

7.0 SIGNIFICANT WOODLANDS

7.1 Policy Explanation

2.1.4 *Development and site alteration shall not be permitted in: ...*

b) *significant woodlands* south and east of the Canadian Shield; ...

unless it has been demonstrated that there will be no *negative impacts* on the natural features or their *ecological functions*.

2.1.6 *Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.3, 2.1.4, and 2.1.5 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.*

Provincial Policy Statement 2005, policy 2.1
Italics indicate terms further defined in the PPS

Woodlands: means treed areas that provide environmental and economic benefits to both the private landowner and the general public, such as erosion prevention, hydrological and nutrient cycling, provision of clean air and the long-term storage of carbon, provision of wildlife habitat, outdoor recreational opportunities, and the sustainable harvest of a wide range of woodland products. *Woodlands* include treed areas, woodlots or forested areas and vary in their level of significance at the local, regional and provincial levels.

Significant: means ... c) in regard to *woodlands*, an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history; ...

Provincial Policy Statement 2005, 6.0 Definitions
Italics indicate terms further defined in the PPS

Quick Links

Table of Contents	ii
Abbreviations Used in This Manual	xi
Provincial Policy Statement Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	

To be consistent with policies 2.1.4(b) and 2.1.6 of the PPS, planning authorities shall protect significant woodlands south and east of the Canadian Shield (see [figure 4-3](#)) by:

- not permitting development and site alteration in significant woodlands south and east of the Canadian Shield unless it has been demonstrated that there will be no negative impacts on the feature or its ecological functions; and
- not permitting development and site alteration on adjacent lands unless the ecological function has been evaluated and it is demonstrated that there will be no negative impacts on the feature or its ecological function.

The PPS definitions for “woodlands” and “significant woodlands” are broad enough to complement other provincial legislation definitions (e.g., Forestry Act) and identification approaches (e.g., Greenbelt Plan) and should not be seen as contradictory to other provincial approaches for identifying woodlands or forests (e.g., ELC).

7.2 Why Protect?

In less than 200 years, parts of southern Ontario have been altered from a predominantly forested landscape to one dominated by a wide variety of agricultural, industrial and urban land uses. In the part of the province south and east of the Canadian Shield, over 70 per cent of the original woodland cover has been lost (Riley and Mohr, 1994). Recent MNR compilations of woodland cover for upper- and single-tier municipalities indicate a range of woodland cover. For example, Essex County and Chatham-Kent County have less than 5 per cent forest cover, while Hastings County (south of the Canadian Shield) has over 50 per cent forest cover. Lower-tier municipalities would show an even greater range of woodland cover.

7.1.1 Relationship to the Forestry Act and Forest Conservation By-Laws

The identification and protection of significant woodlands do not preclude good forestry practices. Ideally, planning authorities should promote good forestry practices, which are defined under the Forestry Act as:

the proper implementation of harvest, renewal and maintenance activities known to be appropriate for the forest and environmental conditions under which they are being applied and that minimize detriments to forest values including significant ecosystems, important fish and wildlife habitat, soil and water quality and quantity, forest productivity and health and the aesthetics and recreational opportunities of the landscape.

To support the PPS and good forestry practices, the Municipal Act, 2001 empowers all levels of municipalities (at their discretion) to pass forest conservation by-laws to regulate tree cutting and provide direction to landowners on how to sustainably manage their woodlands for financial and ecological benefits (see [section 12.6](#)). Activities associated with the development, management, conservation and sustainability of forests and urban forests are subject to the Professional Foresters Act, 2000.

The protection of woodland cover in southern Ontario is an important concern. Woodland habitat loss is one of the most serious threats to biological diversity (Noss and Cooperrider, 1994; Meffe and Carrol, 1997; Marzluff and Ewing, 2001). The definition of “woodlands” in the PPS identifies a number of environmental and economic benefits derived from woodlands. A brief discussion of woodlands benefits is contained in [table 7-1](#).

