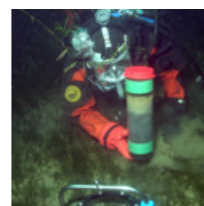


Canadian Great Lakes Areas of Concern



Status of Beneficial Use Impairments Overview

September 2010

ISBN: 978-1-100-18025-0
Cat. No.: En164-22/2011E-PDF
PIBS 8217e

Published by Environment Canada and the Ontario Ministry of the Environment

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This overview provides a brief introduction to the Areas of Concern program in the Great Lakes and the community-focused remedial action plan process established to address environmental challenges in these areas. It also serves as background to the 15 individual 2010 status of beneficial use impairments reports prepared for the 14 remaining Areas of Concern and Wheatley Harbour, which has recently been removed from the list of Areas of Concern.



Areas of Concern

For more than 20 years, local residents, community groups, Aboriginal communities and industries have been working in partnership with federal, provincial and municipal governments to restore environmental quality in the Great Lakes. As part of these efforts, attention has been focused on cleaning up sites where past (and, in some cases, ongoing) industrial and agricultural practices or urban development pressures have caused degradation and led to impairments.

In 1987, Canada and the United States amended the Great Lakes Water Quality Agreement to include a commitment to the identification and remediation of significantly degraded areas throughout the Great Lakes. Together, Canada and the United States have identified 43 Areas of Concern, which are geographic areas where severe water quality degradation has resulted in the impairment of beneficial uses of the environment

(typically referred to as *beneficial use impairments*) and which contribute adversely to the overall quality of the Great Lakes. Beneficial use impairments are defined under the Great Lakes Water Quality Agreement as

1. Restrictions on Fish and Wildlife Consumption
2. Tainting of Fish and Wildlife Flavour
3. Degraded Fish and Wildlife Populations
4. Fish Tumours or other Deformities
5. Bird (or other Animal) Deformities or Reproduction Problems
6. Degradation of Benthos
7. Restrictions on Dredging Activities
8. Eutrophication or Undesirable Algae
9. Restrictions on Drinking Water Consumption or Taste and Odour Problems
10. Beach Closings
11. Degradation of Aesthetics
12. Added Costs to Agriculture or Industry
13. Degradation of Phytoplankton and Zooplankton Populations
14. Loss of Fish and Wildlife Habitat

Three Canadian Areas of Concern (Collingwood Harbour in 1994; Severn Sound in 2003; and Wheatley Harbour in 2010) and one United States Area of Concern (Oswego River in 2006) have been fully remediated and officially removed from the list of Areas of Concern. Currently, there are 9 Areas of Concern on the Canadian side of the Great Lakes, 25 in the United States, and 5 that are shared by both countries (the St. Marys, St. Clair, Detroit, Niagara and St. Lawrence rivers) (Figure 1). These areas vary widely in size and nature. Some are located at small, relatively isolated one-industry towns where past discharges into the lakes have left

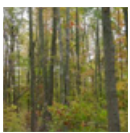


Figure 1: Map of Canadian Areas of Concern

a legacy of risks to the local fish, wildlife and human populations. In contrast, the Toronto and Region Area of Concern is situated in the most densely populated area in Canada and continues to face a wide range of environmental challenges from rapid urbanization.

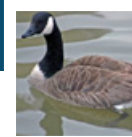
Remedial Action Plans

In each Area of Concern, government, community and industry partners are cooperating to address environmental challenges through the development and implementation of remedial action plans. Environment Canada and the Ontario Ministry of the Environment coordinate remedial action plans for all Areas of Concern in Canada, under the Canada–Ontario Agreement Respecting the Great Lakes Basin Ecosystem.

Remedial action plans are developed and implemented in collaboration with local partners

that include local residents, community groups, Aboriginal communities, industry, various federal, provincial departments and municipal governments in an open and transparent manner. Remedial action plans proceed through three stages:

- Stage 1: assessment of the severity and identification of the underlying causes of environmental degradation that are the basis for the location being designated an Area of Concern;
- Stage 2: development and implementation of remedial actions to restore, protect and monitor environmental quality and beneficial uses; and
- Stage 3: confirmation, through monitoring, that the beneficial use impairments have been addressed successfully through the remedial actions.



