

A Guide to Stewardship Planning for Natural Areas

Second Edition 2006



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K9J 8M5

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Landowners preparing a plan for admission to the Ontario Managed Forest Tax Incentive Program

The Ontario Managed Forest Tax Incentive Program (MFTIP) offers a reduction in property taxes to landowners who are good stewards of their forested property. The framework for planning found in this guide, is used to prepare a Managed Forest Plan required for entrance into the MFTIP. Plans being prepared for entrance into the MFTIP must follow the requirements outlined in the *Ontario Managed Forest Tax Incentive Program (MFTIP) Guide* and be approved by a Managed Forest Plan Approver. You can obtain a copy of the MFTIP guide from the sources listed in Table 1 (page 6) of this guide.



The benefits of land stewardship

Land stewardship means caring for our land, air and water and sustaining the natural processes on which life depends.

Good land stewards know their actions affect the quality and health of plants, animals, air, land and water. What you do with your land today has an impact on your family, neighbours, and future generations. This guide will help you become a knowledgeable steward of the land. By taking care of the land now, you can help ensure that your property remains healthy into the future. It's up to you!

Why do I want a stewardship plan?


Do you see your property as a home for wildlife, a place for recreation, a source of income, or a combination of these and other values? A stewardship plan will help you fully realize the values that are important to you.

A stewardship plan considers all aspects of a property. Your plan will help you:

- learn more about your property
- determine objectives for your property
- plan and schedule activities
- ensure consistent long-term management direction

Some landowners use their plans to get funding or develop partnerships for land stewardship projects with conservation agencies. Other landowners, who are participating in one of the provincial programs that reduce property taxes for eligible rural land, use their plan to learn more about their property. Information on these programs can be found in Table 1 (see page 6).

Owners of eligible woodlands are offered tax relief under the Managed Forest Tax Incentive Program (MFTIP). Plans being prepared for the MFTIP must follow the requirements found in the *Ontario Managed Forest Tax Incentive Program Guide* and be approved by a Managed Forest Plan Approver. You can obtain a copy of the MFTIP guide from the sources listed in Table 1.



Landowners with recognized “provincially significant” conservation land are eligible for tax relief if they agree to protect the identified feature(s) on their property. Owners of these properties will find that a stewardship plan is helpful in learning more about what makes their property important.

Farm properties will also benefit from a stewardship plan for their natural areas. A growing number of farm families in Ontario have an Environmental Farm Plan. These plans are prepared voluntarily by farm families to raise their awareness of the environment on their farms. Farmers highlight environmental strengths on their farms, identify areas of environmental concern, and set realistic goals to improve environmental conditions. A stewardship plan complements this planning process by providing additional information about the natural areas on the farm.

How to prepare a stewardship plan

This guide provides a framework for creating a stewardship plan on rural properties. It uses a 20-year planning horizon and will help you develop a list of stewardship activities you can work on over the first 10 years of your plan. A plan can be prepared for any size of property. The complexity of the plan will increase with the size and diversity of the property.



Why a 20-year planning horizon?

Stewardship planning is long term. For example, forests can take generations to grow and mature. That's why a 20-year planning horizon is recommended. It will take at least 10 years for many projects to evolve and for you to be able to see the results of your efforts. It is a good idea to update your plan at least every 10 years.

You may want to involve your neighbours in stewardship planning. Since the natural features of the land do not necessarily follow property boundaries, neighbouring landowners who work together can have a more significant effect on the landscape. Plans made with neighbours are called community stewardship plans. Environmental programs sponsored by conservation agencies often promote multi-landowner planning and activities. General information on groups and agencies that provide stewardship related assistance to landowners is found in Table 2.

The guide contains pull-out forms for putting together your plan. Examples of the forms, filled out using an imaginary 75-acre property, have been used throughout the guide. Using these examples, along with the information sources that are listed in Section 11, will help you complete your plan. Some general management activities are listed in Section 8. A glossary of terms is found in Appendix 1.

Getting to know yourself as a landowner

There are many different reasons why people own property. Why do you own your property? Is it because you value its natural features — forests, wetlands, and wildlife? Discuss these values with your family. Their input may help you to determine the management objectives of your stewardship plan.

Make sure the objectives you set for your property are realistic. How much time can you expect to spend working on and enjoying your property? Are you willing to spend money on activities? Do you have the required expertise and equipment? Answers to these questions will help develop a sound stewardship plan.

Personal factors to consider when preparing your stewardship plan:

- Do you live on the property or do you have to travel to get there?
- How much time do you now spend actively working on the property? (Don't forget to include family and friends.)
- Is your health a factor in the kind of work you are able to do?
- How much money are you willing to spend on your management activities?
- Do you expect to earn any income from your property?
- Do you have the required expertise and equipment, or will you need the help of a resource management consultant?
- What are your long-term ownership plans for the property? (e.g., transfer it to the family or someone who will continue to care for it?)

Getting to know your land

Learn all you can about your property. Visit it in all seasons, observing and learning about its features and how they change throughout the year. Keep field notes of your observations in a diary. As you walk, start thinking about the different features that your property offers and their values to you.

Aerial photographs and topographic maps may be a helpful starting point. You may find it interesting to mark your observations on these maps to see how things are related. It is interesting to get historical aerial photographs and compare them to more recent ones to see how things have changed over time. Sources for maps and photos are listed in Section 11 (page 23).



Table 1. Provincial programs offering preferred property tax rates on rural land

The Managed Forest Tax Incentive Program (MFTIP)

The MFTIP offers a reduction in property taxes to landowners of forested land who prepare a plan and agree to be good stewards of their property. The Ontario Forestry Association and the Ontario Woodlot Association help the Ministry of Natural Resources (MNR) deliver the MFTIP. Program guides and information are available from either association. The MFTIP guide explains how to prepare a plan that is eligible for the program.

Qualifications:

- greater than 9.88 acres (four ha) of forested land and owned by a Canadian citizen or permanent resident
- a commitment to good stewardship
- a managed forest plan approved by a Managed Forest Plan Approver

For information on the MFTIP, contact:

Ontario Forestry Association

200 Consumer Road, #107

North York, ON M2J 4R4

Telephone: (416) 493-4565 or 1-800-387-0790

E-mail: MFTIP@oforest.on.ca

www.oforest.on.ca

Ontario Woodlot Association

R.R. #4 275 County Road 44

Kemptville, ON K0G 1J0

Telephone: (613) 258-0110 or 1-888-791-1103

E-mail: info@ont-woodlot-assoc.org

www.ont-woodlot-assoc.org

The Conservation Land Tax Incentive Program (CLTIP)

The CLTIP offers a reduction in property taxes to landowners who agree to protect the natural heritage feature(s) identified by MNR on their land. Activities that would degrade, destroy, or result in the loss of the natural values of the site are not allowed.

Eligible lands include:

- provincially significant wetlands
- provincially significant areas of natural and scientific interest (ANSI)
- habitat of endangered species
- lands designated as Escarpment Natural Area in the Niagara Escarpment Plan
- community conservation lands (applies only to eligible conservation agencies)

Qualifications:

- MNR has informed you that there is conservation land on your property
- a commitment to good land stewardship

For information on conservation lands call 1-800-268-8959 or check the blue pages in your telephone directory for your local MNR office. Visit the CLTIP website at **www.mnr.gov.on.ca/MNR/cltip**.

The Farmland Taxation Policy

Eligible farmland qualifies for a reduction in property taxes under this program.

Qualifications:

- property assessed as farmland and owned by a Canadian citizen or resident
- part of a farming business generating over \$7000 of gross farm income, as reported to CCRA for income tax purposes
- has a valid Farm Business Registration for the farm business operating on the land (unless one of the exemptions applies and is granted)

For information on the Farmland Taxation Policy call the Ministry of Agriculture and Food at: 1-800-469-2285 or email farmtax@omaf.gov.on.ca. Visit their Website at: **www.omaf.gov.on.ca**.

Table 2. Help for Ontario's private land stewards

There are many groups and agencies that provide information to landowners who want assistance with land stewardship. Most municipalities in southern Ontario have a stewardship council or are within a watershed covered by a conservation authority. Contact these organizations to see what opportunities are available for landowners in your area. In Northern Ontario, you could start with your local MNR office or contact some of the organizations listed in Section 11 (page 25).

Ontario Stewardship & Stewardship Councils

Ontario Stewardship helps people find information, expertise, and funding to ensure that good management occurs on private land. The program's strength lies in its 41 stewardship councils, which are volunteer groups of landowners and land interest agencies. Each stewardship council works with an MNR staff person known as a stewardship coordinator. Councils discuss, develop, and deliver local programs and projects.

Stewardship councils can help good ideas become great projects. Examples include: workshops on woodlot and wetland management; stream restoration projects; endangered species conservation, and; community tree planting. For information on Ontario Stewardship, visit the web site at: **www.ontariostewardship.org** or check the blue pages in your telephone directory for your local MNR office.

Ontario's Eastern Habitat Joint Venture Program

Partner agencies of the EHJV program; Ducks Unlimited Canada, Wildlife Habitat Canada and the Nature Conservancy of Canada (see contact information on page 30) help landowners protect significant wildlife habitats such as wetlands on their property. The EHJV helps landowners deliver bird conservation through projects aimed at implementing the North American Waterfowl Management Plan and the North American Bird Conservation Initiative. Voluntary participation in the EHJV helps landowners contribute towards conserving the continent's bird species relying on our wetlands and associated habitats. Almost 3,000 landowners in Ontario have participated in this long-standing program of which MNR is an integral partner.

Conservation Ontario

Conservation Ontario is a network of 36 conservation authorities in Ontario. These authorities are community-based environmental organizations dedicated to conserving, restoring, developing, and managing natural resources for watersheds. Healthy forests contribute to healthy water. Some of Ontario's most significant forests are owned by conservation authorities and managed for sustainable benefits to the local community and its environment — especially its wetlands, watercourses, and groundwater. One way to increase the benefits of forests is to plant more trees. Your property may be eligible for tree planting or other private land forestry programs. Programs vary according to local priorities. Contact your local conservation authority to find out how their staff can help you on your property. For information, visit the Conservation Ontario website at **www.conservation-ontario.on.ca**, or check your local telephone directory.

