

Natural Heritage Systems Planning

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Best Practices Guide to Natural Heritage Systems Planning



Ontario
Nature

Ontario Nature's Greenway Guide Series

Best-Practices

- Over 80 Ontario Official Plans reviewed for best practices in natural heritage system policies
- 60 best practice policy examples found
 - In 23 Official Plans

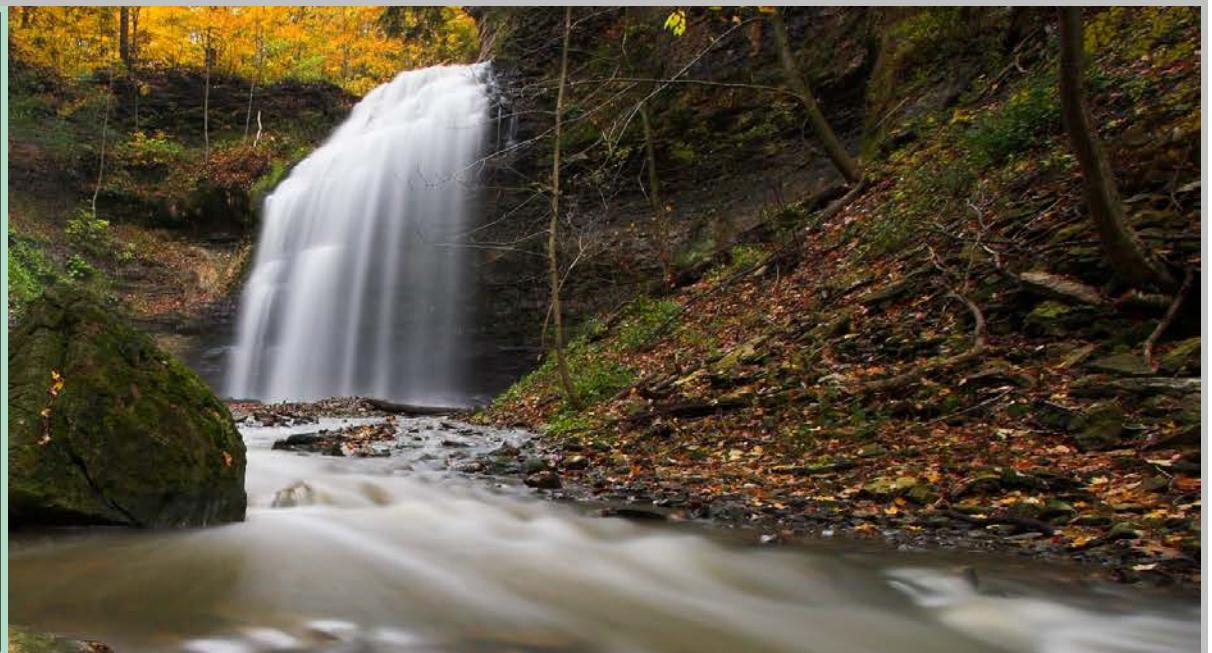


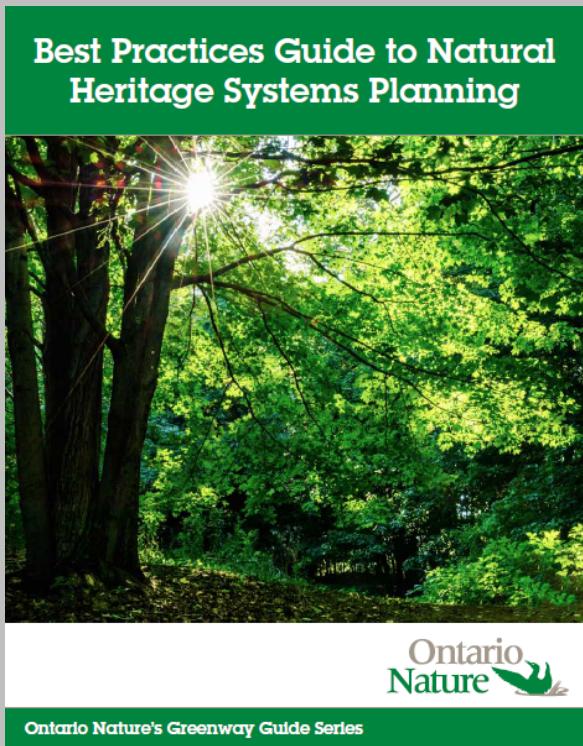


Photo: Michael Wynia

Purpose:

- to assist with policy development as municipalities review and update their Official Plans
- to stimulate and facilitate innovative, systems-based policy development
- hope that this initiative leads to sharing other policies and experiences in natural heritage systems planning

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The manual provides:

- Background on the guide;
- A discussion on the role of municipal planning; and,
- A discussion around natural heritage systems and agriculture.



