

The Bay of Quinte Remedial Action Plan is working towards a healthier Bay of Quinte ecosystem. Work to clean up the Bay of Quinte, which was identified in 1985 as an "Area of Concern" by the International Joint Commission under the Great Lakes Water Quality Agreement, is directed by the Bay of Quinte Restoration Council. This Council includes members from local Conservation Authorities, federal and provincial agencies and non-government organizations, who work together to implement the recommended actions to restore the Bay of Quinte.

RESTORATION COUNCIL

Lower Trent Conservation • Quinte Conservation • Environment and Climate Change Canada • Ontario Ministry of the Environment, Conservation and Parks • Ontario Ministry of Natural Resources and Forestry • Fisheries and Oceans Canada • Ontario Ministry of Agriculture, Food and Rural Affairs • Mohawks of the Bay of Quinte • CFB Trenton • City of Quinte West • Deseronto • Public representative

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Healthy Bay • Healthy Community



The time will soon be here when my grandchild will long for the cry of a loon, the flash of a salmon, the whisper of spruce needles, or the screech of an eagle.

But he will not make friends with any of these creatures and when his heart aches with longing, he will curse me.

Have I done all to keep the air fresh?

Have I cared enough about the water?

Have I left the eagle to soar in freedom?

Have I done everything I could to earn my grandchild's fondness?

— Chief Dan George, Tsleil-Waututh (1899 – 1981)

Annual Report 2018

2018 BENEFICIAL USE IMPAIRMENTS (ENVIRONMENTAL CHALLENGES) STATUS SUMMARY

STATUS: RESTORED

- # 3 Degradation of fish and wildlife populations
- # 4 Fish tumours and other deformities
- # 6 Degradation of benthos
- # 7 Restrictions on dredging activities
- # 14 Loss of fish and wildlife habitat

STATUS: SUBMITTED FOR REDESIGNATION APPROVAL

- # 10 Beach closings

STATUS: REDESIGNATION PROCESS UNDERWAY

- # 1 Restriction on fish and wildlife consumption
- # 9 Restrictions on drinking water or taste and odour problems

STATUS: IMPAIRED

- # 8 Eutrophication or undesirable algae
- # 11 Degradation of aesthetics
- # 13 Degradation of phytoplankton and zooplankton populations

Phosphorus Management Strategy

The main issue with the Bay of Quinte has always been the amount of excess nutrients (phosphorus) entering it from a number of sources both urban and rural. As the Bay gets closer to being removed from the Areas of Concern list a Phosphorus Management Strategy is under development to ensure it doesn't back slide to conditions that required a RAP in the first place.



Stewardship Projects

This year's stewardship program didn't get in to full swing until late June due to funding constraints. We still managed to increase the number of acres sampled in the Healthy Soils Program and increased the acres planted under the Cover Crop Program.

Habitat Enhancement Program

There were a total of 5 participants in the Habitat Enhancement Program. Four were shoreline naturalization, one water way planting.

Healthy Soils Program

There were a total of 17 participants in the healthy soils program. A total of 1597.5 acres.

Cover Crops

There were a total of 9 participants in the cover crops project. There was a total of 722 acres planted.

Be Septic Savvy

There was a total of 2 participants in the Septic Stewardship Program.

Osprey Monitoring with Twitter



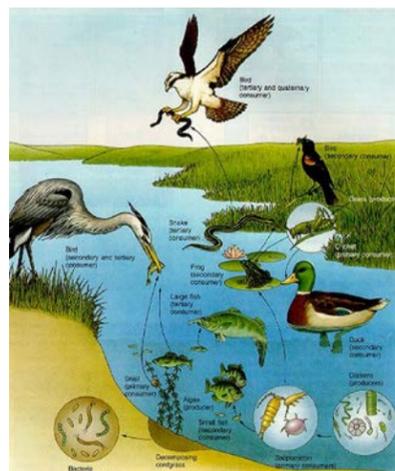
As a pilot project citizen scientists were asked to use Twitter on their Smartphones to locate and monitor Osprey's nests around the Bay of Quinte. The goal is to establish a long-term monitoring program to ensure the Osprey population remains healthy and abundant.

