

4.0 Natural Heritage and Water

4.1 Background

Gananoque is located within the Frontenac Arch Biosphere Reserve, a member of the UNESCO World Network of Biosphere Reserves. It encompasses 2700 sq. km from Brockville to Gananoque, extending north to Harrowsmith, Verona, and Westport. The biosphere is home to a diverse number of plant and animal species, while providing health, social, and recreational opportunities for the surrounding communities. Part of the UNESCO designation as a Biosphere Reserve requires protection and conservation of flora and fauna within its boundaries

The Town is home to several significant woodlands, both in the rural areas and along the shoreline. The PPS defines woodlands as treed areas that provide environmental and economic benefits to both the private landowner and the public, such as erosion prevention, hydrological and nutrient cycling, the provision of clean air and carbon storage, wildlife habitat, and outdoor recreational opportunities. Significant woodlands are woodlands that have either 60% ground coverage, or 10% ground coverage with a variable number of trees of different diameter and type. Development adjacent to significant woodlands are generally subject to a buffer to prevent negative environmental effects or an environmental impact study to demonstrate that the woodland function will not be negatively impacted.

Gananoque also falls within the Cataraqui Watershed and is situated at the juncture of the Gananoque and St. Lawrence Rivers, making the waterfront a major natural heritage feature. Both rivers serve as important fish habitat and spawning areas, as can be seen in Schedule “F” of the Official Plan. The James W. King Intake Protection Zone is also located within Gananoque. The rivers and surrounding watershed provide a source of drinking water for the local community. Protection of the rivers, and the watershed that feeds into the rivers, is of importance to not only animal and plant species for habitat, but the human population as well for health, tourism, and recreation purposes.

In 2014, the Cataraqui Region Conservation Authority prepared the Cataraqui Source Protection Plan which proposed amendments to several of the Town’s Official Plan Policies regarding source water protection. The Plan advocated for the inclusion of ‘and source water protection’ into the Official Plan’s guiding principles for ‘Planning for Public Health and Safety.’ Further, the Plan called for the inclusion of a section of new guiding principles for source water protection under the ‘Planning for Public Health and Safety.’ The Plan laid out new restrictions on developments within Gananoque adjacent to Intake Protections Zones and Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas.

The CRCA also undertook a review of the Official Plan in 2018 and recommended several updates that could be implemented to better reflect the natural environment and natural heritage features present within town. Key themes from their review include:

- Recognizing areas of natural heritage not located along the waterfront, such as woodlands and watercourses, and limiting and/or prohibiting development adjacent to or in these areas
- Addressing potential hazards along shorelines and recommending mitigation measures for the protection of these features
- Implementing environmental policies consistently across the Town

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- Recommending the use of Low Impact Development (LID) practices in new and redeveloped construction

Creating sustainable development practices and policies can mitigate adverse effects on the natural environment. The *Environmental Protection Act* defines adverse effects as the impairment of the quality of the natural environment for any use that can be made of it. One way to minimize these impacts is by using low impact developments (LID). Low impact development uses cost-effective construction and buildings methods to filter, store and return rainwater and melted snow to the ground. LID mimics the natural filtering processes of nature, cleans and cools the water, and reduces the local risk of flooding and strain on local stormwater infrastructure. Examples of low impact developments include rain gardens, bioswales, pervious pavements, and garden roofs.

4.2 The Land Use Planning Framework

4.2.1 The Planning Act

The Planning Act requires that municipalities consider provincial interests, such as the conservation and management of natural resources in carrying out their responsibilities under the Act. It also promotes sustainable economic development in healthy natural environments within the provincial policy framework.

Section 2 a) of the Act lists the protection of ecological systems, including natural areas, features, and functions as a matter of provincial interest, while (q) states that the promotion of development that is designed to be sustainable is of provincial interest.