Other organizations and consultants

Many organizations that offer assistance to landowners have central offices reachable through toll-free numbers or websites (Section 11, page 25). Some have extension services that can provide you with assistance, while others have lists of resource management consultants who are available, for a fee, to come to your property. Consultants have different specialties such as wildlife, wetlands, or forest management. Landowners planning forest management operations, such as tree harvesting, who want a guarantee of professional standards, should hire a Registered Professional Forester (RPF) or an Associate.

Your local municipality

It is a good idea to contact your local municipality when you prepare your stewardship plan. Some municipalities have park plans, greening strategies and policies in their official plan to promote private land stewardship. Your municipality will also be able to provide you with information on bylaws and zoning that may influence activities on your property.

Preparing y

You are now ready to p
your property. Read th

When you have finished your plan, you will have a list of activities that you can undertake to help you realize your land stewardship objectives.

This section of your stewardship plan lists the names of the registered owners of the property, along with details of how they can be reached. If the plan is being prepared for several landowners, list the name of the contact person and record all the owners on a separate piece of paper. If someone prepared the plan for you, you can include contact information in Section 1.2.

2.1 Property location

It is a good idea to check with the Ministry of Natural Resources (MNR), the local conservation authority (CA), and your municipal government about legislation and policies that may affect your property. These could include tree-cutting or zoning bylaws, fill control regulations, environmental protection zones, and conservation land designations.

Federal legislation, such as the Fisheries Act, may have implications for some properties. Any legislation or policy that may have implications for your stewardship plan should be noted in Section 2.2.

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Section 3: Property history

This section of the plan provides an opportunity for you to tell the story of your property.

3.1 Past activities

The history of the land and the past development of the property are important in planning future activities. It is a good idea to provide a record of the past activities that are relevant to your stewardship plan. You may want to include things such as the names of the previous owners, whether a survey exists, details regarding any boundary disputes, and past forestry, wildlife or agricultural activities.

You can also record historical facts that might otherwise be lost (e.g., location of old building

foundations, dug wells, and the remains of stone fences). Are you aware of any archaeological or historic features on the property?

Some questions you may want to consider:

- Has there been any involvement with special programs or projects that deal with the management of the property?
- Do you allow other people to use your property for recreation or other purposes?
- Are there any agreements relating to rights-of-way or conservation easements on the property?

Certain activities could affect the type of management the current or future owners may undertake.

3.2 The surrounding landscape

Your property is part of a much larger landscape and watershed. What you do may affect your neighbours.

- Part of your property may be a wetland that extends beyond the boundary of your land. Changing the wetland could have an impact on the quality and quantity of water.
- A shaded stream may provide excellent habitat for cold water fisheries. If the shade trees are removed, or if the stream is blocked, the stream may no longer provide suitable habitat.
- A cedar forest on your property may be part of a large deer yard. Activities in this area may affect the entire yard and the number of deer it can support.
- If your woodland is part of a much larger forest, it may provide interior forest habitat that is important for certain bird species.
- Your efforts to attract wildlife to your property may also affect the number of wildlife on your neighbour's property. If the increase in wildlife is large, it may create problems, especially if there are working farms nearby.

Section 3: Property history

3.1 Past activities We purchased the property in 1957 from Mr. and Mrs. Smith and we had the property surveyed. Up until that time, the Smiths had been grazing cattle in the open fields. In 1960 we planted a portion of these fields with red pine under WIA agreement 21-123 (F-3). The remainder of the open area is still used for cattle.

We cut around ten cords of firewood each year from the mixed hardwood area to heat our home. Some years we cut more and sell it. We started tapping the hard maple trees in the northwest corner of the property in 1970. We produce enough syrup for our own use and for friends.

There is a two acre wetland that extends into the neighbouring property. Until now, our cattle have drunk water from the wetland. Our neighbour also waters his cattle from the wetland. We have removed beaver dams a couple of times when the water levels started flooding the neighbour's land.

We have been developing trails through the property. The trails are used for walking, skiing, and snowmobiling. The trails join the neighbour's trails and go to the abandoned rail line, giving us access to other trails in the county. This is a good arrangement because it gives our family, and the neighbours access to more trails.

3.2 The surrounding landscape The wetland on our property extends to the south onto other properties. It recharges the wells in the immediate area. In years when neighbours had low water levels in their wells, those of us near the wetland were fine. The wetland drains across our property through a seasonal stream. We enjoy watching the different wildlife in the wetland areas. Usually, two to four pairs of mallards nest in our woodlot adjacent to the pond.

Most of the area surrounding our property was once farmland. It was difficult to farm and is now regenerating to mixed hardwoods. Some of the better land has been kept in hay and pasture. Some fields are still bordered by trees. Two lots to the west of our property, the forest changes to mostly coniferous trees. This is where the deer that spend summers on our property spend the winter.

Section 4: Property map and the surrounding area

A general map of your property and the surrounding area will help you organize your plan. The map should provide an overview of your property and show its relationship to the surrounding areas. Make sure that it separates upland and lowland, or dry and wet areas.

This map should show the features you listed in Section 3.2. The following information should be included:

- physical features such as: property boundaries, roads, fences or buildings on your property and surrounding lands
- natural features within your property, such as: ponds and streams, upland and wetland areas — both wooded and open, wet and dry
- landscape features such as: lakes, wetlands, open areas or forests that extend beyond your property

It should be drawn to scale. Include a north directional arrow and a legend that describes the symbols used. It is helpful to include road names and lot and concession boundaries. You may find it useful to use an aerial photo, topographic map, an Ontario Base Map, or a Forest Resource Inventory map as a template.

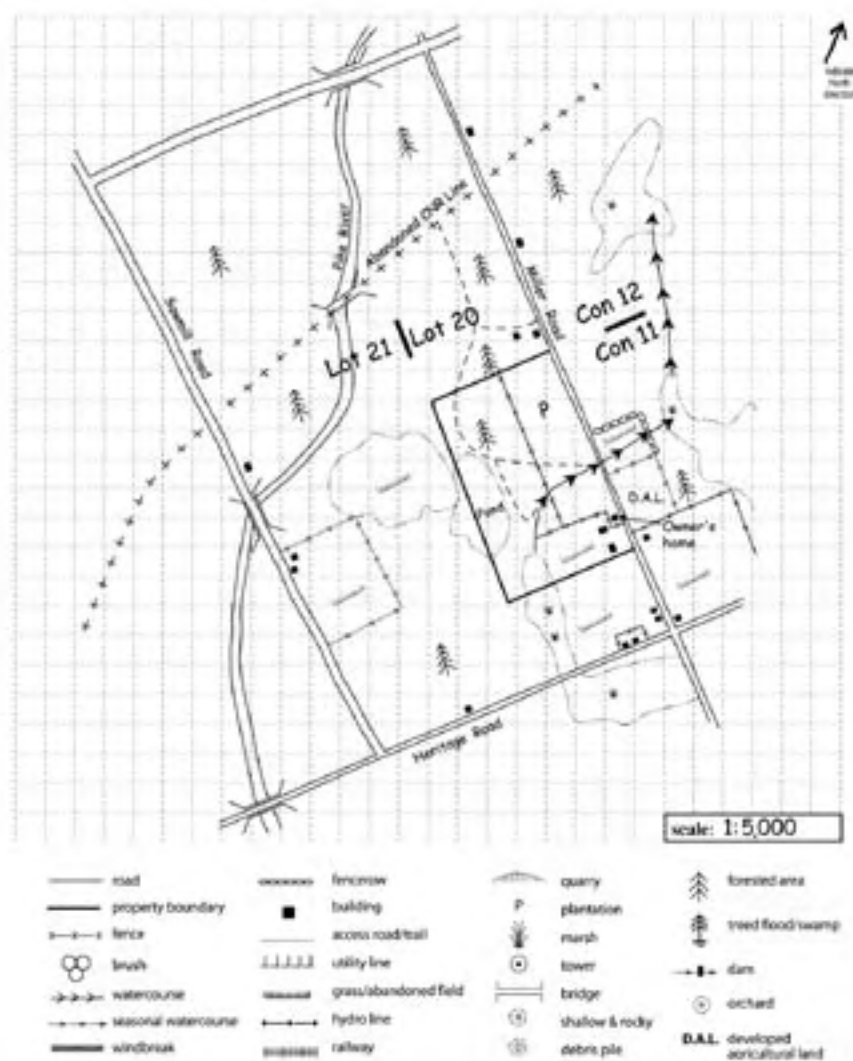



What is a wetland?

A wetland is quite simply that — wet land! Wetlands are covered with water long enough to cause the soils to become waterlogged and to allow growth of plants that like water. Wetlands occur in areas where the water table is at or near the surface, in low-lying open or wooded areas, or along lakes and rivers. Many wetlands are permanently flooded, while others are only periodically flooded. Establishing the boundary of the wetland is not easy and requires information on wetland vegetation and water levels. For your stewardship plan, estimate boundaries using presence of water loving plants and spring water levels. In Section 7, you will collect information to help you describe your wetland.

Section 4: Property map and the surrounding area

This map should provide an overview of your property and show its relationship to adjacent areas.





What is scale?

Scale is the relationship between the size of a map and the area it represents on the ground. For example 1:10,000 means that one unit of measure on the map equals 10,000 units on the ground (1 cm = 10,000 cm or 100 m). A scale of 1 cm = 100 m means that one cm on the map equals 100 m on the ground.

The scale of a map can vary to suit the size of the property and the detail you require. If your property is less than 50 acres, a scale of 1:2,000 may be appropriate; if your property is larger, a smaller scale such as 1:10,000 may be more appropriate.

Section 5: Landowner objectives

Within the overall goal of maintaining a healthy environment, there are a variety of objectives that landowners may have for their property. The following questions are designed to help you clarify your values and set specific objectives.

Is protecting and nurturing the environment important?

- Are you concerned about water quality and quantity?
- Are you interested in protecting or restoring streams, wetlands or natural areas?
- Are there rare species on your property that you would like to protect?
- Are there any special places you would like to protect (e.g., grove of old-growth pine)?
- Do you want the natural features of your property to be conserved by future landowners?

Is recreation important to you and your family?

Do you enjoy:

- hiking or walking?
- cross-country skiing or snowshoeing?
- hunting, trapping or fishing?
- wildlife viewing and nature appreciation?
- harvesting edible products (e.g., berries, mushrooms, leeks)?

