



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

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*This project was provided partial funding through the Lake Huron/Georgian Bay Framework for Community Action to increase the capacity of local organizations, engage the community, and turn local interests and concern into environmental action consistent with 'Framework' principles – see [www.lakehuroncommunityaction.ca](http://www.lakehuroncommunityaction.ca)*

### **Project Synopsis**

**PROJECT TITLE:** Six Streams Protection and Restoration Initiative

**RECIPIENT:** Northern Bruce Peninsula

**PROJECT GOALS AND OBJECTIVES:**

The overarching objective of this multi-year and multi-pronged initiative is to improve water quality and aquatic habitat in the Stokes and Old Woman's Rivers, Judges Creek, Swan Lake and the unnamed creek draining into Little Pike Bay. These rivers drain into Lake Huron and Georgian Bay. By engaging the farming, cottage communities and general public the following objectives are to be addressed:

- a. Nutrient loading and trampling of aquatic habitat by cattle access to the rivers
- b. Nutrient loading by underperforming septic systems owned primarily by cottage residents
- c. Nutrient loading through soil erosion and
- d. Destruction of coastal and interior wetlands through invasive phragmites

**PROJECT PARTNERS:**

Lake Huron Georgian Bay Canadian Framework for Community Action, Ontario Ministry of Environment and Climate Change, Ontario Trillium Foundation, Ontario Ministry of Agriculture, Food and Rural Affairs, Ontario Ministry of Natural Resources and Forestry, Environment Canada through EcoAction, Habitat Stewardship Program, and National Wetlands Fund, the Dalglish Foundation, Bruce County, Nature Conservancy of Canada and the Municipality of Northern Bruce.

**PROJECT LENGTH:** 7 years (2012-2019)

**PROJECT SUMMARY:**

Located in a UNESCO World Biosphere, the Northern Bruce Peninsula has one of the highest concentrations of rare species in all of Canada but no Conservation Authority to lead stewardship and restoration efforts. The award winning Bruce Peninsula Biosphere Association,



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a registered charity managed and led by volunteers and supported by two professionals, fills this gap.

Water quality work was sparked by a seed grant of \$3500 from the Lake Huron Georgian Bay Canadian Framework for Community Action in 2012. Efforts began with engaging the farming community through a dinner, walking all the rivers and conducting pilot water testing of the rivers to locate cattle trampling of stream banks and nutrient issues. Equipped with \$200,000 in grants from Environment Canada's EcoAction Program and the Ontario Trillium Foundation in 2013 12 alternate watering systems for cattle on the Stokes River were installed, cattle exclusion fencing and a riparian buffer. Public awareness of best management practices related to septic system management was increased. S

Water quality is a critical issue on the Northern Bruce peninsula. Improving water quality benefits biodiversity, which is especially important given the high concentration of rare species. It preserves the attractiveness of the water for tourists, a key economic driver in the community. The nearshore of Lake Huron and Georgian Bay benefits as does the First Nations fishery as it preserves significant whitefish spawning grounds. Clean water for the cattle improves farmer's yields as does reducing soil erosion. The karst topography reduces nutrient loads and protects groundwater from contamination, which is vital considering the area relies on wells for drinking water.

### **ACCOMPLISHMENTS:**

- Working with 30 farmers, in 2 1/2 years have installed 47 alternate watering systems that are powered by solar energy; 18 in 2015
- Installed 7.4 kilometres of fencing; 2 km in 2015
- Provided alternate watering sources for 3340 cattle reducing phosphorus loading by three-quarters of a tonne



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- PM received an Award from Bruce County Federation of Agriculture and Featured in Cattlemen magazine, an industry publication centered in Western Canada
- Installed 3 alternate water level control structures (an alternate to berms) (2013 and 2014)
- Facilitated the training of 12 Cabin certified water quality data collection technicians (2013) and 4 new people in training now
- Collected water and benthic samples for 3 consecutive years, analyzed through an independent laboratory and taxonomist and published on website
- Held 3 shoreline stewardship workshops (2015)
- Designed and 3<sup>rd</sup> party delivered a survey of public awareness of septic system best management practices 2014
- Held 3 septic system workshops (2 in 2015)
- Held 6 Pasture meetings and site tours for farming community ( one in 2015)
- Engaged the general public through presentations to 9 Property Owners Associations (2015)
- Completed an aquatic assessment using Ontario Streams Assessment Protocol for Stokes, Judges and Old Woman's Rivers (2015)
- Participated in capacity building by attending Framework's Summit, Manitoulin Rivers Site Visit and River Restoration Workshop (2014 and 2015)
- Demonstration Project for "wilding a stream" started (2015)
- Enhanced water testing capacity by purchasing 2 ISCO's
- Identified over 250 patches of phragmites in coastal and interior wetlands on the Northern Bruce and controlled over 60% of them (2014 and 2015)
- Obtained 3 year Ontario Trillium Foundation and GLASI funding for combatting soil erosion project

### **NEXT STEPS:**

- Begin working on major soil erosion project
- Install at least 11 more alternate watering systems for the cattle



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- Install another 2 km of fencing
- Measure effectiveness of alternate drain structures and install 2 more
- Continue water quality monitoring
- Build out demonstration site
- Develop a “Community of Practice” for Crop Farmers
- Continue building community awareness of phragmites and involving public in identifying it and controlling it

### **LESSONS LEARNED:**

The farming community is closely knit. Maintaining good relationships at all times is critical. It is important to understand the farming community's needs and find a balance between ecological and farmers' economic considerations. At times, a less than ideal ecological solution is necessary to generate stakeholder engagement.