Quick Links

Table of Contents	ii
Abbreviations	
Used in This Manual	xi
Provincial Policy Statement	
Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	

Table 7-1: PPS-Identified Woodland Benefits and Description

WOODLAND BENEFITS	DESCRIPTION
Soil erosion prevention	Woodlands prevent soil erosion through a combination of overhead crown cover and underground root structures.
Nutrient cycling	Plant root structures extract nutrients from the soil and convert the nutrients for use by other life forms.
Hydrological cycling	Woodlands affect both water quantity and quality by reducing the intensity and volume of stormwater runoff and decreasing soil erosion and flooding. By removing nutrients, sediments and toxins from surfacewater runoff and subsurface flows, woodland vegetation contributes to the maintenance of water quality in streams and lakes. The shade that woodlands adjacent to waterbodies provide helps keep water temperatures cool, maintaining high-quality habitat for desirable fish species such as brook trout, as well as providing a source of detritus for aquatic ecology. The existence of woodland cover contributes to the protection of groundwater recharge areas. Some woodlands are also wetlands (e.g., swamps, treed fens, treed bogs).
Flood and erosion reduction	Woodlands reduce flooding and erosion particularly as a mitigation measure to address the negative impacts of increased impervious cover associated with urban development. Maintaining woodlands saves money in retrofitting, erosion control and repair costs resulting from impacts of urbanization.
Clean air and the long-term storage of carbon	Woodland cover can play a significant role in mitigating episodes of poor air quality that may occur during periods of high ozone levels in the summer months. McPherson et al. (1997) and Scott et al. (1998) have shown the important role that urban forests play in reducing air pollution in an urban environment. Weathers et al. (2001) found that forest edges function as traps for wind-borne nutrients and pollutants. Trees facilitate long-term storage of carbon through the formation of wood (Roulet and Freedman, 1999).
Wildlife habitat	At the landscape scale, woodland cover and the distances between individual woodlands are important factors in maintaining woodland integrity and the survival of a large number of wildlife species that depend on woodlands. Environment Canada (2004) has noted that the axiom “the bigger, the better” appears to be in the process of being replaced by “the greater amount of habitat within the landscape mosaic, the better” (see Friesen et al., 1999; Rosenberg et al., 1999; Trzcinski et al., 1999; Austen et al., 2001; Golet et al., 2001; Fahrig, 2002; Lee et al., 2002; UTRCA, 2003). Environment Canada (2004) recommended that at least 30 per cent of each watershed should be in forest cover and that the land units with higher amounts of forest cover should maintain or improve that habitat with reference to the historic (pre-settlement) landscape.

(continued on next page)

Quick Links	
Table of Contents	ii
Abbreviations	xi
Used in This Manual	xi
Provincial Policy Statement	6
Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	
◀ PREV	NEXT ▶

Table 7-1 (continued from previous page)

WOODLAND BENEFITS	DESCRIPTION
Outdoor recreational opportunities	Woodlands provide the desired setting for outdoor recreational activities such as hiking, wildlife observation and hunting, as well as for educational and research purposes. Woodlands are increasingly viewed as representing health, jobs and prosperity, community identity and quality of life in approaches that seek to minimize trade-offs between the environment and economic activity (Canadian Urban Institute and the Natural Spaces Leadership Alliance, 2006).
Sustainable harvest of woodland products	Woodlands also make a significant contribution to the economies of rural communities in southern Ontario through the sustainable provision of wood products, non-timber products such as maple syrup, and tourism.

7.3 Identification

Approaches to compiling and assessing woodland information will vary depending on the availability of information, the nature of the woodlands present in the planning area and the extent of development pressures on the woodland. Information sources for the identification and evaluation of significant woodlands are provided in [appendix B](#). Planning authorities should undertake a comprehensive study to identify significant woodlands for their planning area.³² Conducting a comprehensive study allows planning authorities to:

- establish a set of criteria as part of a focused planning process;
- apply consistent evaluations across the planning area;
- take into account the physiography of the landscape (e.g., moraines, clay plains);
- allow for the evaluation of woodland functions at the landscape level (e.g., providing linkages in a natural heritage system); and
- reduce resources needed to confirm site-specific details at a later planning stage.