Is wildlife important to you?

- Does your property provide important habitat for wildlife?
- Does anyone hunt or trap on your property?
- Do you feed birds or other wildlife?
- Are there any unique species present on your property that you would like to maintain or protect?


Is the production of forest products important?

- Which forest products do you want to produce (e.g., timber, firewood, maple syrup, Christmas trees)?
- Will you use the forest products or sell them?
- If they are for your own use, what are your needs (e.g., cords of firewood per year, board feet of lumber)?
- Are you willing to invest time in improving your forest to increase the value of your trees?
- Would you like to plant some of your open land to produce forest products in the future?

You may have different objectives for different parts of your property. For example, the main objective for your wetland areas may be environmental protection. The main objective for your mixed hardwood forests could be to produce high-quality wood products, such as timber.

Some objectives complement each other and can be attained at the same time in the same area. For example, an objective for a pine plantation may be to produce wood products and improve wildlife habitat. An activity such as thinning will help meet both objectives. Thinning will generate wood products and revenue. It will allow for more light and will encourage the regeneration of other species of trees. The result — a more diverse forest that is better for wildlife.

Some objectives are not compatible. For example, harvesting mature oak trees from a woodlot may decrease the number of acorns available to feed deer and wild turkeys. In this case, revenue generation and wildlife management might not be compatible without some compromise. A resource management consultant can help ensure that your objectives are compatible.



When setting your objectives, try to work with the characteristics of the property. Fighting nature is usually a losing battle. If your wooded area is a swamp, it is not a good idea to try and drain it to create a drier forest type. If the soils in an open area are very shallow or poor, your efforts to plant trees will probably not be very successful. Be realistic and work with what you have!


5.1 Your general objectives

This checklist is designed to help you decide which objectives are important to you. There is room to fill in objectives that are not provided on the list. If some objectives are more important than others, you can rank them in order of their importance. Don't forget that these are overall property objectives. Later on in the plan you can assign specific objectives to specific areas of the property.

In the example, the owners have indicated that environmental protection, forest products, recreation, wildlife, and nature appreciation are priorities. However, they ranked environmental protection as most important. Establishing priorities will help make future decisions easier.

5.2 Details about your property level objectives

In your own words, explain why each of the objectives is important. This will help you think them through. In the example, the owners' focus is on environmental protection. They want to be sure their children and grandchildren will be able to benefit from the beauty of their property.



Their second-level priorities are recreation and wildlife. They would like to continue to provide outdoor recreational opportunities for themselves and their friends. As avid hunters, attracting wildlife, primarily white-tailed deer, is important. Producing forest products will contribute to the household budget.

5.3 How will you achieve your objectives?

Use this area to describe how you will accomplish your objectives. If you lack time or other resources to reach your objectives, you may want to reconsider your options. The questions in the section "Getting to know yourself as a landowner", on page 5, can help you determine if you are on the right track.

In the example, the owners plan on contacting the Ontario Land Trust Alliance to discuss conservation easements and estate planning options. They indicate that they have most of the equipment they need to carry out their planned activities. However, they need some information about protecting their wetland. They plan on attending workshops offered by their local stewardship council and will talk with an expert at the

Section 5: Landowner objectives

5.1 Your general objectives

For the next 20 years, indicate how important the objective is to you. Rank only those which apply to you.

| Management objective | How important is the objective to you? | | | | |
|--------------------------|--|---|---|---|----------------|
| | Less important | | | | More important |
| Environmental protection | 1 | 2 | 3 | 4 | ⑤ |
| Forest products | 1 | 2 | ③ | 4 | 5 |
| Investment | ① | 2 | 3 | 4 | 5 |
| Recreation | 1 | 2 | 3 | ④ | 5 |
| Wildlife | 1 | 2 | 3 | ④ | 5 |
| Nature appreciation | 1 | 2 | ③ | 4 | 5 |
| | 1 | 2 | 3 | 4 | 5 |

5.2 Details about your property level objectives

In your own words, explain why each of the objectives is important.

Environmental protection We feel that it is very important that we protect the natural and environment on our property. If we keep it healthy, our children and their grandchildren will also be able to enjoy it.

Forest products We would like to improve the quality of the hardwood forests. The trees we remove are used to heat our home, reducing our overall living costs. We would like to continue producing maple syrup.

Investment Although we expect the property to increase in value over time, it is really not one of our objectives.

Recreation All of our family enjoy the outdoors. Our children spend a lot of time cross-country skiing and snowmobiling.

Wildlife We would like to improve the wildlife habitat that is present on the property. This will increase our hunting opportunities.

Nature appreciation We enjoy the variety of plants and wildlife. The duck families that develop over the summer in the wetland are fun to watch.

Other

5.3 How will you achieve your objectives?

The Ontario Land Trust Alliance has information on conservation easements and estate planning options. The family is willing to help with the work on the property. We have most of the equipment that is needed to carry out our planned activities (chainsaws, maple syrup equipment, and tractor). We will require some information about protecting the wetland and keeping the cattle out. Our local stewardship council has workshops on this type of thing and the conservation authority has an expert on staff. There are plenty of reference books at the library and book store. In a couple of years we will hire a forestry consultant to take a look at the maple syrup operation to make sure we are on the right track.

conservation authority. They will also visit their local library and book store to obtain general reference material for their property. A forestry consultant will be brought in to discuss their maple syrup operation.



Section 6: Detailed property map

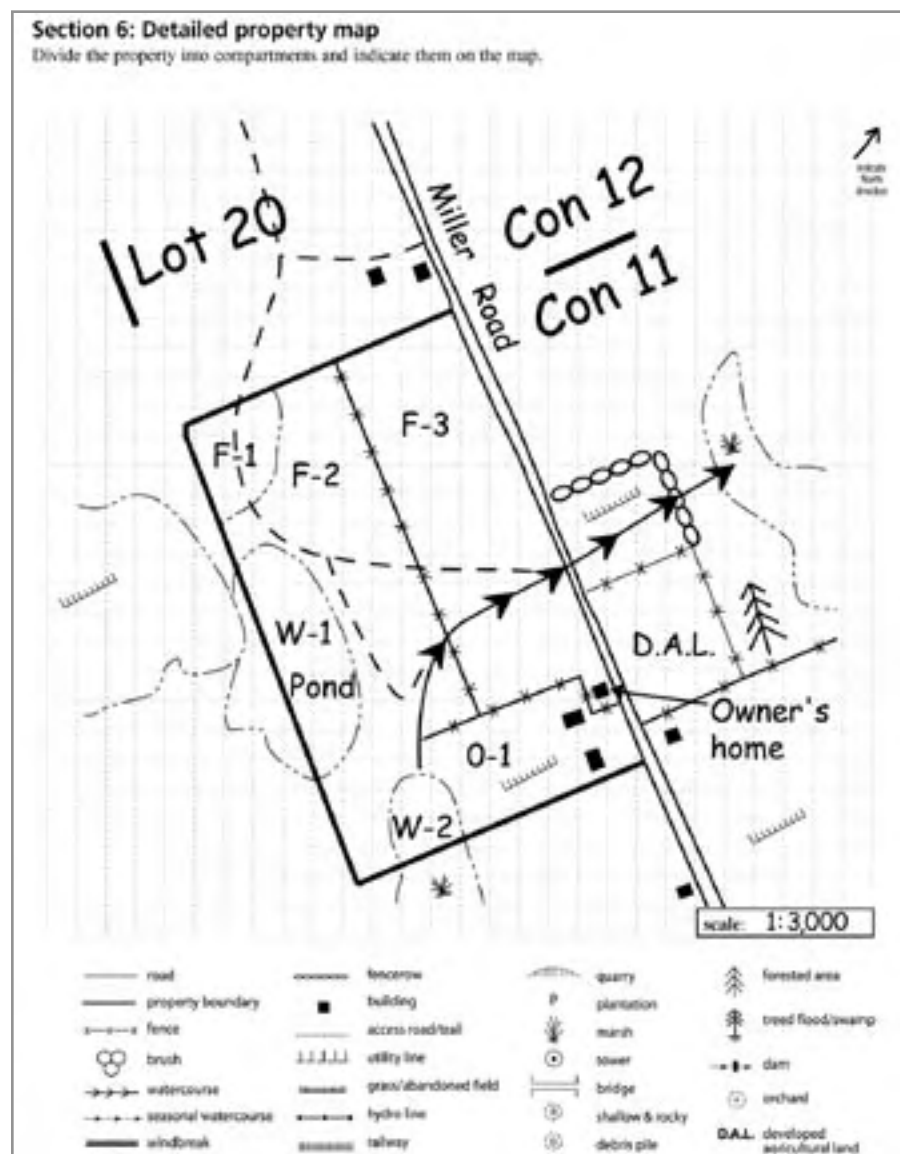
This map may be a more detailed version of your first property map in Section 4. If your property is small, you may be able to combine these two maps. The important thing for management purposes is that areas with different characteristics are treated as separate areas. These are called compartments.

A compartment should have similar vegetation, topography, and soils. Compartments should be uniform in species composition, condition, and age so they can be distinguished from adjacent compartments. They should be easy to identify on the ground as well as on a map. Using natural boundaries such as streams, ridges, roads, fences, and fields is especially helpful.

The size of your compartments will depend on the character of your property, as well as your objectives. For example, if you are managing a portion of a large hardwood forest as a sugar bush, the management activities in this portion of the hardwood forest would be different from those in the remainder of the forest. If you are managing for deer in a large and diverse area, you may want to base your compartments on the seasonal requirements of the deer.

On smaller properties, compartments can be as little as 2.47 acres (1 ha). On larger properties, with large areas of continuous forest cover, they can be as big as 100 acres (40 ha).

When you prepared the map in Section 4, you identified upland and lowland or dry and wet areas. In this more detailed map, you should divide these broad classifications into the cover types described on pages 14 and 15. The inventory forms found in Section 7 will help you determine which cover type applies to your compartment.



Upland cover types

There are five main types of uplands that should be considered when preparing your stewardship plan: deciduous forests, coniferous forests, mixed forests, plantations, and open areas. The information you collect in Section 7 and the diagrams below will help you determine what type of upland(s) you may have. Page 16 has a discussion of open areas.