At the end of Stage 3, after all remedial actions have been completed and when up to three years of monitoring confirm that water quality and ecosystem health (i.e., the beneficial uses) have been restored, an Area of Concern is delisted. Delisting an area means that the goals or delisting criteria leading to the restoration of environmental quality identified in the remedial action plan have been achieved. Delisting criteria are measurable environmental conditions that must be met for the beneficial use impairment in order to conclude that it has been addressed. Delisting is done by the Government of Canada in consultation with the Province of Ontario and local Remedial Action Plan partners and with concurrence from the International Joint Commission.

In the event that additional time is required for recovery of beneficial uses of the environment following

completion of remedial actions, Areas of Concern may be given the interim designation of *Area in Recovery*.

As remedial actions are implemented, the status of the particular beneficial use impairment may shift from *impaired* or *requires further assessment* to *not impaired*. Table 1 summarizes the status of these 14 environmental challenges in the 14 Canadian and binational Areas of Concern and the recently delisted Wheatley Harbour Area of Concern. The individual progress reports provide more details on the environmental challenges in each Area of Concern.

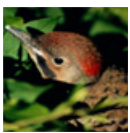
Progress on Environmental Challenges

The federal and provincial governments and partners have made considerable progress in addressing environmental challenges in Areas of Concern. Much

Table 1: Status of Beneficial Use Impairments in the Canadian Areas of Concern

Beneficial Use Impairments (as identified in the Great Lakes Water Quality Agreement) – September 2010														
AREA OF CONCERN	1 Restrictions on fish and wildlife consumption	2 Tainting of fish and wildlife flavour	3 Degradation of fish and wildlife populations	4 Fish tumours or other deformities	5 Bird or animal deformities or reproduction problems	6 Degradation of benthos	7 Restrictions on dredging activities	8 Eutrophication or undesirable algae	9 Restrictions on drinking water consumption, or taste and odour problems	10 Beach closings	11 Degradation of aesthetics	12 Added costs to agriculture or industry	13 Degradation of phytoplankton or zooplankton populations	14 Loss of fish and wildlife habitat
Bay of Quinte	⊙													
Detroit River	⊙													
Hamilton Harbour														
Jackfish Bay			⊙											
Niagara River	⊙ ▲													
Nipigon Bay														
Peninsula Harbour			⊙											
Port Hope Harbour														
Spanish Harbour														
St. Clair River														
St. Lawrence River	⊙													
St. Marys River	⊙													
Thunder Bay														
Toronto and Region														
Wheatley Harbour														

Impaired
Not Impaired
Requires Further Assessment
Change in status from "Impaired" or "Requires Further Assessment" to "Not Impaired"
⊙ for fish
▲ for wildlife



effort has been invested in actions that directly support the restoration and protection of environmental quality and beneficial uses. These initiatives include

- Reducing municipal wastewater and stormwater pollution;
- Encouraging beneficial management practices to reduce pollution from rural areas;
- Developing contaminated sediment management strategies;
- Restoring and protecting fish and wildlife habitats and populations;
- Fostering community participation; and
- Increasing knowledge through research, monitoring and reporting.

Looking ahead, contaminated sediment and municipal wastewater continue to be key challenges, and Canada and Ontario will continue to identify these issues as priorities for achieving goals to restore all of the Great Lakes Areas of Concern.

2010 Status Reports

The 15 **Status of Beneficial Use Impairment Reports** have been prepared jointly by Environment Canada and the Ontario Ministry of the Environment, with the assistance of local remedial action plan public advisory or implementation committees, to report progress to the International Joint Commission. Each status report

- provides background information on the environmental conditions and concerns in the area that led to its designation as an Area of Concern;
- identifies the partner agencies and organizations actively involved in the development and implementation of the remedial action plan;

- identifies the status of the remedial action plan with respect to the three stages of development and implementation;
- highlights key accomplishments and outlines the prospects for eventual delisting of the area of Concern; and
- summarizes, for each beneficial use impairment identified through the remedial action plan process, its current status, key actions undertaken to date by various partner agencies and organizations, as well as future key actions planned by the partners as they work towards the full restoration of environmental quality.

The status reports have been prepared based on the latest available scientific data and input from the local Remedial Action Plan partners, as of September 2010.

For More Information

Environment Canada's Great Lakes Areas of Concern Program Website:

www.ec.gc.ca/raps-pas

Ontario Ministry of the Environment:

www.ontario.ca/environment

Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem:

www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=B903EE0D-1

Great Lakes Water Quality Agreement:

www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=88A2F0E3-1

International Joint Commission:

www.ijc.org

