or management, and intangible sources of information such as anecdotal accounts by local experts or local residents with a long history in the area.

Particular emphasis should be given to:

- A detailed description of the ecological sites or features or species to be protected or managed. Are there areas of critical habitat and how well represented are they regionally or provincially?
- Current information on landform, soils, hydrology, plant/vegetation associations, or individual species of flora and fauna.
- A review and assessment of related ecological functions associated with the property, such as interior forest habitat, seasonal movement and concentrations of wildlife, soil fertility and erosion control, buffering of water quality, groundwater recharge or discharge, or ecological succession and habitat diversity within communities. These functions should be described in terms of their contribution within a regional natural heritage system, or what primary and secondary roles these functions play in a local and regional ecological context.

> FON's management goals for the well-used Petrel Point Nature Reserve are:
> Maintain processes essential to the preservation of habitats present in a state prior to residential development and mitigate process/actions that alter this state, while ensuring no species loss.
> Foster an appreciation, understanding, and enjoyment of Howdenvale Bay Wetland's special features, the role of wetlands in Ontario, and its relation to greater conservation issues.
> Foster an awareness of the FON.

- Which influences such as fire, flooding or other natural disturbance are important to maintain the species present?
- An assessment of habitat linkages with the surrounding region. For example, a property may contain the wintering site for an amphibian but its nesting area may be off-site.
- It is also useful to determine the MNR Site Region the property is located in. This provides an overview of climatic, physiographic, soil and vegetation characteristics.

Assessing this information in order to determine significance, ascertain impacts and threats, or constraints and opportunities for protection, set priorities and develop goals should be done with assistance from someone with a strong environmental background or expertise in land management.

Conservation objectives should be clearly stated so future monitoring can determine if the objectives are being achieved. For example, objectives focusing on conserving specific habitats will be tested by the presence and persistence of particular indicator species, or other environmental indicators.

Goals and Objectives:
This is Step 2 of the planning process.

Goals may be regarded as motherhood statements, but they must be focused and clear enough to help determine explicit action-oriented objectives. Goals for the property should meet your organization's goal, and dictate management objectives. Objectives are then carried forward to the next stage that stipulates appropriate strategies or activities. In some instances you may wish to precede your goals with statements of policy, philosophy or purpose, which hearken back to why your organization is protecting land in the first place. In addition to natural heritage, goals and objectives may also refer to social or cultural benefits such as education, research, demonstration, recreation or fostering personal values.

It may be impossible or undesirable to bring land back to pre-European conditions, particularly if the site or the surrounding environment has changed significantly. In any case, you might ask what type of ecosystem is present and is what is likely to arise. Is it possible to maintain a particular stage of community succession in order to retain a rare species? Accepting the status quo may be the best alternative—'if it ain't broke, don't fix it'. Conversely, admit if the reserve cannot be managed in the ideal state. Remember, goals are often worked *toward*, and being patient and thinking ahead can pay off in the long term.

As with goals, there is some idealism in setting objectives. When it becomes apparent that objectives are not obtainable, a compromise may be needed.

In an FON land management plan, the goal, objectives and actions may look something like these, taken from a plan for a rare and little- understood Jack pine and limestone barrens.

Goal: Preservation of present natural conditions emphasizing rarity of habitat, ecological community representation and species diversity.

Sample objective: Learn more about the Jack pine/pavement environment with an emphasis on determining the natural processes present.

Strategy/action: allow and encourage research on-site, actively seek researchers.

Sample objective: Seek to preserve linkages with the greater surrounding ecosystem.

Strategy/action: maintain a dialogue with adjacent national park; contact and inform adjacent landowners of activities on-site: consider purchase of key surrounding lands to secure linkages.

In the above Jack pine and limestone barren example, note that management activities do not manipulate the site in any way. A hands-off approach is very desirable for more pristine sites with a low public profile. More active management is likely necessary for disturbed sites or sites with visitor impacts.