Deciduous forests: trees originating from natural regeneration; at least 75% of trees are deciduous species (e.g., maple and birch trees).



Coniferous forests: trees originating from natural regeneration; at least 75% of trees are coniferous species (e.g., pine and spruce trees).

Mixed forests: trees originating from natural regeneration; at least 25% of the trees are deciduous and at least 25% are coniferous species.



Plantations: trees are planted; they can be deciduous, coniferous, or mixed (as defined above).

Wetland cover types

There are four main types of recognized wetland in Ontario: marshes, swamps, fens and bogs. The information you collect in Section 7 and the diagrams below will help you to determine what type of wetland(s) you may have.



← **Marshes:** common throughout southern Ontario; periodically or permanently flooded with water; vegetation is mostly emergent non-woody plants (cattails, rushes, reeds, grasses, sedges); in open water, floating-leafed plants (water lilies) and submerged plants (coontail, pondweeds) are common; in drier areas, low shrubs (sweetgale, red osier dogwood, winterberry) may occur.


Swamps: most diverse type of wetland in Ontario; wooded wetlands, often flooded in spring and without surface water later in summer; dominated by trees and shrubs, coniferous trees (white cedar, tamarack, black spruce), deciduous trees (silver maple, red maple, black ash) and tall shrubs (willow, dogwood, alder).



← **Bogs:** very rare in southern Ontario, common in Northern Ontario; peat-filled depressions; main source of water is rainfall, little surface runoff or groundwater from surrounding soils, strongly acidic; usually covered with a carpet of sphagnum mosses, some sedges, low shrubs of heath family (cranberries, blueberries); if trees present, usually black spruce and some tamarack.

Fens: rare in southern Ontario, common in Northern Ontario; peatlands located in areas where groundwater discharges to surface; vegetation mostly sedges and/or mosses, some grasses, reeds and low shrubs; less acidic than bogs; if trees present, they are usually stunted, scattered tamarack or white cedar; more plant species than in bogs.





As with the general map in Section 4, the detailed map should be drawn to scale. Include a north directional arrow and a legend. Features, such as roads, trails, streams, ponds, buildings, and others that may be important to the management of your land, should be included on the map. Don't forget to include rights-of-way and easements; their location may have an impact on your activities.

Each compartment should be numbered or named and labeled on the map. In the example, the letter W indicates the wetland compartments, the forested compartments are marked by the letter F, and the open area compartments are identified by the letter O. You can follow this example or create your own labeling system. It is important to calculate each compartment's area in acres or hectares to help estimate how much work is to be done.




Open areas are important

Some properties have areas that are not forested and are not wetlands. These are called open areas and they increase the diversity of the property.

They often have:

- a mix of annual and perennial herbaceous plants and grasses
- scattered trees
- a wide variety of shrubs

Open areas may include active or abandoned agricultural fields, hydro rights-of-way and shallow rock knobs. Ontario also has unique open area ecosystems such as shallow limestone alvars, native grass prairies and sparsely treed savannahs.



Depending on your management objectives and the characteristics of the open areas, you may want to differentiate between them. Often the reason for separating them is because of their use. For example, a field that you plan to keep as pasture should be a separate compartment from a field where you will be planting trees.

Section 7: "Getting to know..." more about the values of your property

This portion of the plan is where you get to know your property. Forms have been provided to help you describe both the upland and wetland compartments on your property. You will want to copy and fill out a separate form for each compartment you mapped in Section 6. The forms provide a step-by-step process to help you fit the compartment into one of the broad cover types described in Section 6. By determining the cover type, you will be able to get more specific information to help you manage your property.

With your objectives in mind, you can visit each compartment to collect information to help you make decisions. The forms will assist you with this task. Good information will lead to good decisions.



Extensive or limited forest cover?

In municipalities with less than 30 per cent forest cover, planting trees to increase or link forest areas would be a good idea. In municipalities with high forest cover, abandoned agricultural fields and other open areas play an important part in providing habitat diversity. Consider maintaining them as open areas.

If you are planning a harvest or other intensive forest management activity, a detailed forest inventory is recommended. For each forested compartment where the activity is planned, you will need to know the size, age, density and volume of your trees. In Appendix 2, an Enhanced Forest Inventory and Harvest Plan form is provided. You should contact a Registered Professional Forester to help you complete this portion of your plan, as some of the information is quite technical.

Once you have collected the information, each compartment should be evaluated for its potential to achieve your property level objectives. For example, if you would like to produce high-quality timber, are the trees in the compartment the right species, quality, age, and condition? This will help you to choose the best areas to concentrate your efforts.

Once objectives and priorities are set for each compartment, you can schedule work, keep records, and measure accomplishments. For illustration purposes F-2 — mixed hardwood bush — is used as an example of an upland compartment, and W-2 — the marsh — is used as an example of a wetland compartment.

Getting to know your upland areas

7.1 Upland compartment name or number

Space is provided to identify the individual compartment and to record its size.

7.2 Upland compartment characteristics

The form will help you describe the following general characteristics of each compartment:

- soils characteristics
- compartment topography
- accessibility to the area

7.3 Upland compartment history

Describe the management activities that have taken place in the compartment. For example:

- If trees were planted, list information such as the year, number, and type of trees.
- If trees were harvested, list information such as the date of harvest, the silvicultural system used and the results of the harvest.
- If there have been activities, such as restoring wildlife habitat, or if the compartment is used in any wildlife monitoring programs, list the results.

7.4 Upland inventory

If trees dominate the compartment, complete the forest description. If the compartment has few trees, complete the open area description. Both types of compartments are important when preparing a stewardship plan.

Forested compartment

description: If you are unsure of how to collect information on your forested areas, Section 11 (page 24) provides some useful references explaining how to prepare a forest inventory. Walk through the forested compartment and note the species of trees. A tree field guide may be helpful. Take a look at the forest floor. Indicate the amount of woody debris, the diversity of understory plants, and the quantity of tree regeneration. Now look at the trees. What is their age and size? Are they all the same size or do they vary? It is difficult to estimate the age of a forest, but it is fairly easy to see if the trees are generally young or older growth.

Section 7: Getting to know your upland areas
(Fill out a separate form for each upland compartment)

7.1 Compartment number/name F-2 Mixed hardwood bush **Area** 35 acres ha


7.2 Compartment characteristics

| | | | |
|------------------|---|-------------------------------|---|
| Soil type | light (generally sand) | Soil depth | very shallow (less than 15 cm) |
| | <input checked="" type="checkbox"/> medium (generally loam) | | shallow (between 15 and 30 cm) |
| | heavy (generally clay) | | <input checked="" type="checkbox"/> moderate to deep (greater than 30 cm) |
| Stony | yes <input checked="" type="checkbox"/> no | Topography | flat <input checked="" type="checkbox"/> gently rolling <input checked="" type="checkbox"/> steep |
| Drainage | <input checked="" type="checkbox"/> well drained | Accessibility | <input checked="" type="checkbox"/> year-round <input checked="" type="checkbox"/> seasonal |
| | moderate | Additional information | |
| | poor | | |

7.3 Compartment history This has been a mixed bush as long as anyone can remember. We have been harvesting poor-quality trees for fuelwood from this area since we bought the property. Not much cutting was done before that time. There is a well-developed trail system.

7.4 Inventory If the compartment is dominated by trees, complete the Forested Compartment Description (below). If the compartment has few trees, complete the Open Area description (below).

| | | | |
|--|--|------------------------------|--|
| Forested compartment description | | Open area description | |
| Much woody debris on forest floor | <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no | Agricultural areas | pasture cropland |
| Good diversity of understory plants | <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no | Other areas | old field exposed rock hydro- or pipeline corridor shallow limestone alluvial native grass prairie sparsely treed savannah |
| Signs of grazing or other disturbance | <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no | | |
| Good regeneration of seedlings/saplings | <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no | | |
| Trees generally younger | <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no | | |
| Trees generally older growth | <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no | Other features | Such as small open areas small rock knobs/ barrens <input checked="" type="checkbox"/> fencerows small wet areas beaver floods pond, stream lake |
| Trees generally the same age | <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no | | |
| Trees of all sizes and ages | <input checked="" type="checkbox"/> yes <input checked="" type="checkbox"/> no | | |
| Tree species found | Percent | Other | Fencerow along south edge; mainly Manitoba maple + wild apple. Patches of wild leek and trillium (both red and white) |
| Species red maple | 40 % | | |
| Species hard maple | 20 % | | |
| Species white ash | 20 % | | |
| Species basswood | 10 % | | |
| Species white pine | 10 % | | |
| Species | % | | |
| | 100 % | | |
| Estimated height of trees | 65 ft m | | |
| Average diameter at breast height | 18 in cm | | |
| Estimated age of majority of trees | 100 yrs | | |
| General cover type determination: | | | |
| coniferous forest | <input checked="" type="checkbox"/> deciduous forest | mixed forest | |
| coniferous plantation | deciduous plantation | mixed plantation | |

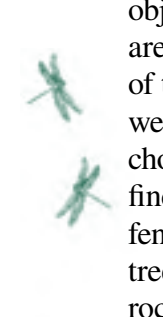


List the most common species and the percentage composition of each one. Only species that make up at least 10 per cent of the forest canopy should be listed. Estimate the percentage to the nearest 10 per cent; the total of all species listed should be 100 per cent. If there are scattered individuals of other species (making up less than 10 per cent of the canopy), they can be listed in brackets at the bottom of the list.

Estimate the height of the tallest trees in the compartment. Measure the diameter of 10 to 15 trees and calculate the average. The diameters should be measured at breast height, which is 1.3 m above the ground. If the trees are of all sizes, give a range of measurements.

To determine the general forest cover type, compare the species composition to the information and figures found in Section 6 (page 14). If you are interested in managing your forests more intensively, and would like to further classify your forest, refer to the Ecological Land Classification (ELC) for Ontario. Section 11 (page 24) provides the source for the ELC series.

Open area description: Land with few trees or open areas plays an important role in the natural environment. The form will help you describe the nature and characteristics of the open compartments on the property. Broad classifications of agricultural and non-agricultural land are provided.



Other features: Identify other features that may be relevant to your objectives. These may include small areas that are different from the rest of the compartment (e.g., a small wetland in a forested area). You may choose to identify other features you find interesting. These could include fencerows, scenic vistas, or unique trees. Special cultural features such as rock fences, old building foundations, or dug wells may also be noted.

