



# RESTORING THE GREAT LAKES AREAS OF CONCERN

CANADIAN ENVIRONMENTAL  
SUSTAINABILITY INDICATORS



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# CANADIAN ENVIRONMENTAL SUSTAINABILITY INDICATORS

# RESTORING THE GREAT LAKES AREAS OF CONCERN

**October 2021**

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## Restoring the Great Lakes Areas of Concern

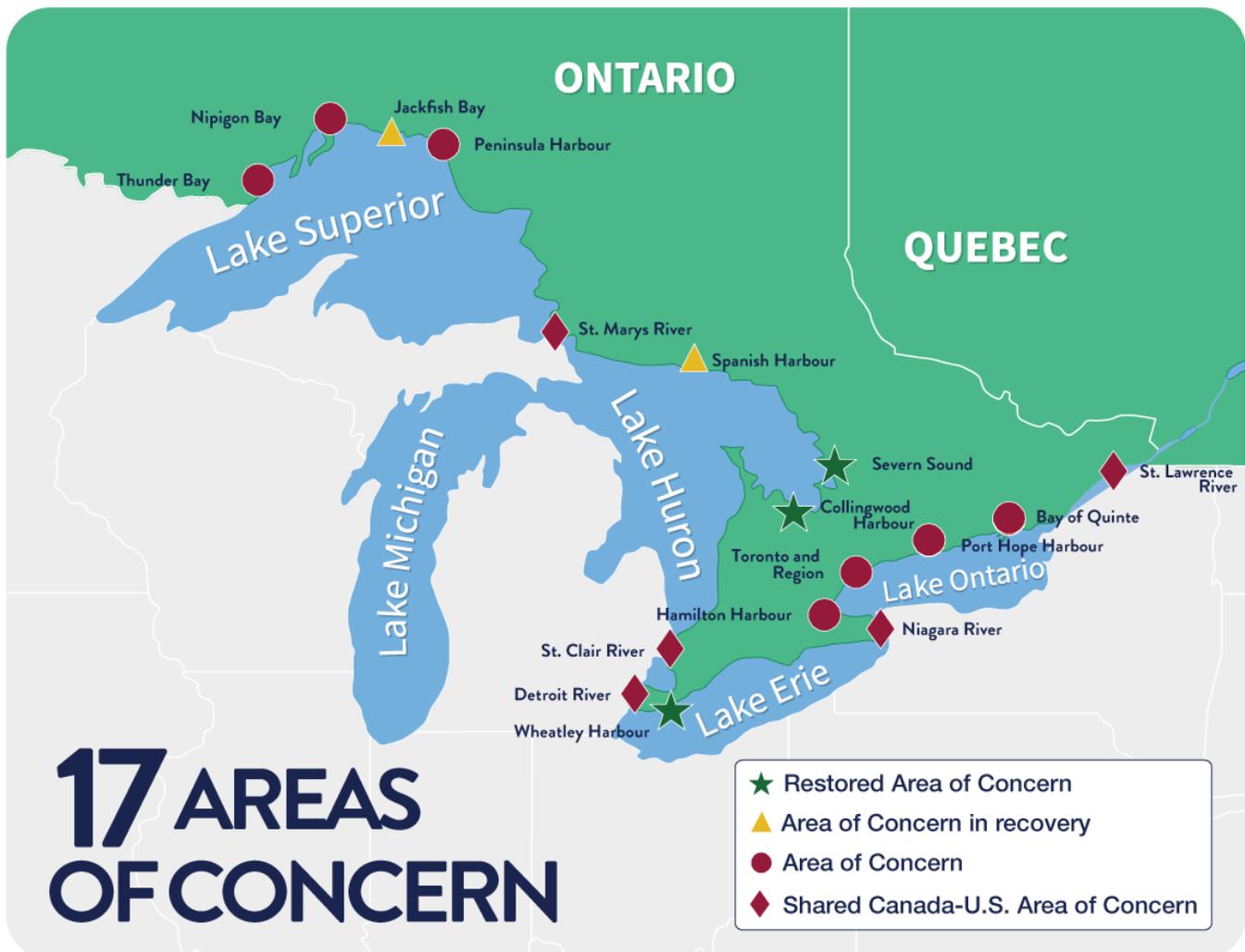
The Great Lakes basin is Canada's most populated region. Its large population and extensive development places a strain on ecosystem health. Locations having experienced a high level of environmental damage from human activity are called Areas of Concern. This indicator assesses progress on restoring Areas of Concern around the Great Lakes within Canadian waters and those shared with the United States.