An initial comprehensive study cannot assess all woodlands characteristics needed to determine significance (or in some cases resources may be unavailable to carry out the study). Some internal woodland characteristics (e.g., composition, diversity, age, structure or productivity) require site-level confirmation. Therefore, woodlands may be identified as potential or candidate significant woodlands for the purposes of the PPS until appropriate detailed studies can be undertaken at a later planning stage (e.g., development application) to confirm their status.

To assist in the identification of significant woodlands at all planning stages, the Province recommends that planning authorities develop and apply a set of evaluation criteria based on the factors and characteristics outlined in the following section.

³² MNR district offices may be able to support planning authorities in undertaking a comprehensive study and can be contacted for more information (see [appendix B.1.2](#)).

Quick Links	
Table of Contents	ii
Abbreviations Used in This Manual	xi
Provincial Policy Statement Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	
◀ PREV	NEXT ▶

7.3.1 Recommended Evaluation Criteria for Determining Significant Woodlands

Table 7-2 and section 7.3.1.1 provide direction for the criteria for evaluating the significance of woodlands. The approach provides flexibility to accommodate various situations. Consideration of local factors and conditions may result in modifications to these criteria.

For example, in some areas, woodlands on slopes may be of particular interest and importance, thus indicating a need for a specific slope standard or criterion. Additional or merged criteria may be used where they are deemed more suited. Woodlands that meet a suggested minimum standard for any one of the criteria listed in table 7-2 should be considered significant. This evaluation approach will avoid overlooking sites that are outstanding in terms of only one criterion.

The recommended approach involves first assessing the conditions in the planning area to determine whether division into sub-units is appropriate. The study would then consider which individual evaluation criteria and threshold values are appropriate to classify a woodland as significant. Consideration may also be given to the stage of the planning process at which criteria that are more detailed would be applied.

In addition to the “woodland size” criterion shown in table 7-2, it is important to consider other criteria based on functions or characteristics in the identification of significant woodlands. Such functions or characteristics assist in identifying significant woodlands that may not meet the simple size criterion. Some criteria information (e.g., composition, diversity, age) to support the identification of significant woodlands may be obtained only by site inspection, which may occur at a later stage in the planning process. In the absence of more complete information, the size threshold should be reduced to include woodlands that otherwise would be missed. For example, where woodland cover is between about 15 and 30 per cent of the land base, woodlands closer to 4 hectares, rather than 20 hectares, could be considered significant. The size threshold and other criteria may be refined further with additional studies that may be undertaken during various stages of a planning process.

For other criteria in the table, a sample range of woodland size thresholds for significance is provided, where relevant, in parentheses. For example, the threshold range for proximity to other woodlands or other habitats is 0.5 to 20 hectares. A threshold toward the lower part of the range would be appropriate for a planning area with little forest cover, whereas a higher threshold would be suitable for a planning area with greater forest cover. In all cases, the threshold should be smaller than for the simple size criterion. Woodlands that meet a suggested minimum standard for any one of the criteria listed below should be considered significant.

Quick Links

Table of Contents	ii
Abbreviations Used in This Manual	xi
Provincial Policy Statement Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	