7.5 Upland wildlife

The detail you provide about wildlife and their habitat will depend on your objectives. It will take many years of observation to have a good knowledge of the wildlife found on your property. However, you can learn a lot from a few visits at different times of the year. List all the species you have seen, heard or detected on your property. Good wildlife and bird field guides will be helpful.

The wildlife section on the upland and wetland forms will help you collect a general wildlife inventory. In compartments that you are managing mainly for wildlife, or in compartments with unique habitats or

Upland areas: continued...

7.5 Wildlife If you are interested in the wildlife in this compartment, fill in the table below. If you are managing this compartment specifically for wildlife, or if the compartment contains unique habitat or species, you may want to use the form in Appendix 2 - Getting to Know the Wildlife, which allows for a more detailed inventory.

List the species that you have observed or have seen signs of (e.g., white-tailed deer - tracks often seen along the edge of creek). Make sure that you note any vulnerable, threatened, or endangered species.

| Species | Observation |
|----------------------------|--|
| 1. white-tailed deer | -in fall, along old fencerow, they eat the apples from the apple trees in the fencerow |
| 2. red-tailed hawk | -nest in large basswood tree; have used same nest for last two years |
| 3. squirrels and chipmunks | -numerous |
| 4. raccoons | -have nested in cavity of large white pine in the past; no signs of activity this year |
| 5. variety of songbirds | -variety is much greater in the spring during maple syrup tapping time |
| 6. grouse | -feed on the ironwood seed |
| 7. | |
| 8. | |
| 9. | |
| 10. | |

7.6 Compartment Objectives

Long-term objectives (What do you want this compartment to be like in 20 years?)

Keep a variety of species growing in the woodlot. We only remove the really poor-quality trees. In the long term we would like to do a commercial harvest. We will consult with a professional forester to see if a cut is possible. Leave some of the larger, declining trees to provide homes for wildlife. Retain the large white pine - they are important to the wildlife.

Short-term activities (What activities, if any, do you have planned in this compartment over the next 10 years that will help reach your long-term objectives?)

Maintain the access trail for removal of fuelwood and recreational use. Cut using crop tree selection method (described in Extension Note). We will cut around 10 cords a year.

Conservation land designation

Eligible for Conservation Land Tax Incentive Program? ☐ yes ☒ no ☐ don't know

Type of conservation land

☐ Provincially significant wetland

☐ Habitat of endangered species

☐ Community conservation lands

☐ Provincially significant area of natural and scientific interest (ANSI)

☐ Escarpment natural area in the Niagara Escarpment Plan

Other information

species, you may want to use the Getting to Know the Wildlife form at the back of this guide (Appendix 2).

Make sure you note any vulnerable, threatened, or endangered species. This will provide a warning to conduct activities in the compartment with care or, perhaps, not at all. An up-to-date listing of these species can be found on the Royal Ontario Museum web site listed in Section 11 (page 25).

In the example, the owner chose to fill out the general wildlife inventory for F-2, where the objectives are primarily fuelwood production. They used the Getting to Know the Wildlife form for W-2, where the main objectives are environmental protection and wildlife habitat.

7.6 Upland objectives

Long-term objectives: Describe what you want this compartment to be like in 20 years.

Short-term activities: List the activities that will be carried out in this compartment in the next 10 years to help reach the long-term objectives.

Conservation land designation: Conservation land is identified by the Ministry of Natural Resources as eligible for the Conservation Land Tax Incentive Program (CLTIP) (see Table 1, page 6). Does all or part of this compartment qualify for the CLTIP? Details regarding any Ministry of Natural Resources conservation land designation(s) within the compartment can be described here.

Getting to know your wetland areas

7.1 Wetland compartment name or number

Space is provided to identify the individual compartment and to record its size.

7.2 Wetland compartment characteristics

Check the characteristics of the soil and water features of your wetland.

7.3 Wetland compartment history

Describe the management activities that have taken place in the compartment in the past. The form will help you describe the water patterns in the wetland. You may have to visit the wetland numerous times, particularly in the spring and in the late summer. Take a look at the entire wetland. What is the average depth of water? Is the water level up or down from previous years? Does the wetland have a name?

Section 7: Getting to know your wetland areas
(Fill out a separate form for each wetland compartment)

7.1 Compartment number/name W-2 Marsh **Area** 4 acres ha

7.2 Compartment characteristics

| | | | | | | |
|------------------|--|-----------------------------|--|----------------------|--|---|
| Soil type | <input checked="" type="checkbox"/> muck <input type="checkbox"/> peat <input type="checkbox"/> silt <input type="checkbox"/> marl <input type="checkbox"/> sand | Main source of water | <input type="checkbox"/> spring <input type="checkbox"/> tile drain <input type="checkbox"/> snow melt <input type="checkbox"/> other | Accessibility | <input checked="" type="checkbox"/> creek <input type="checkbox"/> runoff <input type="checkbox"/> natural pond / lake <input type="checkbox"/> groundwater seepage | year-round <input type="checkbox"/> seasonal <input type="checkbox"/> |
|------------------|--|-----------------------------|--|----------------------|--|---|

7.3 Compartment history

| | | |
|---|--|---|
| <input checked="" type="checkbox"/> flooded year-round <input type="checkbox"/> flooded spring only <input type="checkbox"/> dries mid-summer | <input type="checkbox"/> man-made impoundment <input type="checkbox"/> beaver impoundment <input type="checkbox"/> water at or near ground level | Wetland has been evaluated by OMNR Average yearly water level |
|---|--|---|

Additional information

7.4 Inventory If trees and shrubs cover more than 25% of the compartment area, complete the left side of the form (below). If less than 25% of the compartment area is covered by trees or shrubs, complete the right side of the form (below).

| | |
|--|--|
| Trees or shrubs cover more than 25% | Trees or shrubs cover less than 25% |
| Most trees are dead <input type="checkbox"/> yes <input type="checkbox"/> no | <input type="checkbox"/> no open water <input type="checkbox"/> some open water |
| Mostly shrubs <input type="checkbox"/> yes <input type="checkbox"/> no | Vegetation is <input checked="" type="checkbox"/> emergent <input type="checkbox"/> submergent <input type="checkbox"/> floating |
| Good diversity of understory plants <input type="checkbox"/> yes <input type="checkbox"/> no | Composed of <input checked="" type="checkbox"/> mostly cattails, rushes, reeds, grasses, and sedges |
| Signs of grazing or other disturbance <input type="checkbox"/> yes <input type="checkbox"/> no | <input type="checkbox"/> mostly sedges, mosses |
| Trees generally younger <input type="checkbox"/> yes <input type="checkbox"/> no | <input type="checkbox"/> covered in sphagnum moss |
| Trees generally older growth <input type="checkbox"/> yes <input type="checkbox"/> no | Other vegetation |
| Trees generally the same age <input type="checkbox"/> yes <input type="checkbox"/> no | Other features |
| Trees of all sizes and ages <input type="checkbox"/> yes <input type="checkbox"/> no | <input checked="" type="checkbox"/> stream <input type="checkbox"/> pond <input type="checkbox"/> other (describe) |
| Tree species found | Additional information |
| Species <input type="checkbox"/> % | |
| Species <input type="checkbox"/> % | |
| Species <input type="checkbox"/> % | |
| Species <input type="checkbox"/> % | |
| Species <input type="checkbox"/> % | |
| Species <input type="checkbox"/> % | |
| Estimated height of trees <input type="checkbox"/> ft <input type="checkbox"/> m | |
| Average diameter at breast height <input type="checkbox"/> in <input type="checkbox"/> cm | |
| Estimated age of majority of trees <input type="checkbox"/> yrs | |
| General cover type determination: | |
| <input checked="" type="checkbox"/> marsh <input type="checkbox"/> fen <input type="checkbox"/> bog <input type="checkbox"/> dead tree swamp | |
| <input type="checkbox"/> thicket swamp <input type="checkbox"/> coniferous swamp <input type="checkbox"/> deciduous swamp <input type="checkbox"/> mixed swamp | |

7.4 Wetland inventory

The first step in classifying a wetland is to determine if it is treed or non-treed. If trees or shrubs cover more than 25 per cent of the area, the wetland is considered treed, and by definition, a swamp. If few trees and shrubs are found, the wetland is a marsh, bog, or fen. Completing the Getting to Know Your Wetland Areas form will help you to classify your wetland.

Treed wetlands: Treed wetlands are called swamps. The form will help you describe the trees. Are most of them dead or alive? Describe the trees, their age, and size distribution. List the most common species of trees and shrubs and the percentage composition of each. Only species that make up at least 10 per cent of the canopy should be listed. Estimate the percentage to the nearest 10 per cent. The total of all species listed should equal 100 per cent. Compare your observations with the following criteria, to determine the type of swamp you have:

- Deciduous swamp: more than 75 per cent of the trees are deciduous
- Coniferous swamp: more than 75 per cent of the trees are coniferous
- Mixed swamp: the swamp has a good mixture of deciduous and coniferous trees
- Thicket swamp: there are more shrubs than trees
- Dead tree swamp: most trees are dead

Non-treed wetland: The form will help you describe the most common vegetation found in your wetland. You may find a field guide helpful in identifying the species. Compare the water level and vegetation characteristics that you recorded to the information and figures in Section 6 to determine the broad wetland classification for the compartment: marsh, bog, or fen.

Other features: This guide does not provide a specific form to record the characteristics of ponds or streams.

Check to indicate their presence. More information can be provided in the comment section. In some cases, where you are planning specific activities for these areas, you may decide to separate them into compartments. Activities could include naturalizing shorelines or stocking native fish.