### Status of the Great Lakes Areas of Concern

#### Key results

- Environmental quality in Canada's 17 Great Lakes Areas of Concern has improved since the restoration program began in 1987
- As of 2021, 3 Areas of Concern have been fully restored and delisted

Figure 1. Status of Canada's 17 Great Lakes Areas of Concern, 2021



[Data for Figure 1](#)

**Note:** As of 2016, the [Nipigon Bay Area of Concern](#) had all of its impaired beneficial uses restored; however, it cannot be formally designated as a Restored Area of Concern until the final approval of its completion report following public consultations on its delisting. Area of Concern

status is based on progress reported as of March 31, 2021.

**Source:** Environment and Climate Change Canada (2021) Great Lakes Areas of Concern Office.

In 1987, the Canada-United States Great Lakes Water Quality Agreement identified 43 Areas of Concern around the Great Lakes. Of these Areas of Concern:

- 26 were entirely in American waters and 5 have been restored: Oswego River (2006), Presque Isle Bay (2013), Deer Lake (2014) and White Lake (2014), Lower Menominee (2020)
- 12 were entirely in Canadian waters
- 5 are shared with the United States

To date, considerable progress has been made towards the restoration of Canada's 17 Areas of Concern (including the 5 shared with the United States):

- 3 have been fully restored and delisted: Collingwood Harbour (1994), Severn Sound (2002) and Wheatley Harbour (2010)
- 1 more has had all impaired beneficial uses restored and community engagement will continue until it is removed from the list of Areas of Concern: Nipigon Bay (2016)
- 2 have been formally designated as Areas of Concern in Recovery, signifying that all remedial actions have been completed and the natural recovery of the ecosystem will continue to be monitored: Spanish Harbour (1999) and Jackfish Bay (2011)
- efforts continue to restore the remaining 11 Areas of Concern: Peninsula Harbour, Thunder Bay, Bay of Quinte, Port Hope Harbour, Toronto and Region, Hamilton Harbour, St Lawrence River, St. Clair River, St. Marys River, Niagara River and Detroit River

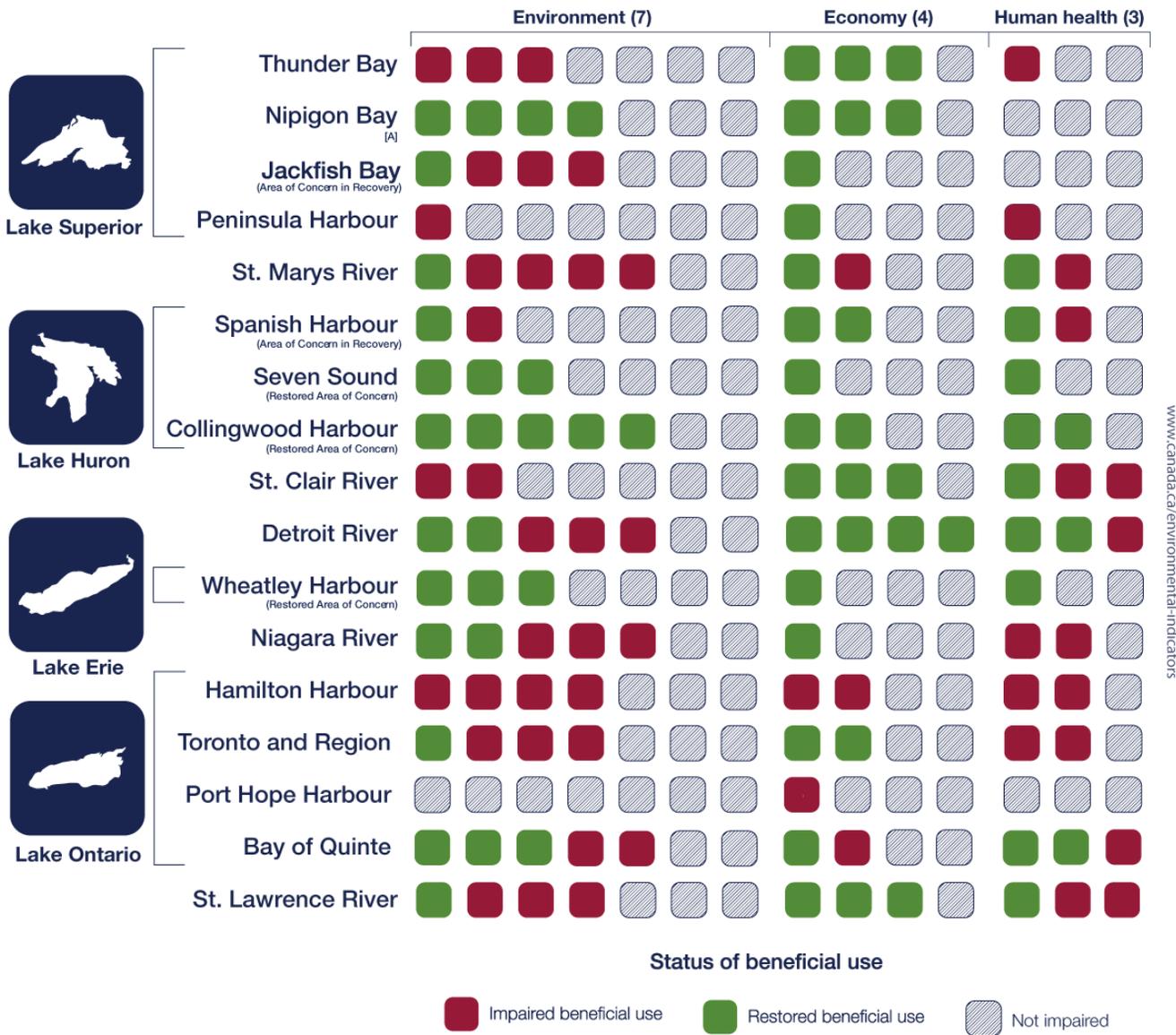
## **Progress on restoring the Great Lakes Areas of Concern**

