

BUI = BENEFICIAL USE IMPAIRMENT - A Beneficial Use Impairment is a condition that interferes with the enjoyment of a water use.

BUI # 1 - RESTRICTIONS ON FISH AND WILDLIFE CONSUMPTION



Since 1975, contaminant levels in fish have been steadily dropping. The 2011- 2012 fish consumption advisories for Brown Bullhead, Yellow Perch, Smallmouth Bass, Largemouth Bass, Walleye for the Upper Bay of Quinte and

Middle Bay of Quinte have achieved the maximum recommended consumption level of 8 meals per month of the general population. Currently, the only lower recommended consumption levels are for brown bullheads in the mouth of the Trent River. These fish are safe to eat, just not at the maximum recommended levels yet.

BUI # 3 - DEGRADATION OF FISH AND WILDLIFE POPULATIONS



In the early 1990s, the fish population was considered impaired due to the lack of species variety. Now, the Bay has a balance of prey and predator species due to improved habitat, fisheries management, and reduced phosphorus

levels. Today, the Bay is considered a world-class walleye and bass fishery. Wildlife was not identified as impaired.

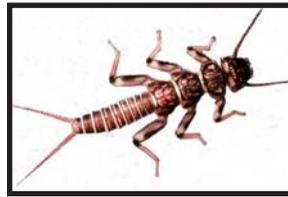
BUI# 4 - FISH TUMOURS AND OTHER DEFORMITIES



The Bay of Quinte RAP has enough scientific evidence to change the status of this environmental challenge - "Fish tumours and other deformities." Based on the results of a detailed and lengthy study, it was determined that liver

tumours in Bay of Quinte brown bullheads are no longer a concern. Brown bullheads were used for this study, since they are considered an indicator species that live near or on the bottom of lakes, rivers, and streams.

BUI # 6 - DEGRADATION OF BENTHOS - BENTHIC MACROINVERTEBRATES



Benthos are the types of worms, nymphs and larvae that live in the sediment on the bottom of lakes, rivers and streams. Some species are tolerant of poor water quality, while others

require good water quality to survive. Today, a variety of underwater bugs that require good water quality to survive are present in the Bay. Current impacts on benthos are from invasives and habitat changes brought on by historical land uses.

BUI # 8 - EUTROPHICATION AND UNDESIRABLE ALGAE



One of the main issues with the Bay has always been excess phosphorus levels. The RAP has been working to reduce the amount of phosphorus from multiple sources, both rural and urban (sewage treatment plants, stormwater run-off,

agricultural land practices). In aquatic ecosystems like the Bay of Quinte, it's the ability of phosphorus to promote rapid growth that causes problems. Excess phosphorus can lead to algal blooms and excess plant growth, which can foul beaches and water intake pipes. Decomposing algae and weeds take up oxygen in the water that is vital to fish survival, and can also cause taste and odour problems in drinking water. This nutrient enrichment process is called eutrophication. Some types of algae (Blue-green algae) can produce toxins that are harmful to humans, domestic animals and wildlife.

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BUI # 9 - RESTRICTIONS ON DRINKING WATER OR TASTE AND ODOUR PROBLEMS



Treated drinking water from the Bay of Quinte is monitored for compounds that can cause taste and odour problems or health issues. It meets the Ontario Drinking Water Quality Standards.

BUI # 10 BEACH CLOSURES



Beaches at Frankford, Kingsford Mills, Centennial Park (Deseronto) and Centennial Park (Northport) are routinely monitored for e-coli. The RAP recommends that Health Unit beach

posting days should not exceed 20% of the annual swimming season (Victoria Day to Labour Day). Currently, these beaches are meeting and/or exceeding this target.

BUI # 11 - DEGRADATION OF AESTHETICS



Over the years, the Bay of Quinte has become known as one of the most picturesque bodies of water in Lake Ontario. There have been dramatic improvements to the water clarity and quality since the beginning of Bay of

Quinte Remedial Action Plan.



The Bay of Quinte wetlands provide habitat for Blandings Turtle a Species at Risk

BUI # 13 - DEGRADATION OF PHYTOPLANKTON AND ZOOPLANKTON



The varieties of phytoplankton (microscopic marine plants) and zooplankton (microscopic animals) that form the bottom of the food web have changed due to invasive species. These changes have caused the food

web dynamics to have to adjust and adapt. The planktons are important food sources for fish.

BUI # 14 - LOSS OF FISH AND WILDLIFE HABITAT



Around the Bay of Quinte, shorelines, wetlands, and underwater vegetation that provide fish and wildlife habitat have been destroyed by human activities. However, a great deal of work has been done to rehabilitate shorelines and wetlands.

Today, wetlands in the Bay are ranked as some of the best in Lake Ontario. With the reduction in phosphorus levels in the Bay water clarity has improved allowing the reemergence of under water vegetation, which provides habitat for smaller prey fish and hunting grounds for top predators - walleye, bass & pike.

The Remedial Action Plan is getting closer to its goal of removing the Bay of Quinte's Area of Concern designation. The efforts of the federal and provincial governments, municipalities, industries, businesses and the public have made it possible to achieve this goal. Today, the Bay of Quinte is a healthy and vibrant ecosystem. The challenge is to protect and monitor the Bay, so future generations can enjoy the benefits a healthy environment brings to the communities surrounding the Bay. By growing and expanding on the successes of the RAP, these communities can ensure the Bay never returns to the conditions that required a Remedial Action Plan.

The Bay of Quinte is one of the most picturesque bodies of water in Lake Ontario. Its shoreline stretches in a Z-shape from Trenton to Bath for almost 100 kilometers. The Bay's watershed is the largest in southern Ontario and includes lands drained by the Trent, Moira, Salmon, and Napanee rivers and a host of smaller tributaries.

RESTORATION COUNCIL

Lower Trent Conservation
Quinte Conservation
Ontario Ministry of the Environment
Environment Canada
Ontario Ministry of Natural Resources
Fisheries and Oceans Canada
Ontario Ministry of Agriculture, Food,
and Rural Affairs
Mohawks of The Bay of Quinte
CFB Trenton



Bay of Quinte

Remedial Action Plan

Healthy Bay • Healthy Community

A Remedial Action Plan or a "RAP" is an important scientific endeavour. A RAP is the response of government, industry, and the local community to environmental concerns that are believed to impair the use of various resources such as drinking water, fish, and recreation. The environmental concerns are called Beneficial Use Impairments.



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