7.5 Wetland wildlife

The wildlife section on the wetland form is designed to help you collect a general wildlife inventory. In the example, the landowner's primary objectives for the wetland are environmental protection and wildlife. They decided to use the Getting to Know the Wildlife form found in Appendix 2. The first page of this form is shown as an example.

| Getting to know the wildlife | | | |
|--|----------------------|----------------------|--|
| 7.5 Description of wildlife for <u>X</u> Compartment number: <u>W-2</u> _____ Entire property | | | |
| Wildlife observations | | | |
| Wildlife species | Season | Activity | Comments |
| Mammals | | | |
| beaver | year-round | live | they sometimes dam the creek |
| white-tailed deer | year-round | drink, browse | have a well travelled trail along edge |
| coyote | year-round | drink | eat dogwood in the fall and winter |
| mink | not sure | feeding | have seen tracks along edge |
| Birds | | | |
| mallards | spring, summer, fall | nest and raise young | seen swimming among the lily pads, feeding along edge |
| great blue heron, often | spring, summer, fall | feeding | last year 2 pairs raised their families here |
| other waterfowl | spring, fall | stop over | comes to marsh to catch fish - seen along edge |
| Amphibians/reptiles | | | |
| leopard frogs | spring, summer | breeding | often a variety of ducks stop to rest here when they migrate |
| bull frogs | spring, summer | breeding | |
| painted turtle | spring | breeding | |
| Fish | | | |
| minnows | spring, summer | feeding | we hear them every spring |
| | | | there seem to be more than in previous years |
| Insects | | | |
| dragonflies | summer | eating bugs | have seen them sunning on logs at edge |
| | | | they are great to have around, they keep the mosquito numbers down |
| Rare Plants | | | |

7.6 Wetland objectives

Long-term objectives: Describe what you want this compartment to be like in 20 years.

Short-term activities: List the activities that will be carried out in this compartment in the next 10 years to help reach the long-term objectives.

Conservation land designation: Some wetlands are designated as provincially significant by the MNR and qualify for the CLTIP (see Table 1, page 6).

Section 8: Ten year activity summary

Create a schedule of the activities that you plan to do during the next 10 years to help meet your objectives. Ideally, you should list the activities by compartment and by the year that they will take place. Estimate the amount of work to be done (e.g., number of acres to be thinned or the number of wildlife shrubs to be planted). If you are considering managing your property as a business, you may want to include expected costs and revenues.

Your scheduled activities should reflect your objectives. In the example, the objective for compartment F-2 is to produce around 10 cords of fuelwood annually and maintain access trails.

When planning your activities, make sure they are realistic. If you find your list is too long, it may be helpful to go back to Section 5 and review your objectives. Use your ranking and the priorities of your objectives to help schedule activities.

The following activities will give you some ideas. Section 11 (page 24) provides a listing of reference material that can help you choose management activities. A resource management consultant or conservation agency may also be able to help you.

Activities to protect and nurture the environment

- identify and remove invasive species
- plant vegetation along watercourses to provide shade and reduce erosion
- maintain unique open area ecosystems such as alvars, prairies and savannahs
- conserve treed swamp (don't harvest any wood from this area)
- fence watercourses to prevent uncontrolled cattle access

Wildlife management activities

- plant trees and shrubs to link forested areas; plant shrubs adjacent to forested areas to create edge
- maintain meadow habitat by mowing every three to four years
- install nest boxes to provide cavity-nesting habitat
- install a beaver baffle to minimize flooding of adjacent upland, but still provide beaver habitat
- in forested areas: create brush piles, retain cavity trees, protect raptor nests, maintain conifer cover

Recreation and nature appreciation activities

- maintain the trail network for hiking and skiing
- maintain a log of bird and wildlife sightings
- participate in a wildlife monitoring program
- maintain a log of vegetation found on property
- harvest edible products

Forest management activities

- plant trees to produce forest products
- monitor for insect and disease damage
- thin plantation or woodlot to encourage natural regeneration and growth of remaining trees
- selectively harvest timber
- complete more intensive inventory
- thin sugar bush to promote good development of tree crowns
- contact professional for advice

Selecting a forest management consultant

The Ontario Professional Foresters Association is responsible for the regulation of the practice of professional forestry in Ontario. Landowners planning forest management operations, such as tree harvesting, who want a guarantee of professional standards should look for a Registered Professional Forester or an Associate when hiring a forest management consultant.

For more information, contact the Ontario Professional Foresters Association by phone at: (705) 436-2226 or visit their website at: www.opfa.ca.



Section 9: Report

Good records can be helpful in evaluating your progress in meeting your objectives. If you record successes and failures, you can see how well things are working. Keep track of them in the comment section of the form. Take pictures of your land and projects periodically. Photographs are a useful way to monitor your progress.

Section 8: Ten year activity summary

Section 10: Contacts and notes

It is a good idea to keep track of the people and organizations you contacted when preparing and carrying out your stewardship plan. You could attach a piece of paper to the back of your plan, or use the Contacts and Notes section on the inside back cover of this guide. You may also want to include a list of the reference material you used to help prepare your plan. If you attend courses, seminars, or workshops that are relevant to the management of your property, you can record them here, as well.

| Compartment | Activity | Proposed | Quantity | Comments |
|-------------|----------|----------|----------|----------|
|-------------|----------|----------|----------|----------|



Section 11: Where to go for assistance

For information on property history (Section 3):

Records of past involvement with special programs are usually maintained by the organization(s) involved in the activity. For example, records of Woodland Improvement Act agreements are maintained at some Ministry of Natural Resources offices.

Copies of surveys may be available and viewed at the local land registry office.

The National Air Photo Library has aerial photography dating back to the 1920s for some parts of Ontario. Old photos can be useful when reviewing land use history for individual properties.

National Air Photo Library
615 Booth Street
Ottawa, ON
K1A 0E9
1-800-465-6277
www.airphotos.nrcan.gc.ca



For map-related products (Sections 4 and 6):

The Ministry of Natural Resources

The Information Access Section of the Ministry of Natural Resources sells an extensive line of map-related products and information. This includes: Ontario Base Maps (OBMs), aerial photos, Provincial Series Maps, as well as Forest Resource Inventory Maps (FRIs). You can order maps at the Natural Resources Information Centre located in Peterborough.

To contact the centre:
1-800-667-1940

<http://themnrstore.mnr.gov.on.ca>

The mailing address is listed in Table 4.

Ministry staff at the centre should be able to assess your specific requirements and advise which products will best meet your needs.

Your local conservation authority

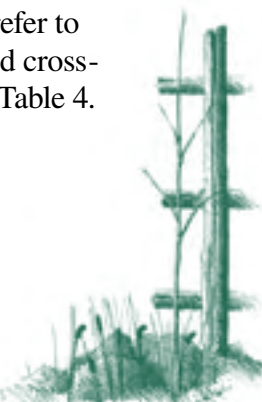
Many conservation authorities have recent and historic maps and air photos for land within their watershed. For information on your local conservation authority, visit the Conservation Ontario website at: www.conservation-ontario.on.ca or check your local telephone directory.

Municipal assessment maps

These maps are used by the assessment office and the municipality to record the location of properties by roll number. The scale and quality of these maps is variable. Copies of these maps may be available for a fee from the Municipal Property Assessment Corporation (MPAC). Check the blue pages of your telephone directory for the phone numbers of the municipality or MPAC.


Reference material (Section 5 and 7):

A number of agencies and organizations have services and publications that can help you learn more about your property. Table 3 lists some examples. To find out where you can obtain the information, refer to the number listed to the right of the item and cross-reference it with the organizations listed in Table 4.



**Table 3: Reference Material**

| Information | Source organizations |
|---|----------------------|
| Extension notes | |
| • The MNR Extension Notes Series has information on a wide range of topics related to land, water, wildlife, trees and property management | 7, 9 |
| • The Ontario Ministry of Agriculture and Food has fact sheets and other publications on agriculture and related topics. The Best Management Practices series may also be helpful | 8 |
| Woodlot management | |
| • A Landowner's Guide to Selling Standing Timber | 16 |
| • Certification of wood products for private land owners | 4 |
| • A True Picture — Taking Inventory of Your Woodlot | 4 |
| • Making Your Woodland Pay | 7 |
| • Trees and tree planting advice | 2, 6 |
| • Managed Forest Plan Approvers | 12, 16 |
| • The Ontario Forestry Association | 12 |
| • The Ontario Woodlot Association | 16 |
| Land stewardship | |
| • Caring For Your Land — A Stewardship Handbook | 1, 12 |
| • Southern Ontario Woodlands at Risk | 5 |
| • The Ontario Environmental Farm Plan | 15 |
| • Your local conservation authority | 2 |
| • Your local stewardship council | 9 |
| • Conservation easements and estate planning options | 10, 13 |
| • Ecological Land Classification series | 9 |
| Wetlands | |
| • A Wetland Conservation Plan | 18 |
| • Rural Wetlands in Ontario ... A Guide for Landowners | 3 |
| • Enhancement of Wetland Wildlife Habitat | 3 |
| Forest management and silviculture | |
| • A Silvicultural Guide to Managing Southern Ontario Forests | 9 |
| • The silvicultural guide series (various working groups) | 9 |
| • Sugar Bush Management for Maple Syrup Producers | 7, 12 |
| • The Ontario Professional Foresters Association | 14 |
| Wildlife and wildlife monitoring programs | |
| • Create your own field guide (The Royal Ontario Museum website) | 17 |
| • Endangered species (The Royal Ontario Museum website) | 17 |
| • Habitat Creation with Native Plants (fact sheet) | 5 |
| • The Federation of Ontario Naturalists (links for wildlife monitoring programs) | 3 |
| • The Ontario Federation of Anglers and Hunters | 11 |
| Bookstores and Libraries: reference material and field guides | |



Your local bookstore and library may have a good selection of general or specific reference material. Tree and shrub identification guides and other field guides will provide good background information to help you prepare your stewardship plan. Make sure the reference material that you select is relevant to Ontario. Searching on the Web is another good way to obtain reference material and field guides. The Forest Shop is a mail-order bookstore, located in Ontario, which has a wide selection of reference material relevant to Ontario. Visit the web site at **www.forestshop.com** or phone (613) 233-4283.