### **Key results**

- As of March 2021, 68 of the 121 impaired beneficial uses identified in Canada's 17 Areas of Concern have been restored. Efforts continue to restore the 53 remaining impaired beneficial uses
- Between April 2020 and March 2021, 5 beneficial uses were restored (out of the 68 restored) in the Spanish Harbour, Detroit River, Toronto and Region, and Bay of Quinte Areas of Concern

Figure 2. Progress on Canada's 17 Great Lakes Areas of Concern, 1987 to 2021

Number of beneficial uses by status and category of impact



www.canada.ca/environmental-indicators

[Data for Figure 2](#)

**Note:** <sup>[A]</sup> As of 2016, the [Nipigon Bay Area of Concern](#) had all of its impaired beneficial uses restored; however, it cannot be formally designated as a Restored Area of Concern until the final approval of its completion report following public consultations on its delisting. The number of beneficial uses that are Impaired in 2021 is based on progress reported as of March 31, 2021.  
**Source:** Environment and Climate Change Canada (2021) Great Lakes Areas of Concern Office.

At the 17 Areas of Concern, 121 beneficial uses have been considered impaired since the restoration program began in 1987. Beneficial uses describe how an aquatic ecosystem benefits the environment, economy or human health: they are the ecological services that are available to the population and the environment when the ecosystem is healthy (not impaired). An impaired beneficial use has experienced enough changes to the chemical, physical or biological integrity of the area to restrict human use or to restrict the area's ability to support

plants and animals. Before classifying an area as an Area of Concern, 14 beneficial uses are considered. Each of the 14 beneficial uses can be classified based on their impairment under 1 of the following Categories of impact:<sup>1</sup>

**Environment (7)**

1. Degradation of fish and wildlife populations
2. Fish tumours or other deformities
3. Bird or animal deformities or reproduction problems
4. Degradation of benthos
5. Degradation of phytoplankton and zooplankton populations
6. Eutrophication or undesirable algae
7. Loss of fish and wildlife habitat

**Economy (4)**

1. Tainting of fish and wildlife flavour
2. Restrictions on dredging activities
3. Degradation of aesthetics
4. Added costs to agriculture or industry

**Human health (3)**

1. Restrictions on fish and wildlife consumption
2. Restrictions on drinking water consumption, or taste and odour problems
3. Beach closing

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<sup>1</sup> For more information on the beneficial use impairments, please see: Environment and Climate Change Canada (2013) [2012 Great Lakes Water Quality Agreement: annex 1](#). Retrieved on March 22, 2021.