4.2.2 The Provincial Policy Statement

The PPS holds that preserving the natural environment and natural features for their economic, environmental and social benefits is essential to Ontario's long-term prosperity, environmental health, and social well-being. These natural features include wetlands and woodlands, water, agriculture, mineral, cultural heritage, and archaeological resources. These natural features provide essential ecological processes, public health and safety, food and fibres, and provide for recreational opportunities and are of provincial interest.

The PPS also defines natural heritage systems as a system made up of natural heritage features and areas, linked by natural corridors which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species and ecosystems.

The PPS outlines policies regarding development, sewage, water and stormwater, agriculture, and development in rural areas for the protection of the natural environment.

Policy 2.1, Natural Heritage, requires consistency from planning authorities to prevent development and site alteration from occurring within, or within the buffer zone of, significant wildlife habitats, woodlands, wetlands, and areas of natural and scientific interest. Further, natural features and areas shall be protected for the long-term, and where possible, linkages between, and among, natural heritage features should be maintained and restored to preserve their ecological function and biodiversity.

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Policy 2.2, Water, states that authorities shall protect, improve, or restore the quality and quantity of water by:

- using the watershed as the ecologically meaningful scale for integrated and long-term planning, which can be a foundation for considering cumulative impacts of development;
- minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts;
- maintaining linkages and related functions among ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shorelines;
- implementing necessary restrictions on development and site alteration to:
 - protect all municipal drinking water supplies and designated vulnerable areas; and
 - protect, improve or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic features
- ensuring stormwater management practices minimize stormwater volumes and contaminant loads and maintain or increase the extent of vegetative and pervious surfaces.

Policy 1.1.3.8. b) of the PPS states that the *infrastructure* and *public service facilities* which are planned or available are suitable for the development over the long term, are financially viable over their life cycle, and protect public health and safety and the natural environment.

Policy 1.1.4.1. h) states that healthy, integrated and viable *rural areas* should be supported by conserving biodiversity and considering the ecological benefits provided by nature.

Policy 1.6.6.1. b) 4) states that planning for sewage and water services shall ensure that these systems are provided in a manner that protects human health and safety, and the natural environment.

4.2.3 The Official Plan

One of the Town's Official Plan's Guiding Principles is a commitment to protect the natural environment. Section 3.6 of the Plan outlines the Town's policies for endangered or threatened species habitat, woodlands, fish habitat, river corridors, wildlife crossings, and public open space.

Woodland policies within the Official Plan state:

1. Development may be permitted in accordance with the underlying land use designation in areas where a Woodlands overlay designation is shown on Schedule F where it has been demonstrated through an environmental impact assessment that the overall woodland function will not be negatively impacted, or the ecological function of the woodland negatively impacted by the proposed development.
2. For significant woodlands, agricultural forestry activities such as maple syrup production and the harvesting of mature trees in accordance with accepted forestry practices, recreational trails and snowmobile trails are considered as appropriate activities in woodlots and therefore are permitted without any environmental impact assessment. Such activities are to be carried out in an environmentally sensitive manner so as to preserve the overall woodlot function.

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All watercourses and waterbodies within Town are considered to have the potential for Fish Habitat, and specifically the Gananoque and St. Lawrence Rivers host both fish habitat and fish spawning. Policies regarding Fish Habitat centre around prohibiting development in fish habitat, except in accordance with provincial and federal requirements, and ensuring development abutting fish habitat adheres to mitigation and prevention measures.

There is reference to the restoration of contaminated sites in Section 3.7.6., which have the potential for adverse effects to human health and the natural environment.

Section 4.1.5 requires watershed and sub-watershed studies to be undertaken when proposed development may impact highly sensitive natural environments. The results of these watershed studies should be incorporated into the Town's Official Plan whenever practical.

Section 5.4.10.2 discusses the implementation of the Town's Development Permit By-Law in which one of the objectives is the continued and enhanced protection of the natural environment.

4.3 Conclusion

The Official Plan must ensure that all relevant natural heritage and source water protection policies, enacted since the Official Plan was introduced, be incorporated into the update. Existing Official Plan policies should be updated to ensure they are up to date with current local, provincial, and federal policy.