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Main Content:

Principles and Best Practices.

Organized in three categories:

- Identification, protection and restoration of NHS;
- Integration of NHS planning; and
- Requirements for Environmental Impact Studies.



Photo: Michael Wynia

Best practice
examples selected
around 19 principles.

Figure 7: Summary of Principles and Best Practices

	Principle	Examples from municipalities with land within the Greenbelt, Oak Ridges Moraine or Niagara Escarpment	Examples outside the Greenbelt	Page
3.1	Identification, Protection and Restoration of Natural Heritage Systems			
3.1.1	Policy should ensure that natural heritage inventories/studies are undertaken, updated and maintained	City of Vaughan: Official Plan Consolidation – 3.2.2 Clearview Township: Official Plan – 11.13	City of Waterloo: Official Plan Consolidation – 8.2.2	19
3.1.2	Policy should require the identification and protection of core natural heritage features and corridors, and linkages to surface water and groundwater features and functions	Town of Ajax: Official Plan Consolidation – 1.2, 2.2.1 City of Hamilton: Urban Hamilton Official Plan Consolidation – C2.0, C2.7.4, C2.7.5	City of Ottawa: Official Plan Consolidation – 2.4.2	21
3.1.3	Policy should establish a commitment or reference to maintaining, improving and restoring the biodiversity and long-term ecological function of natural heritage systems	City of Vaughan: Official Plan Consolidation – 3.2.1 Town of Oakville: Livable Oakville Plan – 10.1.1		26
3.1.4	Policy should address and protect features, functions and linkages not otherwise identified in the Official Plan	Town of Georgina: Official Plan Consolidation – 3.5.2.7 City of Vaughan: Official Plan Consolidation – 3.2.3.2 Clearview Township: Official Plan – 4.1.2.3, 4.1.2.4	Township of Central Frontenac: Official Plan Consolidation – 7.5.2	28
3.1.5	Policy should direct that permitted uses take into account the impact on the natural heritage system, including ecological functions, and should incorporate prohibitions on development and site alteration within the natural heritage system	York Region: Official Plan Consolidation – 2.1.9		32
3.1.6	Policy should require the implementation of natural heritage system policies in zoning bylaws and subsequent amendments, as well as in other municipal bylaws	Halton Region: Regional Official Plan Interim Consolidation– 118 Clearview Township: Official Plan – 4.1.2.4, 4.1.5		33

Manual includes a quick reference table to each of the 19 principles and lists best practice examples by municipality.



Photo: Michael Wynia

The principles themselves provide potential guidance in the development of a well planned natural heritage system.

3.1 Identification, Protection and Restoration of Natural Heritage Systems



Photo: Michael Wynia

#1 Policy should ensure that natural heritage inventories are undertaken, updated and maintained.



Photo: Michael Wynia

Rationale:

- Initial ground truthing step.
- Provides information about features and linkages, and ideally health of the system.
- Can support multiple objectives – OP, watershed studies, ecological restoration, stewardship activities.
- Guides important planning decisions.
- Accurate and updated inventories are important.

EXAMPLE BEST PRACTICE POLICY

Best Practice: City of Waterloo:

“The City may undertake studies to evaluate the status and completeness of the Natural System with the intent of determining the precise location of natural features, identifying elements of the system that need to be added or modified, and establishing targets related to ecological function and biodiversity.”



Photo: Michael Wynia



Photo: Michael Wynia

#2 Policy should require the identification and protection of core natural heritage features and corridors, and linkages to surface water and groundwater features and functions.



Photo: Michael Wynia

Rationale:

- The systems approach is based on understanding linkages and underlying functions.
- Linkages to the hydrologic system also need to be considered for maintenance of biodiversity and for ecosystem resiliency



Photo: Michael Wynia

#3 Policy should establish a commitment or reference to maintaining, improving and restoring the biodiversity and long-term ecological function of natural heritage systems.