Strategies and Actions:
This is Step 3 of the planning process.

Your action plan will indicate what activities will be accomplished by what time, and what budget may be required. Specific natural area restoration or management activities can be described, or at least referred to if they are performed by other experts.

For the most part, strategies and actions may be organized and carried out by a lead hand, or land manager, reserve steward, or custodian, with support from the board or a designated volunteer working group or stewardship committee made up of board and community members. Ideally, these people should also be involved in developing the management plan. It is critical to set expectations up front so all working members can assume their responsibilities in a meaningful way. The lead hand and helpers should be well informed, well trained, and well suited to the task. You may also need to indicate which natural disturbances should be allowed to continue in order to perpetuate rare species, etc.

Deciding what and when to manage can be tricky. The difference between natural and human disturbances can often, but not always, be a guide. For example, small, isolated events such as local windthroughs may be part of natural disturbance patterns and part of natural processes. In other circumstances, for example rare-plant poaching or timber theft, decisive action is required. In times like this, vigilant neighbours or other local stewards may help to correct the situation.

Practicality can begin to win over idealism at this stage, but the intention is still to fully implement objectives. You can use the same wording as you did for the objectives, but they are interpreted in terms of action on the ground.

Monitoring and Reporting:
Step 4 of the planning process indicates that the group should monitor its own activities, the activities of other people, as well as the natural features of the site.

Policies and procedures for monitoring and reporting (what, when, why, how, who) can be put in place so that potential problems can be caught in a timely manner. The following is a list of common monitoring topics, which can be modified to suit your own needs.

Monitoring Topics

Land Trust Activities
The activities you carry out in order to implement the property land management plan.

Natural Disturbance
- Erosion and sedimentation
- Mass wasting
- Fire
- Flooding
- Wind through
- Heavy browsing by deer

Human Disturbance
- Camping or play forts
- Ditching and drainage
- Dumping
- Fence
- Fires
- Horseback riding
- Hunting and fishing
- Invasive species
- Logging or timber theft
- Motorized Vehicles
- Mountain bikes
- Plant harvesting or trampling
- Storage or land use encroachment
- Vandalism

Nature Reserve Areas
Ongoing field studies of the ecological site for assessment of representative biodiversity. These may be some of the same Trust activities first listed here. Other research or field studies that contribute to a greater understanding of the ecological site.

The extent, location and history of each topic recorded during monitoring should be recorded.

The Couchiching Conservancy monitors its properties for disturbances four times a year, or once a season. A stewardship team consisting of four or five people visits the property. If problems are observed they contact a board representative who then brings concerns to the board's attention.

Ongoing field studies that monitor the ecological site or feature, which resulted in land securement in the first place, should be conducted at the time of year when the feature(s) are readily observable. For example, a site known for its ladies' tresses orchids can be visited in late summer when the plants are most conspicuous. Additional studies are advisable at other times of year to determine the full extent of the site's biodiversity. These site visits might be performed less often than monitoring for disturbances, but at more specific times.

More sophisticated monitoring of natural heritage features may involve measuring environmental indicators. This program should be based on scientific and technical protocols of ecosystem monitoring. This type of monitoring and reporting may become part of legal agreements where multiple partners are involved in land securement and management.

Base information for plan drawings can be gleaned from a number of sources. Copies of Ontario Base Maps (OBMs) may be available from your local conservation authority or MNR office. Aerial photographs are available from the MNR Information Centre at 416-314-2000, or through private suppliers known to your conservation authority. County offices may also have more recent aerial photos. On occasion your conservation authority may provide simple photocopies of aerial photographs for a nominal fee. Aerial photographs are handy for observing existing or historic conditions, and are useful for determining property boundaries, or the area and changes in the composition of forests, wetlands and other open space over time.