Table 7-2: Recommended Significant Woodland Evaluation Criteria and Standards

CRITERIA COMMENTS	STANDARDS
1. WOODLAND SIZE CRITERIA	
<ul style="list-style-type: none"> Size refers to the areal (spatial) extent of the woodland (irrespective of ownership). Woodland areas are considered to be generally continuous even if intersected by narrow gaps 20 m or less in width between crown edges. Size value is related to the scarcity of woodland in the landscape derived on a municipal basis with consideration of differences in woodland coverage among physical sub-units (e.g., watersheds, biophysical regions). Size criteria should also account for differences in landscape-level physiography (e.g., moraines, clay plains) and community vegetation types. 	<p>Where woodlands cover:</p> <ul style="list-style-type: none"> is less than about 5% of the land cover, woodlands 2 ha in size or larger should be considered significant is about 5–15% of the land cover, woodlands 4 ha in size or larger should be considered significant is about 15–30% of the land cover, woodlands 20 ha in size or larger should be considered significant is about 30–60% of the land cover, woodlands 50 ha in size or larger should be considered significant occupies more than about 60% of the land, a minimum size is not suggested, and other factors should be considered <p>Note: The size threshold should be reduced in the absence of information for the other three criteria.</p> <p>As a consideration in addressing the potential loss of biodiversity, the largest woodland in the planning area (or sub-unit) should be identified as significant.</p>
2. ECOLOGICAL FUNCTIONS CRITERIA	
a. Woodland interior	
<ul style="list-style-type: none"> Interior habitat more than 100 m from the edge (as measured from the limits of a continuous woodland as defined above) is important for some species. For purposes of this criterion, a maintained public road would create an edge even if the opening was not wider than 20 m and did not create a separate woodland. 	<p>Woodlands should be considered significant if they have:</p> <ul style="list-style-type: none"> any interior habitat where woodlands cover less than about 15% of the land cover 2 ha or more of interior habitat where woodlands cover about 15–30% of the land cover 8 ha or more of interior habitat where woodlands cover about 30–60% of the land cover 20 ha or more of interior habitat where woodlands cover more than about 60% of the land cover

(continued on next page)

Quick Links	
Table of Contents	ii
Abbreviations Used in This Manual	xi
Provincial Policy Statement Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	
◀ PREV	NEXT ▶

Table 7-2 (continued from previous page)

CRITERIA COMMENTS	STANDARDS
b. Proximity to other woodlands or other habitats	
<ul style="list-style-type: none"> Woodlands that overlap, abut or are close to other significant natural heritage features or areas could be considered more valuable or significant than those that are not. Patches close to each other are of greater mutual benefit and value to wildlife. 	<p>Woodlands should be considered significant if:</p> <ul style="list-style-type: none"> a portion of the woodland is located within a specified distance (e.g., 30 m) of a significant natural feature or fish habitat likely receiving ecological benefit from the woodland and the entire woodland meets the minimum area threshold (e.g., 0.5–20 ha, depending on circumstance)
c. Linkages	
<ul style="list-style-type: none"> Linkages are important connections providing for movement between habitats. Woodlands that are located between other significant features or areas can be considered to perform an important linkage function as “stepping stones” for movement between habitats. 	<p>Woodlands should be considered significant if they:</p> <ul style="list-style-type: none"> are located within a defined natural heritage system or provide a connecting link between two other significant features, each of which is within a specified distance (e.g., 120 m) and meets minimum area thresholds (e.g., 1–20 ha, depending on circumstance)
d. Water protection	
<ul style="list-style-type: none"> Source water protection is important. Natural hydrological processes should be maintained. 	<p>Woodlands should be considered significant if they:</p> <ul style="list-style-type: none"> are located within a sensitive or threatened watershed or a specified distance (e.g., 50 m or top of valley bank if greater) of a sensitive groundwater discharge, sensitive recharge, sensitive headwater area, watercourse or fish habitat and meet minimum area thresholds (e.g., 0.5–10 ha, depending on circumstance)
e. Woodland diversity	
<ul style="list-style-type: none"> Certain woodland species have had major reductions in representation on the landscape and may need special consideration. More native diversity is more valuable than less diversity. 	<p>Woodlands should be considered significant if they have:</p> <ul style="list-style-type: none"> a naturally occurring composition of native forest species that have declined significantly south and east of the Canadian Shield and meet minimum area thresholds (e.g., 1–20 ha, depending on circumstance) a high native diversity through a combination of composition and terrain (e.g., a woodland extending from hilltop to valley bottom or to opposite slopes) and meet minimum area thresholds (e.g., 2–20 ha, depending on circumstance)

Quick Links	
Table of Contents	ii
Abbreviations	
Used in This Manual	xi
Provincial Policy Statement	
Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	
◀ PREV	NEXT ▶

(continued on next page)

Table 7-2 (continued from previous page)