## About the indicator

### What the indicator measures

This indicator assesses progress towards the restoration of Canada's 12 Areas of Concern and the 5 Areas of Concern shared with the United States.

An Area of Concern is a region in the Great Lakes that has experienced a high level of environmental damage from human activity. There are 14 beneficial uses that are considered in order to decide whether an area should be classified as an Area of Concern. Beneficial uses describe how an aquatic ecosystem benefits the economy, human health and the environment: they are the ecological services that are available to the population and the environment when the ecosystem is healthy (not impaired). An Impaired beneficial use has experienced enough changes to the chemical, physical or biological integrity of the area to restrict human use or to restrict the area's ability to support plants and animals.

The status of a beneficial use is determined by monitoring and conducting scientific studies in the Area of Concern. The study results are compared to the findings for reference sites and targets listed in the site's remedial action plan and other update reports.

### Why this indicator is important

This indicator is used to provide information about the state of the Great Lakes and the Canadian environment. It tracks the work done to repair the environment at 17 Areas of Concern in Canada. In these areas, the degraded environment has disrupted fisheries, wildlife, tourism, recreation and/or agriculture.



#### Pristine lakes and rivers

This indicator supports the measurement of progress towards the following [2019 to 2022 Federal Sustainable Development Strategy](#) long-term goal: Clean and healthy lakes and rivers support economic prosperity and the well-being of Canadians.

It is used to assess progress towards the short-term milestone: By the end of 2019, complete restoration actions that will assist in delisting 5 Canadian Great Lakes Areas of Concern. In the remaining 9 Areas of Concern, increase the number of restored beneficial uses from 18 in 2014 to 30 in 2019.<sup>2</sup>

In addition, the indicator contributes to the [Sustainable Development Goals of the 2030 Agenda for Sustainable Development](#). It is linked to the 2030 Agenda's Goal 6: Clean water and sanitation and Target 6.6: "By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes."

Finally, the indicator assesses progress towards the goals of the [Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, 2021](#). Specifically, it measures progress towards restoring the remaining impaired beneficial uses in the Canadian Great Lakes Areas of Concern (Thunder Bay, Nipigon Bay, Jackfish Bay, Peninsula Harbour, St. Marys River, Spanish River, St. Clair River, Detroit River, Niagara River, Bay of Quinte, St. Lawrence River, Hamilton Harbour, Toronto and Region, and Port Hope Harbour).

### Related indicators

The [Phosphorus levels in the offshore waters of the Great Lakes](#) indicator reports total phosphorus levels in the offshore waters of the 4 Canadian Great Lakes.

The [Water quality in Canadian rivers](#) indicators provide a measure of the ability of river water across Canada to support plants and animals.

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<sup>2</sup> The short-term milestone does not include the 3 Areas of Concern that have been fully restored and delisted: Collingwood Harbour (1994), Severn Sound (2002) and Wheatley Harbour (2010)

## Data sources and methods

### Data sources

Environment and Climate Change Canada's [Great Lakes Areas of Concern](#) program tracks the status of all beneficial uses in Canada's 17 Areas of Concern (including the 5 shared with the United States). This information is developed as Canada exercises its responsibility under the Canada-United States Great Lakes Water Quality Agreement to remove a beneficial use impairment designation when the established criteria have been met. The most recent data available for each Area of Concern are used to calculate this indicator.

#### More information

The 2021 data were obtained from Environment and Climate Change Canada's Areas of Concern Office. Progress reports summarizing the status of all beneficial uses for all Canadian Areas of Concern have been compiled every 1 to 3 years since 2012. Prior to 2012, beneficial use classifications were taken from remedial action plans and update reports.

Data coverage for this indicator begins with Severn Sound's Stage 1 report published in 1988 and includes data up to March 31, 2021. The other Areas of Concern released their Stage 1 reports between 1989 and 1993, with the majority being released in 1991. Wheatley Harbour released a combined Stage 1 and 2 report in 1998.

The Port Hope Harbour Area of Concern is being restored through the Port Hope Area Initiative, launched in 2001. Canadian Nuclear Laboratories is implementing the Port Hope Project on behalf of Atomic Energy of Canada Limited, a federal Crown corporation because of the nature and scope of the contamination at this site. Only the progress reports compiled since 2003 were considered for Port Hope Harbour.

