

ROUGE RIVER REDSIDE DACE MONITORING & REHABILITATION



PROJECT GOAL

Since 2003, Ontario Streams has been working on the Redside Dace Monitoring and Rehabilitation Project in the Rouge watershed. The Rouge River is one of the few remaining watersheds in Ontario where Redside Dace are found. However, they can only be found in small, isolated populations due to increasing habitat degradation. The goal of this project is to restore and rehabilitate habitat for this provincially endangered species and in doing so, promote stewardship of our local streams.

THE NEED

The Rouge River watershed covers 336 km² and includes areas within the Cities of Toronto and Pickering and the Towns of Richmond Hill, Markham, and Whitchurch-Stouffville. This project has focused primarily on areas in the City of Markham and the City of Toronto. These areas have experienced rapid residential, recreational and industrial development leading to:

- A loss in the quality and quantity of streamside vegetation (riparian areas) due to urban growth and poor agricultural practices. This results in a loss of habitat and food for terrestrial and aquatic species, as well as an increase in water temperature, erosion, and sedimentation.
- The rapid development within the watershed has greatly increased the amount of paved, impervious surfaces, causing increased damaged to watercourses from flash storm water runoff and snow melt. This results in the collection of garbage and debris in-stream as well as increased sedimentation and erosion of stream banks.
- Invasive and non-native species in the watershed include plant and aquatic species such as: Dog Strangling Vine, Himalayan Balsam, European Buckthorn, Rusty Crayfish, Carp, and Goldfish that out-compete native species and reduce local diversity.

ACCOMPLISHMENTS

Since 2003, Ontario Streams has been working in the Rouge on Redside Dace projects. Many monitoring and rehabilitation projects have been completed in Little Rouge Creek, Morningside

Creek, Berczy Creek, Bruce Creek, Apple Creek, Eckardt Creek, Robinson Creek, and Mount Joy Creek including:



Eroded Stream Bank Before Rehabilitation



Eroded Stream Bank After Rehabilitation

- Over 14km of aquatic habitat improvements and bank stabilization projects have been completed. This work been focused on streams located in the Markham and Scarborough areas. Aquatic habitat enhancement projects to increase the amount of in-stream cover and habitat have included the installation of half-log covers and L.U.N.K.E.R.S. structures. Bank stabilization projects to repair minor erosion have included cabled debris jams, cedar sweeps, and log and rock placements. In areas with severe erosion and undercutting, cabled log jams have been installed and banks have been re-graded using various bioengineering techniques.
- Over 9600 native shrubs and trees have been planted at various sites within the Rouge with the help of volunteers. Native shrubs were planted along the riparian zone to provide food and cover for Redside Dace and other aquatic and terrestrial species. These plants once established, will also help to stabilize banks, reduce stream temperatures, and filter runoff.
- In-stream habitat mapping has been completed for over 15km in the Rouge to assess the amount and quality of available habitat for Redside Dace. Rehabilitation plans based on this mapping will provide recommendations for habitat improvements in these areas.

- Garbage and debris was removed over a 14km stretch of the Rouge River. Ongoing garbage cleanups take place around Berczy Creek, and Robinson Creek in Markham and the Rouge River in Richmond Hill with the help of community volunteers.
- Regular monitoring in the Rouge helps assess the quality of stream habitat and determine whether Redside Dace are present in the stream. Fisheries monitoring, benthic invertebrate sampling, and water temperature monitoring are methods used that provide important information on the health of the aquatic environment in the Rouge watershed.

PARTNERS

The Rouge Redside Dace Rehabilitation and Monitoring program receives financial support from the Ontario Ministry of Natural Resources and Forestry's Aurora District office and Rouge Park. Many other partners have provided financial and in-kind support over the years including: the Ministry of Natural Resources and Forestry's Species at Risk Stewardship Fund, Shell Environmental Fund, Unilever-Evergreen Aquatic Stewardship Fund, Markham Environmental Sustainability Fund, York Environmental Stewardship, The Regional Municipality of York, Environment and Climate Change Canada's Habitat Stewardship Fund and EcoAction Community Funding Program.

Ontario Streams has worked with many agencies, community groups, and businesses who have volunteered their time towards these critical rehabilitation and monitoring efforts in the Rouge watershed. We would like to thank the Milliken Mills

High School's T.E.A.M. program; this group has been volunteering for over a decade, working on various in-stream rehabilitation projects, tree and shrub planting, and monitoring activities in the Markham area. In the Scarborough area, we would like to thank Derek Lee MP for the Scarborough Rouge-River who partners with Ontario Streams. Every year, they work to improve the Morningside Creek area by completing projects such as tree and shrub planting and in-stream garbage and debris clearing.

A critical component of this project was to generate public awareness through education and outreach activities such as employing youth, encouraging volunteer participation, and contacting local landowners. Ontario Streams also partners with the Toronto Zoo to educate elementary school students about this endangered species through its curriculum-based programs. If you are interested in participating in Redside Dace projects in your community, visit our website for volunteer opportunities or contact us for more information.

For more information on Redside Dace [click here](#) .