Marsh Monitoring

Every year, volunteer citizen scientist monitor local wetlands for frogs and wetland birds. The data is submitted to Bird Studies Canada to track long term population trends. The BQRAP hosts an evening presentation by Quinte area naturalist Tery Sprague to help recruit new citizen scientists. This year, 42 people attended the presentation.

Invasive species

In 2018, two invasive species were identified as threatening the Bay's ecosystem. Water Soldier has been moving its way down the Trent River for the past several years and is getting closer to invading the Bay. A Tench was caught in the Bay, at this point it is uncertain what this means. Local anglers were asked to report any caught to the Invasive Species Awareness Program.



Summer of Science

Numerous BQRAP partner agencies are on the water collecting research data for a variety of water quality indicators like: fish populations, wetland habitat, phosphorus levels, algae species, and water chemistry.

Ministry of Natural Resources and Forestry (MNRF) ensure Bay of Quinte fish remain healthy and diverse by operating programs that monitor the fish community. **BQRAP staff and Quinte Conservation** monitor 15 coastal wetlands for: water quality, underwater bugs, fish and wildlife, and vegetation. As well, algae species and their concentrations, are monitored at nine sites around the Bay. **Fisheries and Oceans Canada (DFO)** monitors the phytoplankton and zooplankton communities, underwater plant growth and a host of other water quality indicators in the Bay. **University of Toronto** implemented research and monitoring projects to reduce phosphorus runoff into Napanee River, Wilton Creek and Hay Bay.

Satellite Sensing

Lower Trent Conservation just completed a two year research study using satellite technology to identify blue-green algae blooms in the Bay of Quinte. The study revealed the use of this imagery was accurate in identifying areas where algae blooms were developing. The satellite uses wavelengths of light to identify colour differences and algae shows up in the brightest green/yellow light spectrum, due to the presence of chlorophyll a within their cells. This will be an additional tool to complement the traditional efforts of the public reporting of algae sightings to the MOECC Spills Action Centre.

Great Lakes Protection Initiative funding

The Bay of Quinte received Federal funding totalling \$ 595,000 for 5 research and monitoring projects. The funding recipients are: Lower Trent Conservation, Quinte Conservation and the University of Toronto.



Belleville Water Treatment Plant

Environmental challenges - restored

- 3**
- Degradation of fish and wildlife populations
 - Degradation of benthos
 - Loss of fish and wildlife habitat

Official confirmation was received from the Federal and Provincial governments of the reclassification of these environmental challenges to restored.

Public Consultation

A public consultation was implemented from April 3 - May 3, 2018 to get input from the public on whether they agree or not with changing the status of another environmental challenge.

- Beach Closings

The BQRAP assessed four area beaches: Centennial Park at Deseronto, Kingsford Mills on the Salmon River, Frankford Park on the Trent River and Centennial Park at Northport. These beaches were meeting or exceeding their criteria regarding beach postings and contaminant sources.

The public comments were incorporated into the final reports and sent to the Federal and Provincial governments for formal approval to redesignate this environmental challenge to restored.

Stormwater Projects

In 2018, there were 3 on-going projects to assess retrofit stormwater management facilities in urban areas of Belleville, Picton and Deseronto. The Belleville project (Herchimer Ave) has received its Environmental Compliance Approval. The Environmental Assessments for Picton and Deseronto were both completed and the next phase will be to obtain environmental compliance approvals. One new project was started in the City of Belleville (Foster Ave). There are plans for 2 additional assessments to enhance stormwater treatment for phosphorus removal. One is a master drainage plan which will have the overall objective of reducing phosphorus from both existing and future development.

Bay of Quinte science presented at International conference

Researchers from around the world gathered at the University of Toronto in Scarborough in June, for the International Association for Great Lakes Research's 61st annual conference.

The Bay of Quinte was the focus of a morning session called "Ecosystem Health and Recovery of the Bay of Quinte, Lake Ontario". Eight presentations covered a variety of topics from: predicting algae blooms, to fish consumption and fish health, water currents and circulation patterns, to nutrient inputs during extreme weather events and data sharing.