

Background Briefing

Natural Heritage

December 2014

The Natural Heritage department protects and enhances the resources of the watershed to help restore its natural resiliency, protect and improve biodiversity and provide natural spaces for the enjoyment and benefit of watershed residents.

It does these things in a variety of ways:

- developing watershed-scale plans such as the Watershed Forest Plan, the Grand River Fisheries Management Plan and the Natural Heritage Strategy.
- providing input on ecological matters during review of land-use planning and permit applications
- tree-planting, ecological restoration and enhancement of natural areas on GRCA land,
- assessment of the success of restoration projects,
- monitoring of species at risk and invasive species,
- supporting the development of master plans for GRCA properties, and
- evaluation of lands proposed to be purchased by the GRCA.

To implement its program, the Natural Heritage department employs specialist in forestry, restoration, natural heritage and ecology.

Watershed scale plans

The Watershed Forest Plan for the Grand River provides an overview of the terrestrial resources of the watershed and recommends actions that can be taken to protect and enhance them. The Forest Plan guides the work done by the GRCA as well as providing context for private landowners or volunteer and community groups that carry out their own efforts. The plan highlights the high ecological value of GRCA lands, which has led to a greater emphasis on improvements to those properties.

The Grand River Fisheries Management Plan was developed in the 1990s as a co-operative venture of the GRCA, the Ministry of Natural Resources and Forestry and community groups with an interest in improving the watershed's fisheries. It developed a list of 42 "best bets" – projects with the greatest chance of improving the fishery and the overall health of its waterways. The plan's implementation committee develops projects and helps



A crew conducts electrofishing on the Grand River as part of a study of fish populations.

obtain funding from public and private sources to carry out the projects. In 2009 the committee was presented the National Recreational Fisheries Award by Fisheries and Oceans Canada.

Plan input and permit review

The Natural Heritage department reviews development and construction proposals to determine their potential impact on natural features such as streams, wetlands, significant woodlands and others. The review includes advice on how the proponent could avoid or reduce the impact.

In many cases, this involves pre-consultation meetings and site visits with the proponent to identify the concerns, define requirements for additional studies or to discuss other changes to reduce the impact of the work. They may discuss, for example, provisions for sediment and erosion control, timing of the project and other matters.

Staff also work with consultants, the Ministry of Natural Resources and Forestry and others to update wetland and other maps in order to provide better information to GRCA staff, proponents, municipalities and other agencies involved in reviewing applications.

Managing GRCA lands

The GRCA owns about 20,000 hectares of land. The Natural Heritage group guides the stewardship of these lands in conjunction with Property and Conservation Area staff.

They will, for example,

- conduct vegetation inventories and assess the significance of various habitats
- help develop master plans,
- prepare and implement forest management and restoration plans, and
- support stream and fishery improvement projects, such as removal of small dams or in-stream works that improve fish habitat, and
- provide guidance for land purchases.

Restoration and improvement projects

Natural Heritage staff work with other agencies and community partners to undertake projects each year to expand or improve woodlands, grasslands, wetlands, streams, rivers and other natural areas.

Woodlands

Each year the GRCA plants trees on its own property to increase forest cover. Planting plans are based on local climate, soil and other characteristics. In many projects, professional tree-planting firms are used. However, community organizations participate in Earth Day and other events. In 2014 Natural Heritage staff organized the planting of nearly 100,000 trees on GRCA land. In recent years, Rotary Clubs and other community organizations have supported the creation of new forest at Snyder's Flats, Guelph Lake and in Brantford.

Grassland, prairie and savannah

These rare landscapes are found in the central part of the watershed, near Brantford and Cambridge. Notable examples include the F.W.R. Dickson Wilderness Area and the Apps' Mill Conservation Area. Fire is a natural part of the life cycle of these lands, so the GRCA carries out period controlled burns to reduce the presence of non-prairie species and foster the growth of native grassland plants.

Wetlands

The Grand River watershed has lost about two-thirds of its wetlands. The GRCA has re-established wetlands in areas such as the Luther Marsh and Dunnville Marsh. Several partners, notably Ducks Unlimited Canada, have supported the projects.



A controlled burn at Snyder's Flats

Rivers and stream

Projects are undertaken to improve water quality by restoring rivers and streams. For example, small dams have been removed on Chilligo Creek in Cambridge and Mill Creek near Cayuga to improve water quality and eliminate barriers to fish movement. Streambank restoration projects, such as one carried out at Apps' Mill Conservation Area, reduce erosion and thus improve habitat.

The Mill Creek Rangers program, supported by the GRCA and private and public agencies, has been at work for years to restore the creek which starts near Guelph and enters the Grand in Cambridge.

The GRCA also supports the Ministry of Natural Resources and Forestry and the Friends of the Grand River in a program to stock about 40,000 brown trout in the Grand and Conestogo rivers each year. The program has turned the Grand into an internationally recognized fly-fishing river.

Partnerships and community support

Many restoration projects and some staffing contracts are funded from external sources solicited by department staff and the Grand River Conservation Foundation.

For example, Ontario Power Generation has provided money over several years for reforestation of land at Luther Marsh Wildlife Management Area.

Rotary Clubs in Guelph and Kitchener area have contributed to restoration and reforestation projects in their communities. Government agencies such as Environment Canada Habitat Stewardship Program have underwritten costs of restoration projects and monitoring of species at risk. Ducks Unlimited Canada and Trout Unlimited have supported wetland and stream projects. The GRCA also makes its property available to universities so staff and students can pursue their own investigations.