



## Lake Huron/Georgian Bay Watershed: A Canadian Framework for Community Action

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### **Project Synopsis**

**PROJECT TITLE:** Kagawong River Stream Restoration Site KAG-160

**RECIPIENT:** Manitoulin Streams Improvement Association

**PROJECT GOALS AND OBJECTIVES:**

To provide ecological, environmental and social/economic benefits to the Lake Huron basin by engaging our local community members in educational awareness and having them contribute toward stream restoration projects that will protect and restore water quality, natural habitats and biodiversity of our Lake Huron tributaries. The goal of Site KAG 160 project was to restore and rehabilitate the recreational fisheries habitat along the Kagawong River working with the Township of Billings and engaging local community members in stewardship activities. This would enhance sustainability and ongoing productivity of Lake Huron's recreational fisheries through the protection of water quality, restoration and enhancement of aquatic & fish habitat and by improving fish passage or connectivity to critical spawning habitat for this Lake Huron tributary.

**PROJECT PARTNERS:**

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Ausable Bayfield Conservation Authority/Lake Huron-Georgian Bay Canadian Watershed Framework for Community Action (MOE, EC), Canada Ontario Agreement Funds (COA), Recreational Fisheries Conservation Partnership Program (RFCPP), Northern Ontario Heritage Fund Corporation (NOHFC), Municipality of Central Manitoulin, Township of Billings, Town of Northeastern Manitoulin and the Islands, Municipality of Assiginack, Manitoulin Transport, Carriere Industrial Supply Ltd., Ramakko's Source for Adventure, Walmart Evergreen, RBC Blue Water Fund, Ontario Federation of Anglers and Hunters (OFAH), Manitoulin Stream volunteers, Gore Bay Fish and Game Club, United Fish and Game Club, Little Current Fish and Game Club, 4Elements Living Arts, Canada Council for the Arts, Manitoulin Area Stewardship Council, Windy Lake Provincial Park Stewardship Rangers, Sudbury District Stewardship Rangers, College Boreal, Laurentian University

**PROJECT LENGTH:** 12 months



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### **PROJECT SUMMARY:**

The Kagawong River Enhancement Strategy identified Site KAG-160 as 1 of 20 sites along the Kagawong River in need of restoration and was ranked as the highest priority site to be restored. Problems identified at site KAG-160 included: erosion on the left bank, channel widened by erosion, split flow in channel, existing pools (2) on left bank that need to be adjusted and a lack of vegetative cover over the pools. These cumulative impacts in addition to fluctuating water levels due to numerous hydro dams situated along the river have impacted critical spawning habitat that bring socio-economic benefits to the area. By improving the river's hydrological function, fish passage and spawning habitat it will help provide migrating salmonids such a Coho, Chinook, Atlantic Salmon and Rainbow trout better access up the 1km river reach to facilitate the completion of their life cycle thereby improving our recreational fishing opportunities. In addition to the Kagawong River being a key area for recreational fishing, it has a highly accessible public hiking trail along the river that provides educational and fish viewing opportunities. A bioengineered site design was implemented through installation of in-stream structures along an 80 metre stretch restoring and protecting approximately 900 square metres of in-stream habitat. This included improving riparian vegetation and canopy, prevention of bank erosion, reducing stream width and increasing stream depth, improving center and edge habitat, and accommodating flow fluctuations due to hydro dams. Community members were involved with stewardship activities to restore and stabilize 700 square metres of shoreline banks by planting native trees and shrubs within the adjacent riparian buffer zones and conducted a shoreline cleanup.

### **ACCOMPLISHMENTS:**

- Agreement arrangement between Manitoulin Streams and the Township of Billings
- Restored 63 linear m of stream
- Repaired 842 m<sup>2</sup> aquatic in-stream fish habitat
- Installed 9 in-stream boulders to create 1 vortex weir
- 1m diameter boulders (72) installed in-stream over 2 locations with boulders being used to block the entrance to a split channel over a length of about 8 m.
- Installed 23 root wads over approximately 45m of river bank
- Installed 1 wing deflector
- Enhanced 701.5 m<sup>2</sup> of riparian habitat



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- 2 m wide riparian vegetation zone planted along the edge of the river in various areas (642 shrubs)
- 3 m wide canopy zone planted along the edge of the river in various areas (602 trees)
- Installation of a viewing area (about 2 m by 10m)
- Hectares protected 0.17
- Relocation of the existing walking path as required
- Removal and relocation of existing rip rap
- Removal of trees off site to allow equipment access
- Implement erosion and sediment control plan
- Installed 1 in-water and 2 land art installations through partnership with 4Elements Living Arts
- Shoreline and in-stream river cleanup
- Invertebrate and electro-fishing assessments with College Boreal and Laurentian University

### **NEXT STEPS:**

- Manitoulin Streams will continue to obtain funding to restore the top 10 streams on Manitoulin Island identified in our Strategic Plan. In 2016, it is our intention to restore 4 sites on the Mindemoya River (1 high priority site and 3 medium priority sites), 1 medium priority site on the Manitou River and continue to work with Lakeview P.S. restoring M'Chigeeng Creek on M'Chigeeng First Nation.
- Increase our educational outreach to various people in our communities and maintain and increase partnerships.
- Media – increase public awareness (Website, Facebook, news articles)
- Continue to communicate with landowners to promote future restoration efforts.

### **LESSONS LEARNED:**

- Establishing new partnerships can bring a different dimension to restoration projects that generate new conversations amongst the public about ongoing restoration efforts. The partnership with 4elements Living Arts provided opportunities for people to connect the land based arts with the environment. We want to explore more of these types of beneficial partnerships.



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### **POTENTIAL FOLLOW-UP PROJECTS:**

- Manitoulin Streams will return to this site in 3 years to have College Boreal and Laurentian University conduct post fisheries and invertebrate assessments to evaluate the gains of the restoration work completed.

### **PROJECT PHOTOS:**



Shoreline before the undertaking of restoration efforts



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Shoreline after the completion of restoration efforts