Photo: Michael Wynia

Rationale:

- Conserving and enhancing biodiversity and maintaining and restoring ecosystem function are key objectives of systems planning.
- Southern and eastern Ontario fall below the Provincial target of conservation of at least 17% of the landscape.

#4 Policy should address and protect features, functions and linkages not otherwise identified in the Official Plan.



Photo: Michael Wynia

Rationale:



Photo: Michael Wynia

- Natural systems are dynamic.
- Municipal resources may not provide for accuracy and complete information in initial identification and mapping.
- It remains appropriate to protect features and functions when identified.
- Consistent with other policy aspects of Official Plans which are not entirely dependent on designation boundaries.

#5 Policy should direct that permitted uses take into account the impact on the natural heritage system, including ecological functions, and should incorporate prohibitions on development and site alteration within the natural heritage system.



Photo: Michael Wynia



Photo: Michael Wynia

Rationale:

- The natural heritage system can serve many different social, economic and ecological objectives.
- While development is prohibited in certain features, development is not prohibited in the entire system.
- Minimum standards are set in the PPS allowing municipalities to build on these policies to achieve their own goals and objectives.



Photo: Michael Wynia

#6 Policy should require the implementation of natural heritage system policies in zoning by-laws and subsequent amendments, as well as in other municipal by-laws.

Rationale:



Photo: Michael Wynia

- Well-crafted zoning by-laws are essential to implementation and provide regulatory protection.
- OP provides basis for authority in zoning by-laws as well as site plan control by-laws, tree by-laws and other municipal by-laws and activities.



Photo: Michael Wynia

#7 Policy should establish provisions to grow and enhance the secured and environmentally managed portion of the natural heritage systems (e.g. through conservation easements, stewardship agreements or acquisitions).

Rationale:

- Much of the natural heritage system is privately owned and managed.
- Important to have a mandate to expand public ownership and management where opportunities arise.
- Opportunity also arises through working with landowners through stewardship agreements, conservation easements etc.



Photo: Michael Wynia

#8 Policy should require monitoring of the ecological health of the natural heritage system.



Photo: Michael Wynia



Photo: Michael Wynia

Rationale:

- Monitoring allows for assessment of ongoing health of the system.
- It improves the understanding of impacts of development and other stressors such as climate change.
- It allows for updating avoidance and mitigation techniques.



Photo: Michael Wynia

#9 Policy should enable biodiversity offsetting (i.e. compensatory mitigation) on a net gain basis, but only after avoidance and mitigation have been fully addressed, and only if:

1. the impacted biodiversity values have been explicitly measured;
2. the restoration of these values within a reasonable timeframe is demonstrably feasible; and,
3. uncertainties and risks have been fully accounted for in the loss-gain calculation (i.e. replacement ratio).



Photo: Michael Wyrta

Rationale:

- Entails compensating for losses at a site by generating equivalent gains elsewhere.
- Utilized in fisheries and endangered species management.
- Uncertainty involved so a “net gain” basis advocated.
- Should only be utilized where avoidance and mitigation not feasible, where reliable and proven conservation techniques available, and where gain is assured.
- There should be clarity on where it is appropriate to employ.

#10 Policy should provide for the involvement of the public and non-municipal agencies in the identification of natural heritage features and functions in monitoring activities.



Photo: Michael Wynia

Rationale:

- Public involvement benefits the community and the system.
- Promotes broader awareness and support.
- Capitalizes on resources.



Photo: Michael Wynia

3.2 Integration of Natural Heritage Systems Planning



Photo: Michael Wynia

#11 Policy should ensure the integration of natural heritage systems planning at multiple levels: regional, watershed, subwatershed and/or secondary plan level.