#### Description of the Areas of Concern process

The 1987 revision of the Canada-United States Great Lakes Water Quality Agreement identified 43 Areas of Concern in Canadian and American waters of the Great Lakes. All Canadian Areas of Concern, have a remedial action plan to guide restoration and protection efforts targeting specific beneficial uses.<sup>3</sup>

In the former process, under the 1987 Protocol to the Canada-United States Great Lakes Water Quality Agreement, remedial action plans were developed and implemented in 3 stages.

- Stage 1 identified which of 14 beneficial uses were classified as Impaired or Not impaired, as well as the sources and causes of the problem
- Stage 2 established the goals, objectives and actions required to restore the ecosystem to a healthy state
- Stage 3 documented the successful restoration of the Area of Concern as measured against the objectives (delisting criteria) outlined in the Stage 2 Remedial Action Plan report

When the beneficial uses were considered Not Impaired, and Stage 3 was complete, the Area of Concern was declared Restored and officially "delisted". Typically, Canada waited to change the status of beneficial uses to Not Impaired in bunches (for example, with the release of a stage update report) or en masse (for example, with the completion of Stage 3).

Under the 2012 Canada-United States Great Lakes Water Quality Agreement, the process was modified and remedial action plans are now periodically updated to reflect restoration progress. That is, the Parties will not wait to change the status of beneficial uses en masse. Canada:

- will remove an Impaired beneficial use designation when established criteria have been met

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<sup>3</sup> For more information on what the beneficial uses are, please see: Environment and Climate Change Canada (2013) [2012 Great Lakes Water Quality Agreement: annex 1](#). Retrieved on March 22, 2021.

- may elect to identify an Area of Concern as an Area of Concern in Recovery when all actions identified in a remedial action plan have been implemented and monitoring shows recovery is progressing as anticipated
- will remove the Area of Concern or Area of Concern in Recovery designation when environmental monitoring confirms beneficial use restoration criteria have been met

An Area of Concern in Recovery is an area originally identified as an Area of Concern where, on the basis of community and government consensus, all scientifically-feasible and economically-reasonable actions have been implemented and additional time is required for the environment to recover.

The reports prepared for each Area of Concern and additional information can be found at [Great Lakes: Areas of Concern](#).

## Methods

The number of beneficial uses listed as Impaired was counted for all Stage 1 reports and all update reports conducted up to the end of March 2021. The results include the beneficial uses for Canada's 12 Areas of Concern, covering the 4 Canadian Great Lakes, as well as the 5 Areas of Concern shared with the United States in their connecting channels.

An Impaired beneficial use can be classified as Restored if all delisting requirements for that beneficial use impairment have been met. Criteria for a beneficial use impairment are established in consideration of conditions that can be eventually achieved on a lake-wide basis.

## Caveats and limitations

This indicator does not show the continuous nature of the rehabilitation process for each Area of Concern because the status for each beneficial use impairment can only change when new reports are published and the party (Canada) has confirmed the status as per the provisions in Annex 1 of the Great Lakes Water Quality Agreement. With progress reports being updated annually, the staggered change is less evident.

Port Hope Harbour follows a separate program, the Port Hope Area Initiative that is being implemented by Canadian Nuclear Laboratories on behalf of Atomic Energy of Canada Limited.

## Resources

### References

Environment and Climate Change Canada (2013) [2012 Great Lakes Water Quality Agreement: annex 1](#). Retrieved on March 22, 2021.

### Related information

[Great Lakes: Areas of Concern](#)

[Canada-United States Great Lakes water quality agreement, 2012](#)

[Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, 2021](#)

[2019 Progress Report of the Parties](#)

## Annex

### Annex A. Data tables for the figures presented in this document

Table A.1. Data for Figure 1. Status of Canada's 17 Great Lakes Areas of Concern, 2021

