LAKE ONTARIO

Lake Ontario, the 14th largest lake in the world, is the smallest of the Great Lakes in surface area. Lake Ontario's level is controlled by a dam at Kingston, Ontario, and two-thirds of the lake lies below sea level. It ranks fourth among the Great Lakes in maximum depth, but its average depth is second only to Lake Superior. Lake Ontario lies 325 ft (99 m) below Lake Erie, at the base of Niagara Falls. The falls were always an obstacle to navigation into the upper lakes until the Trent-Severn Waterway, along with the Welland and Erie Canals were built to allow ships to pass around this bottleneck. The oldest lighthouse on the U.S. side of the Great Lakes was set up at Fort Niagara in 1818 to aid navigation.

The basin is largely rural, with many scenic resort areas. A few large urban areas, including Ontario's capital city (Toronto), are located on the Canadian shoreline. In 1972-73, 1,000 scientists, engineers and technicians undertook the most extensive survey ever made of a Great Lake.

WATER USE

The Great Lakes provide water for many purposes: residential, commercial and institutional facilities; agricultural operations; industrial processes; electric power generation; navigation; sanitation; recreation; and habitat for fish, waterfowl and other aquatic organisms. In 1987, the Great Lakes states and provinces established at the Great Lakes Commission a regional water use data base for the Great Lakes basin and the individual lakes. However, as of 1989, it was not yet possible to obtain accurate information for all categories of water use in Lake Ontario.

ECONOMIC IMPORTANCE

Agriculture: Region contains 17 percent of Canadian farmland. Top commodities include oats (Ontario), apples, grapes, sweet corn, and dairy products. Grape and wine-producing area in New York.

Industry: Machinery, electrical goods, transportation equipment, chemicals.

SPONSORS/INFORMATION SOURCES

Toxics Management Plan has been cooperatively developed by Canada, the United States, Ontario and New York to implement existing programs and create new ones that will further reduce the level of toxic contamination that enters the lake.

SPONSORS/INFORMATION SOURCES

Michigan State University
334 Natural Resources Building
East Lansing, MI 48824-1222 (517) 353-9568
or
The University of Michigan
2200 Bonisteel Boulevard
Ann Arbor, MI 48109 (313) 764-1138

International Joint Commission
Great Lakes Regional Office
100 Ouellette Avenue, Eighth Floor
Windsor, ON N9A 6T3 (519) 256-7821
or
P.O. Box 32869
Detroit, MI 48232-2869 (313) 226-2170

Environment Canada
Communications Directorate
25 St. Clair Avenue East, Room 600
Toronto, ON M4T 1M2 (416) 973-6467
or
Ontario Ministry of the Environment
Public Information Centre
135 St. Clair Avenue West
Toronto, ON M4V 1P5 (416) 323-4321

Great Lakes Commission
The Argus Building II
400 Fourth Street
Ann Arbor, MI 48103-4816 (313) 665-9135

Institute of Water Research
Michigan State University
334 Natural Resources Building
East Lansing, MI 48824-1222 (517) 353-3742
The Center for the Great Lakes
435 North Michigan Avenue - Suite 1408
Chicago, IL 60611 (312) 645-0901
or
The Centre for the Great Lakes Foundation
320 1/2 Bloor Street, West, Suite 301
Toronto, ON M5S 1W5 (416) 921-7662

Other publications in this series are: Great Lakes Basin (E-1865, MICHU-SG-89-503); Lake Superior (E-1866, MICHU-SG-89-504); Lake Michigan (E-1867, MICHU-SG-89-505); Lake Huron (E-1868, MICHU-SG-89-506); and Lake Erie (E-1869, MICHU-SG-89-507). For additional copies, contact one of the organizations listed above, your county Extension office, or the MSU Bulletin Office, 10-B Agriculture Hall, East Lansing, MI 48824-1039.

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25 cents (Single copy free to Michigan residents)
FILE: 28.32 or 23.21 (Great Lakes Resource Management)
Lake Ontario

Lake Ontario is bounded by the powerful Niagara Falls on the west and the picturesque Thousand Islands on the east.

**LAKE ONTARIO DIMENSIONS**

- **LENGTH**: 193 mi / 311 km
- **BREADTH**: 53 mi / 85 km
- **DEPTH**: 282 ft / 86 m average; 804 ft / 245 m maximum
- **VOLUME**: 393 mi³ / 1,640 km³
- **WATER SURFACE AREA**: 7,340 mi² / 18,960 km²
- **DRAINAGE BASIN AREA**: 23,400 mi² / 60,600 km²
- **SHORELINE LENGTH**: 726 mi / 1,168 km (including islands)
- **ELEVATION**: 246 ft / 75 m
- **OUTLET**: St. Lawrence River to the Atlantic Ocean
- **RETENTION/REPLACEMENT TIME**: 6 years
- **POPULATION**: 2,657,432 (U.S.); 4,616,070 (Canada)

**LAND AND SHORELINE USE**

The percentages below were calculated in the 1970s, based on information collected by the former Great Lakes Basin Commission. A study group formed by the International Joint Commission began to assemble current shoreline use information in 1987.

**LAND USE (Percent of total)**

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<th>Category</th>
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<th>U.S.</th>
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<td>33</td>
<td>39</td>
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<tr>
<td>Residential/industrial</td>
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<td>8</td>
<td>7</td>
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<tr>
<td>Forest</td>
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<td>53</td>
<td>49</td>
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<tr>
<td>Other</td>
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**SHORELINE USE (Percent of total)**

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<tr>
<td>Commercial</td>
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<td>8</td>
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<tr>
<td>Other</td>
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