Plan Map:
A plan map of the property must be produced. Usually called the Management Plan on its own, it should be prepared at a known scale, to scale, and show:

- property boundary;
- north arrow;
- calibrated bar scale;
- title, for example, Windsor Woods Management Plan, location and date;
- who the proponent is, with an optional listing of partners and who prepared the drawing
- cultural features such as roads, trails, fences, view points, easements, service utilities, dams, conservation authority flood and fill lines, etc.
- natural features such as the specific areas you are protecting, forest and forest edges, meadows, old fields, wetlands, permanent or intermittent watercourses, ponds and other water features, rock outcrops, or individual features such as trees, erosion scars, steep slopes, stone piles, hedgerows, depressions or high points, etc.

Additional plan drawings may be necessary showing management units, buffer zones, land-use zones, etc., or details of smaller areas of the property to be managed such as various biotic associations within larger vegetation units.

Plan Review and Update

The land management plan should also indicate procedures for its own review and update. This is a two-tier process involving an annual review (a handy way of checking to see if action items have been completed *and* scheduling activities for the following year) and a five-year plan update (rewriting or updating appropriate sections of the plan). Updates may be required sooner if significant change occurs on or near the property. This could involve population declines in significant species, severe flooding or fire, sudden increase in invasive species, land expropriation or proposed major land development adjacent to the reserve.

Plan reviews and periodic updates are critical to reflect ongoing changes in the property itself, an evolving working knowledge of ecosystem management, as well as changes in our evolving social, economic or political environment.

Sources of Information

Finally, your plan should list sources of technical information, contact numbers, references, publications, web sites, etc. Miscellaneous information such as field notes, tax notices, expense forms, photographs, etc., can be included at the back of the plan or stored separately in a three-ring binder or multiple file folders for the property.

As noted previously, your plan need not contain all of the information listed above. At minimum it must document the planning process and contain a map of the property. Most land management plans only need to pertain to management issues or opportunities relevant to the property and the associated organization or its partners. It need not be a long document, but dynamic in nature, complete and concise.

Management plans will likely be necessary for complex properties with many partners. For example, the Nature Conservancy of Canada requires management plans as a condition for funding or other legal and administrative support. Even Type I properties indicated in Table 1 that require minimal management or passive stewardship will benefit from a simplified management plan.

6.3.3 Developing the Management Plan

The management plan should be sensitive to the local community, and involve local people who feel they have a stake in their community. This can be a good first step in realizing your objectives if, for example, vandalism is a problem. Local people will often ensure the project's success, particularly in the long term. Ironing out differences of opinion, such as use of the land for resource extraction, can be a delicate issue. Proceeding in a non-confrontational manner, visiting the site together and sharing information on the type and sensitivity of natural resources can instill mutual respect and result in a strong ally.

While a certain amount of give and take is expected, involvement in developing and implementing the management plan must be conditional on being consistent with the objectives or primary goals and policies of the organization as they pertain to the property. In most instances this will focus on the protection of natural heritage and the processes that sustain native biodiversity over time. For example, certain human access or resource extraction of any type such as logging must be strictly prohibited where the maintenance of natural conditions is warranted.

The conservation organization should guide the process for plan development, provide clear expectations and requirements, and promote timely completion. The organization must also then be responsible for implementing, reviewing and updating the plan.

6.4 Other Land-Management Issues and Opportunities

- ONTA Land Registry: see 6.2 above.

- Adjacent Land Securement:

This may be desirable where an ecological site extends beyond the boundaries of the secured property. If this is the case, discussion with the appropriate landowner(s) can begin early and in a manner that increases your likelihood of securing the adjacent property. Various legal options may be useful at this stage, such as donation, first right of refusal, reserved life estate, bargain sale or installment sale. These and other creative means to secure land are discussed in Part 2 of this manual and *in Creative Conservation* and *Islands of Green.*

- Taxes:

Currently, all land owned by land trusts should be included in the Conservation Land Tax Incentive Program (CLTIP), if not in categories 1-4, then in category 5, "other lands." This means these properties should be exempt from municipal taxes. The Ministry of Natural Resources began a review of the other conservation lands category in the spring of 1998. Until this review is completed only properties which qualified for the program in 1997 or properties which qualify under one of the other conservation land categories receive the property tax exemption.