Lake	Area of Concern	Assessment year	Status as of March 31, 2021
Superior	Thunder Bay	1991, 2012	Area of Concern
Superior	Nipigon Bay	1991	Area of Concern
Superior	Jackfish Bay	1991	Area of Concern in Recovery
Superior	Peninsula Harbour	1991, 2012	Area of Concern
	St. Marys River	1992	Area of Concern
Huron	Spanish Harbour	1993	Area of Concern in Recovery
Huron	Severn Sound	1988	Restored Area of Concern
Huron	Collingwood Harbour	1989	Restored Area of Concern
	St. Clair River	1991	Area of Concern
	Detroit River	1991, 1998	Area of Concern
Erie	Wheatley Harbour	1998	Restored Area of Concern
	Niagara River	1993	Area of Concern
Ontario	Hamilton Harbour	1992	Area of Concern
Ontario	Toronto and Region	1989	Area of Concern
Ontario	Port Hope Harbour	2003	Area of Concern
Ontario	Bay of Quinte	1990	Area of Concern
Ontario	St. Lawrence	1992	Area of Concern

**Note:** Assessment reports were published between 1988 and 1993, in what were titled *Stage 1 Remedial Action Plan reports*, with the exception of Wheatley Harbour and Port Hope Harbour, which were produced in 1998 and 2003, respectively. Many of these included undefined status for certain beneficial uses, and they "required further assessment". Upon further assessment over subsequent years, what had been undefined was clarified in Remedial Action Plan status update reports. In these cases, a second year is noted as assessment year.  
**Source:** Environment and Climate Change Canada (2021) Great Lakes Areas of Concern Office.

Table A. 2. Data for Figure 2. Progress on Canada's 17 Great Lakes Areas of Concern, 1987 to 2021

Lake	Area of Concern	Initial assessment (number of beneficial use impaired)	2021 assessment year: total impaired (number of beneficial use impaired by category of impact)	2021 impaired beneficial use	2021 assessment year: total restored (number of beneficial use restored by category of impact)	2021 restored beneficial use	Year and number of restored beneficial use	Beneficial use not impaired
Superior	Thunder Bay	7	Environment: 3 Human health: 1	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Degradation of benthos</li> <li>Loss of fish and wildlife habitat</li> <li>Beach closing</li> </ul>	Economy: 3	<ul style="list-style-type: none"> <li>Restrictions on dredging activities</li> <li>Degradation of aesthetics</li> <li>Added costs to agriculture or industry</li> </ul>	2004: 1 2012: 1 2019: 1	7
Superior	Nipigon Bay <sup>1A</sup>	7	No impaired beneficial use	n/a	Environment: 4 Economy: 3	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Degradation of benthos</li> <li>Eutrophication or undesirable algae</li> <li>Loss of fish and wildlife habitat</li> <li>Tainting of fish and wildlife flavor</li> <li>Restrictions on dredging activities</li> <li>Degradation of aesthetics</li> </ul>	1995: 2 2016: 5	7
Superior	Jackfish Bay <sup>1B</sup>	5	Environment: 3	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Degradation of benthos</li> </ul>	Environment: 1 Economy: 1	<ul style="list-style-type: none"> <li>Fish tumours or other deformities</li> <li>Restrictions on dredging activities</li> </ul>	1998: 1 2010: 1	9

Lake	Area of Concern	Initial assessment (number of beneficial use impaired)	2021 assessment year: total impaired (number of beneficial use impaired by category of impact)	2021 impaired beneficial use	2021 assessment year: total restored (number of beneficial use restored by category of impact)	2021 restored beneficial use	Year and number of restored beneficial use	Beneficial use not impaired
				<ul style="list-style-type: none"> <li>Loss of fish and wildlife habitat</li> </ul>				
Superior	Peninsula Harbour	3	Environment: 1 Human health: 1	<ul style="list-style-type: none"> <li>Degradation of benthos</li> <li>Restrictions on fish and wildlife consumption</li> </ul>	Economy: 1	<ul style="list-style-type: none"> <li>Restrictions on dredging activities</li> </ul>	2012: 1	11
	St. Marys River	9	Environment: 4 Human health: 1 Economy: 1	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Fish tumours or other deformities</li> <li>Degradation of benthos</li> <li>Loss of fish and wildlife habitat</li> <li>Restrictions on fish and wildlife consumption</li> <li>Restrictions on dredging activities</li> </ul>	Environment: 1 Human health: 1 Economy: 1	<ul style="list-style-type: none"> <li>Eutrophication or undesirable algae</li> <li>Beach closing</li> <li>Degradation of aesthetics</li> </ul>	2018: 3	5
Huron	Spanish Harbour <sup>[B]</sup>	6	Environment: 1 Human health: 1	<ul style="list-style-type: none"> <li>Degradation of benthos</li> <li>Restrictions on fish and wildlife consumption</li> </ul>	Environment: 1 Human health: 1 Economy: 2	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Beach closing</li> <li>Restrictions on dredging activities</li> <li>Added costs to agriculture or industry</li> </ul>	1999: 3 2020: 1	8