Visit Canada's Stewardship Portal: www.stewardshipcanada.ca

Table 4: Source organizations

- 1 Centre for Land and Water Stewardship**
Richards Bldg., University of Guelph
Guelph, ON N1G 2W1
www.uoguelph.ca/~claws
(519) 824-4120 ext. 58329
- 2 Conservation Ontario**
Box 11, 120 Bayview Parkway
Newmarket, ON L3Y 4W3
www.conservation-ontario.on.ca
(905) 895-0716
- 3 Ducks Unlimited Canada**
566 Welham Road
Barrie, ON L4N 8Z7
www.ducks.ca/contact/on.html
Barrie office: 888-402-4444
Kingston office: 866-389-0418
- 4 Eastern Ontario Model Forest**
P.O. Bag 2111
Kemptville, ON K0G 1J0
www.eomf.on.ca
(613) 258-8241
- 5 Ontario Nature**
355 Lesmill Road
Toronto, ON M3B 2W8
www.ontarionature.org
800-440-2366
- 6 Forest Gene Conservation Association**
266 Charlotte Street, Suite 23
Peterborough, ON K9J 2V4
www.fgca.net
(705) 755-3284
- 7 LandOwner Resource Centre**
Box 599, 5524 Dickinson Street
Manotick, ON K4M 1A5
www.lrconline.com
(613) 692-2390
- 8 Ministry of Agriculture, Food & Rural Affairs**
Information Contact Centre
1 Stone Road
Guelph, ON N1G 4Y2
www.omaf.gov.on.ca
877-424-1300
- 9 Ministry of Natural Resources**
Information Centre
Box 7000, 300 Water Street
Peterborough, ON K9J 8M5
www.mnr.gov.on.ca
800-667-1940
Ontario Stewardship
www.ontariostewardship.org
- 10 Nature Conservancy of Canada (Ontario)**
RR #5, 5420 Highway 6 North
Guelph, ON N1H 6J2
www.natureconservancy.ca
877-343-3532
- 11 Ontario Federation of Anglers and Hunters**
4601 Guthrie Drive
Peterborough, ON K9J 8L5
www.ofah.org
(705) 748-6324
- 12 Ontario Forestry Association**
200 Consumer Road, Suite 307
North York, ON M2J 4R4
www.oforest.on.ca
800-387-0790
Tree planting in Ontario
www.treesontario.on.ca
- 13 Ontario Land Trust Alliance**
1 Jasper Avenue
Smith Falls, ON, K7A 4B5
www.ontariolandtrustalliance.org
(613) 284-4646
- 14 Ontario Professional Foresters Association**
8000 Yonge Street, Unit #3
Innisfil, ON L9S 1L5
www.opfa.ca
(705) 436-2226
- 15 Ontario Soil and Crop Improvement Association**
1 Stone Road
Guelph, ON N1G 4Y2
www.ontariosoilcrop.org
800-265-9751
- 16 Ontario Woodlot Association**
RR#4, 275 County Road 44
Kemptville, ON K0G 1J0
www.ont-woodlot-assoc.org
888-791-1103
Forest Services Directory
<http://ontariowoodlot.com>
- 17 Royal Ontario Museum**
100 Queen's Park
Toronto, ON M5S 2C6
www.rom.on.ca/ontario/risk.php
(416) 586-5549
- 18 Wildlife Habitat Canada**
1750 Courtwood Crescent, Suite 310
Ottawa ON K2C 2B5
www.whc.org
800-699-7919



Appendix 1. Glossary of terms

acre – an imperial unit of measure of area equal to 43,560 square feet or 0.4 hectare (208 ft. x 208 ft.)

alvar – limestone plain, containing distinct life forms, adapted to arid, calcium rich environments, with many of the rare plants and invertebrates largely confined to this habitat

aquatic – of or concerning water; an organism whose primary habitat for growth, reproduction, and survival is on, in or partially submerged in water

area of concern – an area adjacent to an identified value that may be affected by some (or all) aspects of forest management activity (may include lakes, wildlife habitat, and wetlands)

area of natural and scientific interest (ANSI)
– area of land and water containing natural landscapes or features that have been identified by the Ontario Ministry of Natural Resources as having life science or earth science values related to protection, scientific study or education

bog – nutrient-poor, acidic wetland comprised of peat soils with a high water table

canopy – top layer formed by the crowns of the taller trees in a forest

cavity tree – a standing tree, dead or live, with a hole or holes where wildlife can make nests or dens, or escape predators

clay – soil composed of very fine-grained, water-retaining minerals, generally plastic when moist and will harden to a brick-like consistency when dry; can be molded into a form by hand and maintains shape

community conservation lands – one of five categories under the Conservation Land Tax Incentive Program; lands owned by non-profit organizations that, through management, contribute to provincial conservation and natural heritage program objectives, but do not fall into one of the other categories of eligible conservation land

community stewardship plan – a stewardship plan prepared by a number of adjacent landowners for their combined land ownership

composition – the representation of tree species in a forest stand expressed quantitatively as a percentage

coniferous – a tree which is “evergreen”; it has cones and needles or scale-like leaves that are usually retained throughout the winter (includes pine, spruce, fir, cedar, larch and juniper)

conservation easement – an agreement entered into between a qualified conservation organization and a landowner that places limits on land use to help conserve a property’s features

cover type – a general unit of classifying vegetation based on existing plant cover

diameter limit cutting – a form of high-grading where all high-quality trees down to a certain diameter, generally measured on the stump, are removed

diameter at breast height (DBH) – the diameter of a tree outside of the bark roughly at breast height (1.3 metres off the ground)

deciduous – a tree or plant that sheds its leaves annually to prepare for dormancy during the winter (examples include maple, birch, and poplar)

deer yard – winter concentration area in which deer gather and overwinter, typically dominated by coniferous trees which serve to intercept snowfall, provide shelter from wind, and help conserve energy loss through radiation; deer traditionally use the same yards year after year

easement – selected rights of use of another’s land (includes rights-of-way, access to shoreline); included on title

ecosystem – an interacting system of living organisms and their environment

Ecological Land Classification (ELC) – a system devised by MNR to describe over 80 wetland and terrestrial forest vegetation types in Ontario

emergent – plants that rise out of the water (includes cattails)

endangered species – a native species at risk of extinction (no longer exists anywhere) or extirpation (no longer exists in Ontario in the wild) throughout all or a large portion of its Ontario range if the limiting factors are not reversed

fauna – animals, including invertebrates

fen – peatland with water table at or just above the surface, and very slow drainage or seepage

fencerow – section of natural or planted vegetation growing along a fence

floating – plants that have their leaf area floating on the surface of the water; some floating-leaved plants are rooted (includes white water-lilies) while others are free-floating (includes duckweed)

flora – plants, including lower plants

forest interior – blocks of forest more than 100 metres inside a woodland (roughly three to five tree-lengths away from a woodland edge, road or permanent opening inside a woodland); important because it provides a sheltered, secluded environment away from the influence of forest edges and open habitats

gravel – a sediment of stones > 2 mm, formed by the action of moving water, usually mixed with finer particles

groundwater – zone of saturation in the soil, the top being the water table

habitat – food, water, shelter, cover and other elements of the environment that living organisms need to survive

hectare (ha) – a metric unit of measure of area equal to 10,000 square meters or 2.47 acres

herbaceous – a plant that is not woody or does not have a woody stem

hibernaculum – protected area with stable non-freezing temperatures, such as a cave where bats survive the winter or a burrow where snakes do the same

high-grading – a form of logging that removes the largest, most valuable trees & leaves less valuable trees or species to grow and regenerate the forest; changes the species composition in a forest and can reduce the

future commercial value and health of the forest

impoundment – a body of water created by the interruption of the flow of water

indigenous – species which originated naturally in a particular region or environment

loam – a soil containing a mixture of sand, silt, and clay; can be molded into a form by hand, but easily crumbles

marl – soil consisting of limestone, varying amounts of clay, and other impurities; may include fossils

marsh – standing or slowly moving water with emergent plants, and to a lesser extent floating and submerged plants; surface waters may fluctuate seasonally

mast – the fruit and nuts of trees and woody shrubs used as a food source by wildlife

mast tree – trees supporting mast production (examples include oak, beech, cherry)

mineral lick – area of upwelling groundwater rich in sodium, generally surrounded by forest cover that is visited by wildlife to replenish sodium supplies; important area for moose

moose aquatic feeding area – site, generally marsh habitat, that contains aquatic vegetation rich in sodium (examples include pondweed, water milfoil, yellow water-lily) with sufficient shoreline cover that it is frequented by moose


muck – organic soil, darker in colour with a higher mineral content than peat and with the organic material decomposed beyond recognition

open water – water is > 2 m deep and vegetation covers < 25 per cent of the area

organic soil – soil dominated by organic materials (peat and muck soils); characteristic of wet sites

peat – black or brown, partly decomposed, fibrous vegetative matter that has accumulated in a waterlogged environment, such as a bog

pond – a fairly small body of still water formed naturally or by hollowing or embanking



prairie – an area of native grassland usually containing distinct species; occurs on sites that are more severe than savannahs

provincially significant wetlands – a wetland that has been classified as provincially significant by the Ministry of Natural Resources in accordance with the Wetland Evaluation System

raptor – a bird of prey such as a hawk, owl, or eagle

regeneration – young trees

right-of-way – the right to pass over another's land; established by easement or established practice over time

sand – loose single-grained soil, coarser than silt, finer than gravel, with quartz as its most common component; usually cannot be molded into a form by hand even when moist

sapling – a young tree of small diameter, typically 1 to 9 cm DBH

saturated, saturation – soil where all the air spaces between particles are filled with water

savannah – natural areas of mostly grasses with scattered, open-grown trees; occurs on sites which are subject to environmental stresses, typically fire, drought, spring flooding, and warmer than usual local climates, but on less severe sites than prairies

seedling – a small tree grown from seed; usually restricted to trees equal to or less than 1 cm DBH

seepage area – an area where soil is saturated due to emerging ground water

silt – very small rock or mineral particles, smaller than a very fine grain of sand and larger than coarse clay

silviculture – the art and science of producing and tending a forest

snag – a standing tree that is decaying which can provide habitat for many wildlife species; may be a safety hazard during logging operations

stick nest – a platform of sticks constructed by certain bird species for nesting (e.g. herons)

submergent – plants that normally lie entirely beneath the surface of the water

super-canopy tree – a living tree that rises well above the canopy of a forest stand

swamp – wooded wetlands with 25 per cent cover or more of trees or shrubs

terrestrial – of or concerning the land; an organism whose primary habitat for growth, reproduction, and survival is on or in the land

thinning – selective cutting in an immature stand to increase the growth rate of the trees that are left

threatened species – a native species likely to become endangered if the factors affecting its vulnerability are not reversed

topography – the elevation, shape, & slope of the land

upland – an elevated area which generally has adequate drainage to prevent waterlogging of soil

understory – the portion of the trees and other vegetation in a forest stand below the canopy

very shallow – for use within the Managed Forest Tax Incentive Program – soils less than 15 cm (six inches) in depth

vulnerable species – a native species of special concern because of low or declining numbers, small range or for some other reason, but not a threatened or endangered species

watershed – an area of land that catches rain and snow and drains or seeps into a marsh, stream, river, lake or groundwater

water table – the upper level of the groundwater

wetland – land seasonally or permanently flooded by shallow water, as well as land where the water table is close to the surface; presence of abundant water causes poorly drained soils, favouring dominance of either water-loving or water-tolerant plants

Wetland Evaluation Program – program of the Ministry of Natural Resources, which evaluates wetlands in Ontario

woody debris – sound and rotting logs and stumps that provide habitat for plants, animals, and insects and a source of nutrients for soil development

Appendix 2: Enhanced Inventory Forms

The inventory forms in the guide will help you describe both the upland and wetland compartments of your property. However, you may need more information to plan your activities. Appendix 2 contains two forms to collect enhanced information. The Getting to Know the Wildlife form will help you collect information for compartments with unique habitats or where you will be managing mainly for wildlife. If you are planning a harvest or other intensive forest management activity, a detailed forest inventory is recommended. The Enhanced Forest Inventory and Harvest Plan form is designed to collect the type of information that is required to make good forest management decisions.