Notwithstanding the above, you should not be paying taxes on wetland currently registered in the CLTIP. If you have these lands, you should check with your property assessment office, and ask for a copy of the portion of the assessment map that indicates the area of your property pertaining to CLTIP tax exemption. Keep this copy in your records.

There may be a need or desire to include managed forests under the Managed Forest Tax Incentive Program (MFTIP) as a companion to the main land-management plan. The MFTIP is administered by MNR and the Ontario Forestry Association (OFA). While CLTIP tax exemption overrides managed forest tax exemption (which assesses forested land at the standard farm property rate), you may benefit from going through the managed forest process. This may be advantageous if the CLTIP "other land" designation remains held up for some time and you stand to benefit from the tax relief of having a managed forest. Also, you might simply use the MFTIP as a guide to forest management. Standardized forms are provided. Otherwise, you can include forest management as a component of your main land-management plan.

- Fiscal Needs:

Common costs associated with real estate are startup costs, fixed costs, and carrying costs. Applied to land management, startup costs can include title searches, survey fees, legal costs, other real estate costs, and costs of preparing the management plan. Fixed costs exist no matter what you do with the property, and include mortgage payments or equivalent, and taxes. Carrying costs are usually variable in nature, and include such things as land or building maintenance, services, monitoring and other activities associated with implementing the management plan. An accountant will help the land trust organize these costs into a suitable financial plan. Remember, buildings can have substantial maintenance requirements, and may result in a higher property-tax assessment than if the land was vacant.

- Risk Management:

The membership standards of the Ontario Nature Trust Alliance refer specifically to liability and risk-management issues in the following numbered sections:

2. The Board of Directors or Trustees of each member group assumes legal responsibility and accountability for the affairs of their group, and manages their activities and risk responsibly and accountably.

8. Member groups shall consider the safety of visitors on lands they protect and ensure that all lands are appropriately insured.

The Ontario *Occupiers' Liability Act* imposes a positive duty on owners and occupiers of land to maintain a reasonably safe environment for visitors and other property users. As an owner and occupier of land, the land trust or conservation organization must have a risk-management program in place. Such a program is intended to identify and minimize the actual physical risks to visitors on the property, to document the measures taken to identify those hazards, and to provide insurance against those accidents that ultimately may not be prevented. This should be a formal policy including at least the following elements:

- a program of property inspection to inventory and identify hazards and to monitor use and problems on the property;
- formal reporting on the site inspections, recommendations for action, maintenance activities, accidents and liability claims if any;
- a program of risk mitigation through maintenance, repair and capital and program improvements; and
- property insurance.

The Ontario *Occupiers' Liability Act* also provides some relief to landowners and occupiers so that they will not be discouraged from permitting recreational use of their rural lands. Accordingly, the statute provides that recreational users of rural lands that have not paid an entrance fee are considered to have willingly assumed their own risk against normal hazards. However, out of an abundance of caution, the prudent landowner will manage the property according to a risk-management program as outlined above.

A more complete description of land-trust liability and risk-management issues is found in the Winter 1991, Vol. 10, No. 1 issue of *Exchange: Journal of the Land Trust Alliance.*

- Boundary Marking:

As a standard practice, the property boundary should be determined when the land is secured. It is then a simple matter of maintaining visual boundary cues. The use of visual markers such as permanent bars is recommended, but should be limited. In addition, stones or logs may serve as temporary or semi permanent reminders of the property line. Small bits of flagging tape may be useful, but these bright-coloured markers should be used sparingly, if at all.

It is highly recommended to meet adjacent property owner(s) and review the property boundary together on-site. Any encroachment issues may be discussed and resolved at that time, or at some other mutual convenient time.