Lake	Area of Concern	Initial assessment (number of beneficial use impaired)	2021 assessment year: total impaired (number of beneficial use impaired by category of impact)	2021 impaired beneficial use	2021 assessment year: total restored (number of beneficial use restored by category of impact)	2021 restored beneficial use	Year and number of restored beneficial use	Beneficial use not impaired
Huron	Severn Sound <sup>[C]</sup>	5	No impaired beneficial use	n/a	Environment: 3 Human health: 1 Economy: 1	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Eutrophication or undesirable algae</li> <li>Loss of fish and wildlife habitat</li> <li>Restrictions on fish and wildlife consumption</li> <li>Restrictions on dredging activities</li> </ul>	2002: 5	9
Huron	Collingwood Harbour <sup>[C]</sup>	9	No impaired beneficial use	n/a	Environment: 5 Human health: 2 Economy: 2	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Bird or animal deformities or reproduction problem</li> <li>Degradation of benthos</li> <li>Eutrophication or undesirable algae</li> <li>Degradation of phytoplankton and zooplankton populations</li> <li>Restrictions on fish and wildlife consumption</li> <li>Degradation of aesthetics</li> <li>Beach closing</li> </ul>	1994: 9	5

Lake	Area of Concern	Initial assessment (number of beneficial use impaired)	2021 assessment year: total impaired (number of beneficial use impaired by category of impact)	2021 impaired beneficial use	2021 assessment year: total restored (number of beneficial use restored by category of impact)	2021 restored beneficial use	Year and number of restored beneficial use	Beneficial use not impaired
						<ul style="list-style-type: none"> <li>Restrictions on dredging activities</li> </ul>		
	St. Clair River	8	Environment: 2 Human health: 2	<ul style="list-style-type: none"> <li>Degradation of benthos</li> <li>Loss of fish and wildlife habitat</li> <li>Restrictions on fish and wildlife consumption</li> <li>Restrictions on drinking water consumption, or taste and odour problems</li> </ul>	Human health: 1 Economy: 3	<ul style="list-style-type: none"> <li>Beach closing</li> <li>Restrictions on dredging activities</li> <li>Degradation of aesthetics</li> <li>Added costs to agriculture or industry</li> </ul>	2012: 1 2016: 1 2018: 2	6
	Detroit River	12	Environment: 3 Human health: 1	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Bird or animal deformities or reproduction problems</li> <li>Loss of fish and wildlife habitat</li> <li>Restrictions on fish and wildlife consumption</li> </ul>	Environment: 2 Human health: 2 Economy: 4	<ul style="list-style-type: none"> <li>Fish tumours or other deformities</li> <li>Degradation of benthos</li> <li>Restrictions on drinking water consumption, or taste and odour problems</li> <li>Beach closing</li> <li>Tainting of fish and wildlife flavor</li> <li>Restrictions on dredging activities</li> <li>Degradation of aesthetics</li> </ul>	2010: 2 2014: 1 2016: 2 2019: 1 2020: 2	2

Lake	Area of Concern	Initial assessment (number of beneficial use impaired)	2021 assessment year: total impaired (number of beneficial use impaired by category of impact)	2021 impaired beneficial use	2021 assessment year: total restored (number of beneficial use restored by category of impact)	2021 restored beneficial use	Year and number of restored beneficial use	Beneficial use not impaired
						<ul style="list-style-type: none"> <li>Added costs to agriculture or industry</li> </ul>		
Erie	Wheatley Harbour <sup>(C)</sup>	5	No impaired beneficial use	n/a	Environment: 3 Human health: 1 Economy: 1	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Eutrophication or undesirable algae</li> <li>Loss of fish and wildlife habitat</li> <li>Restrictions on fish and wildlife consumption</li> <li>Restrictions on dredging activities</li> </ul>	2010: 5	9
	Niagara River	8	Environment: 3 Human health: 2	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Degradation of benthos</li> <li>Loss of fish and wildlife habitat</li> <li>Restrictions on fish and wildlife consumption</li> <li>Beach closing</li> </ul>	Environment: 2 Economy: 1	<ul style="list-style-type: none"> <li>Bird or animal deformities or reproduction problems</li> <li>Eutrophication or undesirable algae</li> <li>Restrictions on dredging activities</li> </ul>	2009: 2 2019: 1	6
Ontario	Hamilton Harbour	8	Environment: 4 Human health: 2 Economy: 2	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Degradation of benthos</li> </ul>	No restored beneficial use	n/a	No restored beneficial use	6