CRITERIA COMMENTS	STANDARDS	Quick Links
3. UNCOMMON CHARACTERISTICS CRITERIA		
<ul style="list-style-type: none"> Woodlands that are uncommon in terms of species composition, cover type, age or structure should be protected. Older woodlands (i.e., woodlands greater than 100 years old) are particularly valuable for several reasons, including their contributions to genetic, species and ecosystem diversity. 	<p>Woodlands should be considered significant if they have:</p> <ul style="list-style-type: none"> a unique species composition or the site is represented by less than 5% overall in woodland area and meets minimum area thresholds (e.g., 0.5 ha, depending on circumstance) a vegetation community with a provincial ranking of S1, S2 or S3 (as ranked by the NHIC and meet minimum area thresholds (e.g., 0.5 ha, depending on circumstance) habitat (e.g., with 10 individual stems or 100 m² of leaf coverage) of a rare, uncommon or restricted woodland plant species and meet minimum area thresholds (e.g., 0.5 ha, depending on circumstance): <ul style="list-style-type: none"> vascular plant species for which the NHIC's Southern Ontario Coefficient of Conservatism is 8, 9 or 10 tree species of restricted distribution such as sassafras or rock elm species existing in only a limited number of sites within the planning area characteristics of older woodlands or woodlands with larger tree size structure in native species and meet minimum area thresholds (e.g., 1–10 ha, depending on circumstance): <ul style="list-style-type: none"> older woodlands could be defined as having 10 or more trees/ha greater than 100 years old larger tree size structure could be defined as 10 or more trees/ha at least 50 cm in diameter, or a basal area of 8 or more m²/ha in trees that are at least 40 cm in diameter 	<ul style="list-style-type: none"> Table of Contents ii Abbreviations xi Provincial Policy Statement Implementation 6 Natural Heritage Systems 15 Natural Heritage Features and Areas 37 Significant Habitat of Endangered and Threatened Species 47 Significant Wetlands and Significant Coastal Wetlands 56 Significant Woodlands 63 Significant Valleylands 74 Significant Wildlife Habitat 81 Significant Areas of Natural and Scientific Interest 90 Fish Habitat 94 How to Protect: Municipal Planning Techniques and Tools 107 Addressing Impacts of Development and Site Alteration 118 Provincial Land Use Planning Documents 134 Natural Heritage System Planning 145 Natural Heritage Information Sources 166 Glossary 216 Works Cited 219 Ontario Ministry of Natural Resources website Municipal Planning in Ontario web pages
4. ECONOMIC AND SOCIAL FUNCTIONAL VALUES CRITERIA		
<ul style="list-style-type: none"> Woodlands that have high economic or social values through particular site characteristics or deliberate management should be protected. 	<p>Woodlands should be considered significant if they have:</p> <ul style="list-style-type: none"> high productivity in terms of economically valuable products together with continuous native natural attributes and meet minimum area thresholds (e.g., 2–10 ha, depending on circumstance) a high value in special services, such as air-quality improvement or recreation at a sustainable level that is compatible with long-term retention and meet minimum area thresholds (e.g., 0.2–10 ha, depending on circumstance) important identified appreciation, education, cultural or historical value and meet minimum area thresholds (e.g., 0.2–10 ha, depending on circumstance) 	<p style="text-align: center;">◀ PREV NEXT ▶</p>

7.3.1.1 Significant Woodland Evaluation Criteria Further Discussion

7.3.1.1.1 Woodland Size

Larger woodlands are more likely than smaller woodlands to contain a greater diversity of plant and animal species and communities. A larger size allows woodlands to maintain fuller, more resilient nutrient cycles and food webs, and to be big enough to permit different and important successional stages to co-exist (MNR 1991). Larger woodlands have a greater relative importance for mobile animal species such as forest birds. Small, isolated woodlands are more susceptible to the effects of blowdown, drought, disease, insect infestations, and invasions by predators and non-indigenous plants (Pearce 1992). As woodlands reach a particular size, their importance for a particular set of species can be predicted to a certain extent. A multitude of local effects, however, makes very precise predictions impossible.

It is known that the viability of woodland wildlife depends not only on the characteristics of the woodland in which they reside, but also on the characteristics of the landscape in which the woodland occurs. Woodlands are highly dependent on surrounding habitat.

The percentage of forest cover in the surrounding landscape, the presence of ecological barriers such as roads, the ability of various species to cross the matrix surrounding the woodland and the proximity of adjacent habitats interact with woodland size in influencing the species assemblage within a woodland.

