

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

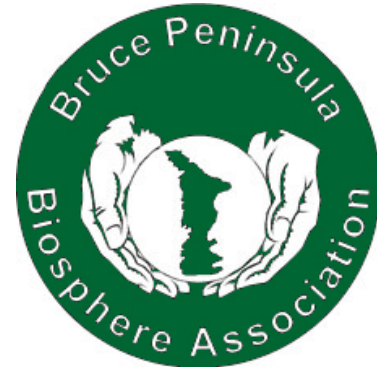
This project was provided partial funding through the Lake Huron/Georgian Bay Framework for Community Action to increase the capacity of local organizations, engage the community, and turn local interests and concern into environmental action consistent with 'Framework' principles – see www.lakehuroncommunityaction.ca

Project Synopsis

PROJECT TITLE: Six Streams Ecosystem Restoration and Protection Project

RECIPIENT: Bruce Peninsula Biosphere Association (BPBA)
(<http://www.bpba.ca/>)

RECIPIENT'S MISSION: *To build community commitment and capacity in conservation and sustainable development while achieving concrete environmental goals.*



PROJECT GOALS AND OBJECTIVES:

The Six Streams Initiative seeks to address the varying forms of aquatic pollution and habitat deterioration within the Judges Creek and Stokes River/Old Woman's subwatersheds of the Bruce Peninsula. Furthermore, the initiative seeks to improve water quality through establishing cattle exclusion fencing, reducing soil erosion, and promoting responsible septic system maintenance to achieve the greater objective of preventing ecological degradation in the subwatersheds and in the receiving waters of Lake Huron and Georgian Bay.

PROJECT PARTNERS:

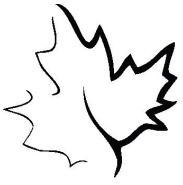
Environment and Climate Change Canada (ECCC), Ontario Ministry of the Environment and Climate Change (MOECC), Lake Huron Georgian Bay Canadian Framework for Community Action, Trillium Foundation, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), Ontario Ministry of Natural Resources and Forestry (MNRF), the Nature Conservancy of Canada, the Daghish Foundation, Bruce County, the Municipality of Northern Bruce Peninsula, and various landowners and volunteers.

PROJECT LENGTH: 12 months

PROJECT SUMMARY:

In 2016, the Bruce Peninsula Biosphere Association (BPBA) continued addressing aquatic pollution and habitat deterioration through programs first initiated back in 2012. Through community partnerships and collaboration with landowners, BPBA established cattle exclusion structures on 12 news sites and hosted septic system workshops to initiate septic system inspections, servicing and remediation activities.

BPBA also initiated a 3-year project to address soil erosion. Through demonstration sites featuring BMPs such as minimum tillage, alternate water level tile drain controls, and water and sediment control basin approaches, BPBA educated landowners on methods to reduce soil erosion and increase farm profits. An additional demonstration site also featured a 2-stage channel design that offered farmers and the municipality a practical alternative to address stream bank erosion that often plagues traditional straight, channelized streams.



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BPBA also began a hydrologic assessment to measure water quality changes, and to gain a better understanding of the groundwater network within the watershed. Once complete, the hydrologic assessment will offer BPBA insights into complex flow dynamics within the watershed and allow continued monitoring of hydrologic changes in the system over time.

Finally, project funding allowed the BPBA to provide essential water sampling support under the Six Streams Soil Erosion initiative.

ACCOMPLISHMENTS:

- Constructed cattle exclusion structures on 12 new sites
- Costed four septic system workshops; facilitated the service and inspection of 31 septic systems and remediation of 10 systems
- Initiated a 3 year project to address soil erosion
- Constructed four BMP demonstration sites
- Began a hydrologic assessment to better understand groundwater pathways and overall system change in the watershed
- Conducted water sample analyses to measure various water quality characteristics



Benthic invertebrate sampling in the lower Stokes River

NEXT STEPS:

- Continue using demonstration sites to educate landowners about the benefits of BMPs
- Continue hosting septic system workshops
- Continue Six Streams Soil Erosion Initiative

LESSONS LEARNED:

- A 2-stage channel system is a practical alternative to the bank erosion that tends to occur in traditional, straight channelized streams

POTENTIAL FOLLOW-UP PROJECTS:

- Monitor system change using the data obtained during the hydrologic assessment
- Continue monitoring BMPs for effectiveness