Lake	Area of Concern	Initial assessment (number of beneficial use impaired)	2021 assessment year: total impaired (number of beneficial use impaired by category of impact)	2021 impaired beneficial use	2021 assessment year: total restored (number of beneficial use restored by category of impact)	2021 restored beneficial use	Year and number of restored beneficial use	Beneficial use not impaired
				<ul style="list-style-type: none"> <li>Eutrophication or undesirable algae</li> <li>Loss of fish and wildlife habitat</li> <li>Restrictions on fish and wildlife consumption</li> <li>Beach closing</li> <li>Restrictions on dredging activities</li> <li>Degradation of aesthetics</li> </ul>				
Ontario	Toronto and Region	8	Environment: 3 Human health: 2	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Eutrophication or undesirable algae</li> <li>Loss of fish and wildlife habitat</li> <li>Restrictions on fish and wildlife consumption</li> <li>Beach closing</li> </ul>	Environment: 1 Economy: 2	<ul style="list-style-type: none"> <li>Degradation of benthos</li> <li>Restrictions on dredging activities</li> <li>Degradation of aesthetics</li> </ul>	2016: 2 2020: 1	6
Ontario	Port Hope Harbour	1	Economy: 1	<ul style="list-style-type: none"> <li>Restrictions on dredging activities</li> </ul>	No restored beneficial use	n/a	No restored beneficial use	13
Ontario	Bay of Quinte	10	Environment: 2 Human health: 1 Economy: 1	<ul style="list-style-type: none"> <li>Eutrophication or undesirable algae</li> <li>Degradation of phytoplankton and zooplankton populations</li> </ul>	Environment: 3 Human health: 2 Economy: 1	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Loss of fish and wildlife habitat</li> </ul>	2017: 1 2018: 3 2019: 1 2020: 1	4

Lake	Area of Concern	Initial assessment (number of beneficial use impaired)	2021 assessment year: total impaired (number of beneficial use impaired by category of impact)	2021 impaired beneficial use	2021 assessment year: total restored (number of beneficial use restored by category of impact)	2021 restored beneficial use	Year and number of restored beneficial use	Beneficial use not impaired
				<ul style="list-style-type: none"> <li>Restrictions on fish and wildlife consumption</li> <li>Degradation of aesthetics</li> </ul>		<ul style="list-style-type: none"> <li>Degradation of benthos</li> <li>Restrictions on drinking water consumption, or taste and odour problems</li> <li>Beach closing</li> <li>Restrictions on dredging activities</li> </ul>		
Ontario	St. Lawrence	10	Environment: 3 Human health: 2	<ul style="list-style-type: none"> <li>Degradation of fish and wildlife populations</li> <li>Eutrophication or undesirable algae</li> <li>Loss of fish and wildlife habitat</li> <li>Restrictions on fish and wildlife consumption</li> <li>Beach closing</li> </ul>	Environment: 1 Human health: 1 Economy: 3	<ul style="list-style-type: none"> <li>Degradation of benthos</li> <li>Restrictions on drinking water consumption, or taste and odour problems</li> <li>Restrictions on dredging activities</li> <li>Degradation of aesthetics</li> <li>Added costs to agriculture or industry</li> </ul>	1997: 3 2007: 2	4
Total	n/a	121	53	n/a	68	n/a	68	117

**Note:** n/a = not applicable. Empty cells indicate a Great Lake tributary river. The number of beneficial uses that are Impaired for 2021 is based on progress reported as of March 31, 2021. <sup>[A]</sup> All impaired beneficial uses have been restored in the Area of Concern; however, it cannot be formally designated as a Restored Area of Concern until the final approval of the completion report. <sup>[B]</sup> Area of Concern in Recovery. <sup>[C]</sup> Restored Area of Concern.

**Source:** Environment and Climate Change Canada (2021) Great Lakes Areas of Concern Office.

Additional information can be obtained at:

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