

Watershed Biodiversity

Biodiversity is a term used to describe the number and variety of organisms found within a given geographic region. Ecosystems containing a wide variety of plants and animals tend to be healthier than those with a low level of biodiversity. Making an effort to conserve biodiversity is important because we are reliant on a healthy natural environment for our chief resources including water to drink, food to eat, and air to breathe.

- Conservation Halton's watershed supports a diversity of natural features, including rare plants and animals as well as significant natural habitats and geological formations.
- Conservation Halton is dedicated to making informed decisions regarding the management and rehabilitation of our natural resources. In 2005, the Long-Term Environmental Monitoring Program was formalized to guide the collection of information on species, ecosystems and changes to the environment over time.
- Healthy ecosystems are dynamic and able to adapt to naturally changing conditions. However, rapidly changing conditions caused by human activity have the potential to harm the natural environment and disrupt biodiversity.
- Some major threats to biodiversity include habitat fragmentation and destruction, invasive species, and pollution.
- Increased population growth can have a major effect on biodiversity through habitat loss. To maintain a high level of biodiversity in Halton's watersheds, it is important that growth is managed in a proactive and environmentally responsible manner.
- In 2003 and 2004, the Hamilton, South Peel, and Halton/North Peel Naturalists' Clubs, Conservation Halton and Halton Region developed a comprehensive record of Halton Region's biodiversity – the Halton Natural Areas Inventory (NAI). Copies of the NAI are available for purchase through Conservation Halton.
- Despite the fact that high biodiversity is normally associated with a healthy environment, some significant habitats possess a naturally low diversity of plants and animals. This low biodiversity is often the result of naturally low nutrient levels and harsh conditions (such as drought and

Summary

Conservation Halton's viewpoint on biodiversity promotes the conservation of biological variability and the sustainable use of natural resources. To maintain a healthy watershed, it is important that we strive to prevent the loss of biodiversity.



freezing) as is seen with sand dune and alvar habitats. An alvar habitat is a biological environment based on a limestone plain with thin or no soil and as a result, sparse vegetation. Despite lacking biodiversity within themselves, their uniqueness adds to the overall biodiversity of the watershed. Alvars provide habitat for birds, rare plants, and butterflies whose habitat is declining elsewhere.

Why is Biodiversity Important?

Biodiversity is often viewed as a sign of a healthy environment because complex ecosystems tend to be more stable than environments with less diversity. Healthy ecosystems are dynamic and have the ability to adapt to naturally changing conditions. However, human activity has the potential to disrupt this natural balance. With human-induced, rapidly changing environments, we run the risk of harming our natural environment. Humans disrupt biodiversity in four major ways: habitat degradation and loss, pollution, introduction of invasive species, and unsustainable use of resources.

Conservation Halton is committed to conserving native biodiversity through activities such as protection of natural heritage systems, the creation of wildlife corridors, and increased public awareness.

Invasive Species and Biodiversity

Many invasive species will aggressively out compete and damage native species, lowering overall biodiversity. Invasive

plants will frequently reduce biodiversity to such an extent that only a monotypic community remains where the invasive is the only plant growing.

Species at Risk in Halton Region

The Natural Heritage Information Centre (NHIC) is part of the Ontario Ministry of Natural Resources Fish and Wildlife Branch. The Centre is dedicated to maintaining an up to date database on rare plant and animal species across Ontario. The NHIC lists 80 species at risk within Conservation Halton's watershed. "Species at Risk" is a designation given to plant and animal species that are threatened with extinction, extirpation or endangerment in a given geographic region. Species at Risk in Halton Region include mammals, birds, reptiles, amphibians, fish, insects, and a variety of plants.

Examples of rare species found within our watershed include (pictured above from left to right):

Locally Rare: Slaty Skimmer (*Libellula incesta*) - Dragonfly

Provincially Rare: Mottled Dusky-Wing (*Erynnis martialis*) - Butterfly

Endangered: Hoary Mountain mint (*Pycnanthemum incanum*) - Plant

Threatened: Jefferson Salamander (*Ambystoma jeffersonianum*) - Amphibian

Special Concern: Louisiana Waterthrush (*Seiurus motacilla*) - Bird

Conservation Halton Natural Champion for a Healthy Watershed



Conservation Halton is the community based environmental agency that protects, restores and manages the natural resources in its watershed. Conservation Halton has staff that includes ecologists, land use planners, engineers, foresters and educators, along with a network of volunteers, who are guided by a Board of Directors that includes municipally elected and appointed citizens. Conservation Halton is recognized for its stewardship of creeks, forests and Niagara Escarpment lands through science based programs and services.

For more information about Biodiversity contact Conservation Halton:

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