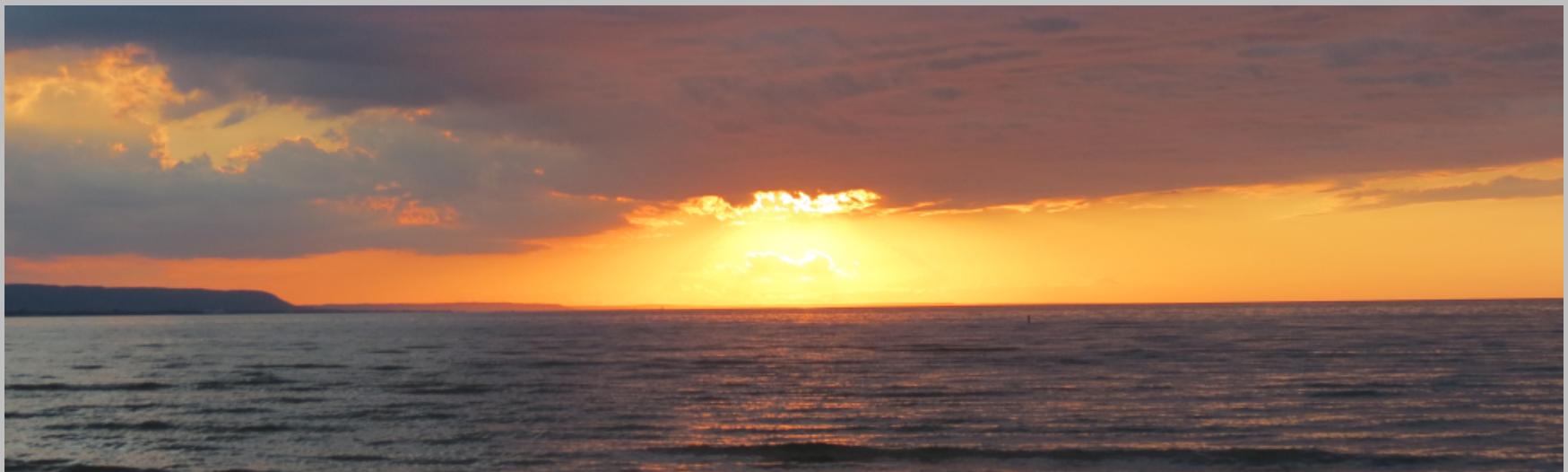


Photo: Michael Wynia



Photo: Michael Wynia

Rationale:

- Scale is an important consideration.
- Systems should incorporate features considered significant at a range of scales and should provide for refining features at various stages in the planning system and in the development approval process.
- Natural systems cross boundaries.

#12 Policy should acknowledge the importance of cross-jurisdictional communication and co-operation regarding natural heritage systems.



Photo: Michael Wynia



Photo: Michael Wynia

Rationale:

- Jurisdictional boundaries can impede success.
- The PPS directs a coordinated and integrated approach.
- Natural heritage systems extend across boundaries and across mandates.



Photo: Michael Wynia

#13 Policy should recognize the relationships and synergies between natural heritage systems and the surrounding environment, including agricultural lands, urban areas and resource extraction areas.

3.2.3 Rationale:



Photo: Michael Wynia

- Functions extend beyond the boundaries of systems.
- Promoting environmentally compatible agricultural, extractive and urban design practices will enhance and compliment measures to protect natural systems and functions.

#14 Policy should recognize the socio-economic, cultural and ecological values associated with natural heritage features and the services that the natural heritage system provides to the community.



Photo: Michael Wynia

Rationale:



Photo: Michael Wynia

- Natural heritage systems provide a significant benefit to communities in terms of ecosystem services, public health, recreation and social and economic opportunities.
- Acknowledgement and appreciation of these benefits cultivates interest, commitment and long-term sustainability.

3.3 Requirement for Environmental Impact Studies



Photo: Michael Wynia



Photo: Michael Wynia

#15 Policy should require proponents to conduct environmental impact studies and demonstrate that through avoidance and mitigation measures, there will be no negative impacts on the natural heritage system.