Red dots - ten centimeters or four inches in diameter - posted in visible locations no more than fifty feet apart at a minimum of four to five feet off the ground indicate “no trespassing” under the provincial *Trespass to Property Act*. Yellow dots indicate that certain uses are permitted on the property provided you first contact the landowner. Care should be taken not to confuse these markings with standard forestry symbols in which yellow dots indicate a tree to cut, blue dots indicate a tree to retain, white dots indicate trails, etc., and red dots indicate the property boundary.

- Encroachment:

This can be a delicate issue, particularly when the encroachment is historic or done by a land donor. Encroachment may range from cutting grass and the storage of wood or machinery to the placement of buildings and other semi-permanent structures. Reducing or limiting the encroachment, phasing out the activity, or permitting certain uses should always be worked out by mutual agreement between the parties concerned. Agreement can be secured with a simple handshake possibly followed up by a friendly letter of understanding, particularly when the activity does not negatively affect the natural heritage values for which the land was secured. This type of cooperation can build mutual respect to address issues of greater consequence. Remember that your neighbour is a potential volunteer who can keep an eye on your property. Spending time with the person by walking the land together, listening to his or her position, explaining your needs, and reaching a mutual agreement is time well spent.

- Trail Development:

Visitors can have the biggest impact on your land. Limit the amount of trail exposure to significant areas or species, especially if they are sensitive to disturbance or prone to other prohibited activities, such as poaching. Trails may need to be closed at certain times of year, for example during nesting season, and appropriate measures taken to educate visitors as to why this is necessary.

- Technical Information (various topics from wildlife management to butternut canker):

First-hand information from local experts can be very valuable. A second or third opinion is advisable, especially when land managers are new to land-management practice. As noted above, land-management activities can have quite opposite effects from those intended, and nature is sometimes the best (and least expensive) manager of all. All land-management activities must be very carefully considered before action is taken. Follow up monitoring is imperative, and may call for additional management action. Consult several experts until you are satisfied with the proposed course of human action, or appropriate lack thereof.

Your local conservation authority or MNR office may provide some first-hand technical advice. Additionally, the Landowner Resource Center (LRC) has available more than 40 Extension Notes and sells publications on various land-management and land-stewardship topics. Among others, one popular publication is *Greening the Land: Principles, Guidelines & Cases*, published by the Centre for Land and Water Stewardship at the University of Guelph. A complete listing of products is available by calling the LRC in Manotick at 888-571-INFO or 613-692-2390, or visiting www3.sympatico.ca/lrc.

6.5 References and Other Sources of Information

<u>References</u>

Land Management Policies, Bruce Trail Association, Various document dates.

Petrel Point Nature Reserve Annotated Management Plan, Graham Bryan, Federation of Ontario Naturalists, 1996.

Creative Conservation, Stewart Hilts and Ron Reid, Federation of Ontario Naturalists,. 1993.

Island of Green, Stewart Hilts et. Al, Ontario Heritage Foundation, 1986.

A New Framework for Management Planning and Monitoring, Nature Conservancy Canada, June 1998.

Saving America's Countryside, Stokes, et. al. John Hopkins University Press, 1989.

Baseline Reporting for Natural Heritage Easements in Ontario, Jason Thorne, Ontario Heritage Foundation. 1997.

<u>Sources of Information</u>

Landowner Resource Centre. Web site: www3.sympatico.ca/lrc/.

Natural Heritage Information Centre. (705)755-2000 or 1-800-667-1940. Web site: www.mnr.gov.on.ca/MNR/nhic/nhic.html.

6.6 List of Appendices

See Appendices for the following sample agreements and report forms:

6A Nature Conservancy of Canada Standard Land Holding Agreement

6B Nature Conservancy of Canada Standard Custodianship Agreement

6C Nature Conservancy of Canada Property Monitoring Report Form