Getting to know the wildlife

The Getting to Know the Wildlife form may be used for a compartment or for an entire property depending on factors such as the size and diversity of your property.

A landowner's knowledge about the wildlife in a woodlot normally comes from years of observation. It is often a matter of chance whether certain wildlife is seen. A few observation visits can tell you a lot if the visits are over the course of several seasons and you make use of some good field guides.

List all the species you have seen, heard, or found evidence of on your property. If possible, indicate where and when the species was noted and the habitat it was using (e.g., mast trees, fallen trees, or trails). Wildlife habitat can include anything that wildlife use for food, shelter or travel routes. Almost everything in the forest is used by one type of wildlife or another, but some features are more important. A habitat feature checklist appears on the back of the form.

To learn more about the wildlife, you may want to take part in one of the monitoring programs in Ontario. Section 11 provides sources to find out more about monitoring programs. Joining a naturalist club or conservation group may also provide useful learning opportunities. A number of significant wildlife habitats are already mapped and known to conservation agencies, naturalists and, perhaps neighbours.

Enhanced forest inventory and harvest plan

Forests are complex systems supporting many life forms. If you are going to take wood from the forest, it is important to harvest in ways that sustain these systems and the commercial productivity of the forest. The Enhanced Forest Inventory and Harvest Plan is designed to help forest managers collect the type of information needed for good decision making.

The collected information will allow for selection of a suitable silvicultural system. Silvicultural systems are different approaches to harvesting, regenerating and growing forests. The three silvicultural systems used in Ontario are: the selection system, the shelterwood system, and the clearcut system. Different forest types are suited to different silvicultural systems.

In Ontario's hardwood forests, the selection system is often the best choice. It removes individual or small groups of trees in 10- to 20-year intervals and encourages the growth of a healthy, diverse forest, with trees of all ages. It can also increase wildlife habitat and the value of future wood products. In some hardwood and coniferous forests, the shelterwood system may be appropriate. In the boreal forests of Northern Ontario, the clearcut system is more suitable. Collecting the right type of information to select and implement a silvicultural system is quite technical and you should contact a Registered Professional Forester for help.





North American Waterfowl
Management Plan
Plan nord-américain de
gestion de la sauvagine
Plan de Menage de Aves
Acquatiques de l'Amérique du Nord

What is the Ontario Eastern Habitat Joint Venture (EHJV)?

The EHJV is an on-the-ground program that focuses on wetland and related upland securement, enhancement, management and stewardship. The EHJV coordinates and implements habitat conservation projects to meet biodiversity objectives of the North American Waterfowl Management Plan and the North American Bird Conservation Initiative. The EHJV is part of a continental partnership and one of 6 Joint Ventures in Canada dealing both with regional habitat conservation and with research and management of particular species. These Joint Ventures provide a framework within which governments, municipalities, businesses, conservation organizations, and individuals collaborate to secure and improve wetland habitat.

The Ontario EHJV partnership includes the Ministry of Natural Resources, the Canadian Wildlife Service, the Ministry of Agriculture, Food and Rural Affairs, Ducks Unlimited Canada, the Nature Conservancy of Canada, Wildlife Habitat Canada, and other partners including the United States Fish and Wildlife Service.

How can you participate in conserving birds through the EHJV?

Contact one of the non-governmental partners of the EHJV below to find out how they can help you conserve bird habitats on your property.



The Nature Conservancy of Canada (NCC) is a non-profit, non-advocacy organization that takes a business-like approach to preserving Canada's natural heritage. The focus of NCC is on conservation through private action to protect areas of biological diversity for their intrinsic value and for the benefit of future generations. The success of NCC is based on partnerships with individuals, corporations, community groups, foundations and government agencies to create solutions that benefit nature.

Contact the Nature Conservancy of Canada by calling 1-877-343-3532 or visit www.natureconservancy.ca



Ducks Unlimited Canada is a non-profit, non-government charitable organization that conserves, restores and manages wetlands for waterfowl, other wildlife and people. Ducks Unlimited Canada partners with landowners, private organizations, Conservation Authorities, government and many conservation-minded individuals in Ontario to deliver wetland conservation projects all throughout the province.

Contact Ducks Unlimited Canada's provincial office by calling 1-888-402-4444 or www.ducks.ca



Wildlife Habitat Canada's Ontario Wetland Habitat Fund (WHF) program provides on-site consultation, technical advice and financial assistance to landowners who restore and enhance wetlands and other significant bird habitats. Every landowner, property and wetland is unique, so WHF staff help tailor projects

to suit your property and your individual needs. More than 900 landowners have signed on to this voluntary, non-governmental stewardship program and many more have benefited from our extension services.

Contact the Ontario Wetland Habitat Fund by calling 1-800-669-7919 ext. 248 or visit www.wetlandfund.com

Getting to know the Wildlife

7.5 Description of wildlife for _____ Compartment number: _____
_____ Entire property

Wildlife observations

| Wildlife species | Season | Activity | Comments |
|---------------------|--------|----------|----------|
| Mammals | | | |
| Birds | | | |
| Amphibians/reptiles | | | |
| Fish | | | |
| Insects | | | |
| Rare plants | | | |

Getting to know the Wildlife (continued)

Habitat features

Check the boxes that describe the habitat features found on your property.

| Habitat feature | Details/comments |
|---|--------------------------|
| Snags | <input type="checkbox"/> |
| Cavity trees | <input type="checkbox"/> |
| Very tall (supercanopy trees) | <input type="checkbox"/> |
| Mast trees (nut or fruit bearing trees) | <input type="checkbox"/> |
| Conifer thickets | <input type="checkbox"/> |
| Stick nests | <input type="checkbox"/> |
| Heronry | <input type="checkbox"/> |
| Fallen and dead trees | <input type="checkbox"/> |
| Dens or dug holes | <input type="checkbox"/> |
| Droppings, tracks or other signs | <input type="checkbox"/> |
| Wildlife trails | <input type="checkbox"/> |
| Deer wintering yard | <input type="checkbox"/> |
| Deer bedding area | <input type="checkbox"/> |
| Moose aquatic feeding area | <input type="checkbox"/> |
| Waterfowl nesting | <input type="checkbox"/> |
| Waterfowl feeding | <input type="checkbox"/> |
| Waterfowl breeding pair habitat | <input type="checkbox"/> |
| Waterfowl brood habitat | <input type="checkbox"/> |
| Snake hibernaculum | <input type="checkbox"/> |
| Other food sources (cones, tree saplings, salt licks) | <input type="checkbox"/> |

Additional Comments: _____

Enhanced Forest Inventory and Harvest Plan

Compartment number/name (7.1)

Area _____

Compartment characteristics (7.2)

Soil type _____

Drainage _____

Access _____

Other features _____

Topography _____

Physical features _____

Water features _____

Compartment history (7.3) _____

Inventory (7.4)

Current forest conditions

Overstory _____

Understory _____

Understory

| Desirable regeneration | Species abundance | | |
|------------------------|-------------------|--------|-----|
| | High | Medium | Low |
| < 2 metres | | | |
| 2-6 metres | | | |
| > 6 metres | | | |

Vegetation competing with desirable regeneration

Non-woody _____

Shrubs _____

Trees _____

Additional comments _____

Overstory

| Tree species found | |
|--------------------|---|
| Species | % |
| Species | % |
| Species | % |
| Species | % |
| Species | % |
| Species | % |
| Species | % |

100%

Average basal area _____

Average height of trees _____

Average diameter at breast height _____

Age _____

ELC cover type _____

Significant wildlife habitat, features, and other areas of concern (7.5) _____

Enhanced Forest Inventory and Harvest Plan (continued)

Compartment objectives (7.6)

Desired future forest condition

Long-term _____

Short-term _____

Planned activities _____

Harvest plan

Silvicultural system _____ ☐ Tree-cutting/conservation bylaw in municipality

Stage of management _____

Detailed recommendations

Targets and strategies _____

Tree marking _____

Anticipated ecological impacts of proposed activities and mitigating strategies _____

Forest renewal, tending, and maintenance proposed _____

Proposed assessments _____

The Professional Foresters Act 2000, proclaimed on May 1st, 2001, requires that practitioners of professional forestry in Ontario must be members of the Ontario Professional Foresters Association. Professional forestry is the provision of services relating to the development, management, conservation and sustainability of forests including urban forests, and the designing of silvicultural prescriptions and treatments including timber harvesting and the classification and inventory of forests. The Act establishes the Ontario Professional Foresters Association (OPFA) as the association responsible for the regulation of the practice of professional forestry in Ontario.

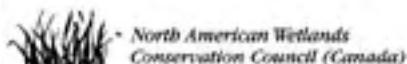
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Ducks Unlimited Canada



EASTERN ONTARIO
MODEL FOREST
FORÊT MODÈLE
DE L'EST DE L'ONTARIO



WETLAND
HABITAT
FUND

FONDS POUR
LES HABITATS
HUMIDES

WILDLIFE HABITAT
CANADA
HABITAT FAUNIQUE