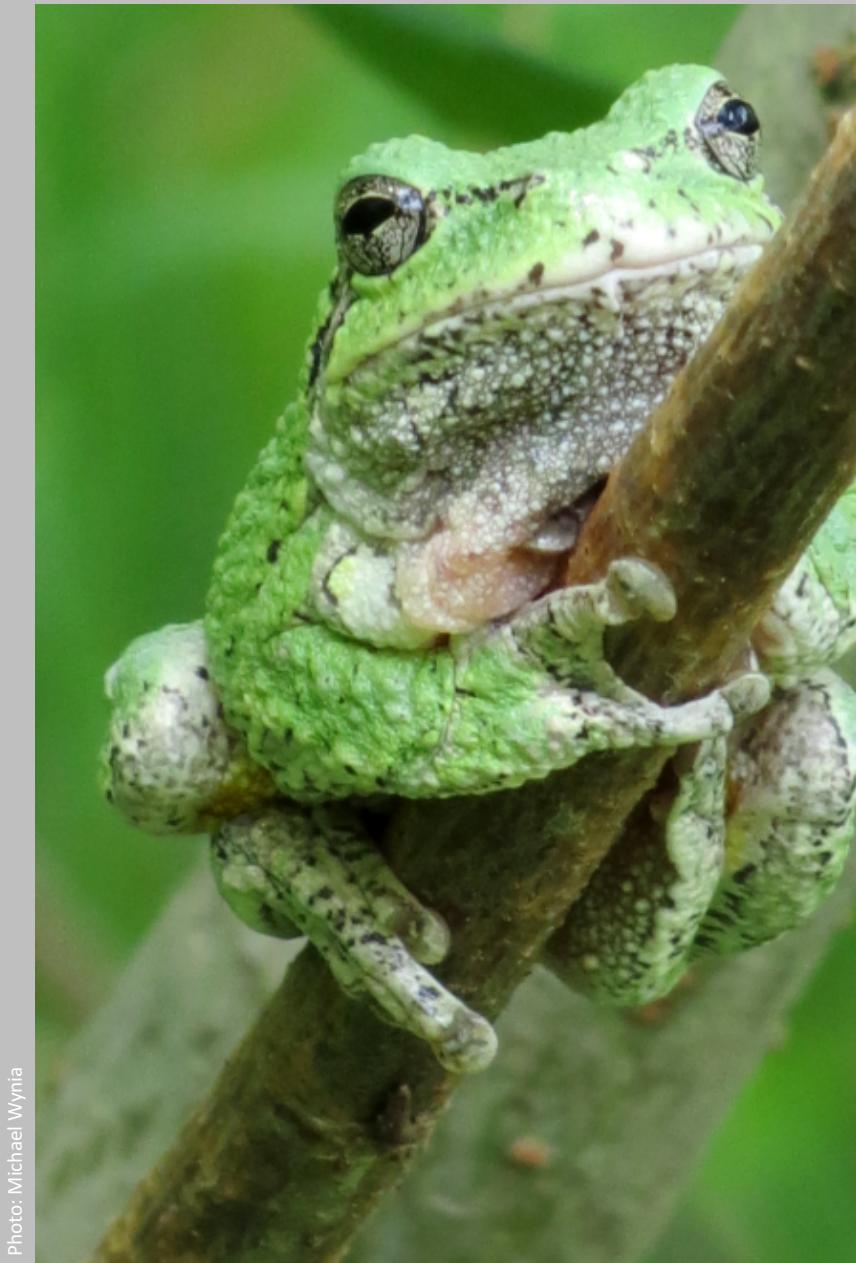


Photo: Michael Wynia

Rationale:

Environmental impacts studies:

- Are intended to protect features and functions by demonstrating that development will not have a negative impact.
- Should suit scale of the proposal and potential impacts.
- Should have workable planning recommendations.
- Should be determined in consultation with relevant approval agencies.

#16 Policy should clearly set out the requirements for impact assessments, including required content and analysis.



Photo: Michael Wynia



Photo: Michael Wynia

Rationale:

- EIS are an essential component of planning and development review process.
- Policies should establish minimum requirements for content.
- Detailed requirements provide strong and clear direction.
- Provide for an appropriately scaled approach.



Photo: Michael Wynia

#17 Policy should require the consideration of the role and importance of lands adjacent to natural heritage systems, an analysis of the impacts of development proposals, and the establishment of appropriate ecological buffers and setbacks.

Rationale:



Photo: Michael Wynia

- PPS establishes the requirement that development should not occur on adjacent lands except where evaluation has demonstrated no negative impacts.
- Adjacent lands to act as a buffer to protect natural heritage features and functions to promote long-term viability.

#18 Policy should require that development proponents consult with municipal staff, environmental advisory committees and/or planning boards prior to submitting an application.



Photo: Michael Wynia



Rationale:

- Benefits all parties by ensuring that submissions are complete and comprehensive.
- Assists in identifying information gaps, outlining expectations and identifying other agencies in approvals process.

#19 Policy should provide for extended and meaningful consultation with stakeholders that may exceed requirements in the Planning Act, particularly where large-scale developments or developments with potential significant impacts are being considered.



Photo: Michael Wynia



Photo: Michael Wynia

Rationale:

- Planning Act sets out minimum requirements.
- To enhance consultation and build on community values and perspectives additional input adds value.
- May involve additional meetings, extended review periods, wider access to information or other measures appropriate to exercise and scale of issue/application.



Thank you for your time.

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