Woodland size should be evaluated in the context of the percentage of forest cover for the planning area (generally on the basis of a municipal or watershed boundary). Size criteria should also account for differences in landscape-level physiography (e.g., moraines, clay plains). In planning areas with little forest cover, small woodlands are increasingly important for providing woodland values and contributing to biodiversity by having special site characteristics (soil, climate, species or genes) that are not represented in other locations. In areas with a higher percentage of forest cover, smaller woodlands still may be significant for the factors listed above and should not be dismissed because of an abundance of surrounding forest land.

Regardless of landscape context, the largest woodlands in the planning area (or sub-unit) should be identified as significant. This recognizes the functional importance of large woodlands and attempts to address incremental fragmentation.

7.3.1.1.2 Ecological Functions

For purposes of identifying and evaluating significant woodlands in the NHRM, ecological functions that should also be considered are woodland interior, proximity to other woodlands or other habitats, linkages, water protection and woodland diversity.

Woodland interior habitat, usually defined as habitat more than 100 metres from the edge of the woodland, is important for some species (Askins et al., 1987; LandOwner Resource Centre and Ontario Ministry of Natural Resources, 2000), although it is now recognized that the overall percentage of woodlands within a landscape may have as much influence on a woodland's functions as the amount of edge. The 100 metre distance provides for relative seclusion from outside influences. The presence of such interior habitat provides a moister, more sheltered and productive forest habitat for certain sensitive species (Henshaw and Leadbeater, 1999). Woodlands with interior habitat have centres that are more clearly buffered against the edge effects of agricultural activities or more harmful urban activities than those without. Environment Canada (2004) recommended that more than 10 per cent of the land in planning units of the Great Lakes basin should be covered by interior forest habitat.

Woodlands that overlap, abut or are close to other significant natural heritage features or areas could be considered more valuable or significant than those that are not. Similarly, woodlands that are located between other significant features or areas can be considered to perform an important linkage function as "stepping stones." In addition, situations that enable woodlands to protect water sources are significant.

Woodlands composed of representative native species that have declined significantly south and east of the Canadian Shield (e.g., generally on deep-soiled uplands and fertile level plains where such locations have been largely cleared for other uses) provide significant contributions to the overall biodiversity of the landscape. Woodlands that extend across a variety of terrain features tend to consist of a broader range of vegetation communities than those occurring in more uniform settings. These more diverse woodlands may individually contain more plant and animal species, and provide more habitat features.

Quick Links

Table of Contents	ii
Abbreviations Used in This Manual	xi
Provincial Policy Statement Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	

7.3.1.1.3 Uncommon Characteristics

Forests in southern Ontario have been shaped by their ecological setting and historical disturbances. It is important to retain on the landscape woodlands that contain uncommon or outstanding woodland features. These woodlands contribute to the overall health, diversity and well-being of our forested landscape and may provide special habitats and other ecological values that are important to society.

Woodlands that contain rare or uncommon community types, important habitats of a species that is at risk or important habitats of species that are rare or restricted in their distribution, and woodlands that are dominated by old or large trees should be considered significant.

7.3.1.1.4 Economic and Social Values

Managed woodlands can provide many direct socio-economic benefits, as well as natural attributes. Southern Ontario woodlands can yield forest products (e.g., timber, maple syrup) of high economic value. They may also be managed for multiple benefits, including wildlife habitat or recreation at a level that is compatible with long-term ecological sustainability. In urban areas, air-quality improvement may be of particular importance. Planning authorities also have the ability to recognize the importance of the educational, natural heritage, cultural or historical values that woodlands provide especially in proximity to settlement areas.

7.3.2 Delineation of Woodland Patches

Developing a process for delineating woodland patches has many challenges that need to be addressed. For example, legislation and other sources outside the PPS vary in terms of how they define a woodland in relation to factors such as size, species composition and coverage by trees. Treed areas separated by small openings have important ecological functions in combination and could still be considered as a single woodland. It may be necessary, however, to establish a maximum distance between woodland patches beyond which the patches would be considered independent of each other.

Planning authorities may wish to consider delineating woodland patches for the purposes of assessing their significance using an approach based on the percentage of tree cover³³ and/or the Forestry Act definition for “woodlands.”³⁴ The combined approach will allow woodland patches to be identified using aerial photography with a ground-truthing component based on stem counts when needed.

Specific guidance relating to questions such as tree definition, woodland origin (i.e., naturally occurring or planted) and proximity of patches is briefly described below:

- Plantations: Generally, plantations (excluding fruit orchards or Christmas tree plantations) are recognized as investments made with the objective of forest restoration and can be considered to be woodlands.
- Woodland openings: A bisecting opening 20 metres or less in width between crown edges is not considered to divide a woodland into two separate woodlands. The area of the developed opening (e.g., maintained public road or rail line) is not included in the woodland area calculation.
- Minimum patch width: This width is intended to exclude relatively narrow linear treed areas such as hedgerows. The minimum average width for significance can be related to the woodland size threshold being applied. For example, a minimum 40 metre average width where the size threshold is 4 hectares or less can be increased to a 60 metre width where the size threshold is 10 hectares or more.

For further information about woodland patch delineation, planning authorities should contact their local MNR district office.

33 For example, the ELC approach defines a “forest” as tree cover greater than 60 per cent (see [appendix B.1.2](#)).

34 Under the Forestry Act, “woodlands” means land with at least:

- 1,000 trees of any size per hectare; or
- 750 trees measuring over 5 centimetres in diameter, per hectare; or
- 500 trees measuring over 12 centimetres in diameter, per hectare; or
- 250 trees measuring over 20 centimetres in diameter, per hectare but does not include a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees.

Quick Links

Table of Contents	ii
Abbreviations Used in This Manual	xi
Provincial Policy Statement Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	

7.4 Adjacent Lands

Adjacent lands are the lands relevant to which impacts must be considered and the compatibility of a development proposal must be addressed. The extent of adjacent lands may vary, depending on such factors as potential changes to surfacewater hydrology, survivability of trees located near a woodland edge and disruption to wildlife movement patterns. Adjacent lands may be defined using a variety of approaches, depending on site-specific conditions (see [section 4.4.2](#)). In all cases, these approaches should be justified relative to the overall objective of ensuring that there will be no negative impacts on significant woodlands from incompatible development (see [section 13](#)).

PPS NATURAL HERITAGE FEATURE	ADJACENT LANDS WIDTH (distance from feature for considering potential negative impacts)
Significant woodlands	120 m

For the purposes of policy 2.1.6 of the PPS, the Province recommends that adjacent lands are those lands within 120 metres of a significant woodland. This distance is recommended since development and land uses within 120 metres of woodlands have a reasonable probability of affecting the ecological functions of the woodlands (see [section 4.4.1](#)).

Considerations in recommending an adjacent lands area include:

- sensitivities of the plant and animal species in the woodland;
- potential for direct and indirect disruption, and changes in soil moisture and compaction;
- susceptibility to erosion;
- fear of hazards from falling edge trees that are functional when standing (e.g., as screening or cavity habitat trees); and
- the cumulative impacts of potential nearby developments and uses (see [section 13](#)).

Site-specific evaluations based on these considerations may demonstrate the need for greater or lesser adjacent lands widths.

Quick Links

Table of Contents	ii
Abbreviations Used in This Manual	xi
Provincial Policy Statement Implementation	6
Natural Heritage Systems	15
Natural Heritage Features and Areas	37
Significant Habitat of Endangered and Threatened Species	47
Significant Wetlands and Significant Coastal Wetlands	56
Significant Woodlands	63
Significant Valleylands	74
Significant Wildlife Habitat	81
Significant Areas of Natural and Scientific Interest	90
Fish Habitat	94
How to Protect: Municipal Planning Techniques and Tools	107
Addressing Impacts of Development and Site Alteration	118
Provincial Land Use Planning Documents	134
Natural Heritage System Planning	145
Natural Heritage Information Sources	166
Glossary	216
Works Cited	219
Ontario Ministry of Natural Resources website	
Municipal Planning in Ontario web pages	