Lake Huron Basin
Michigan State University Cooperative Extension Service
Michigan SeaGrant
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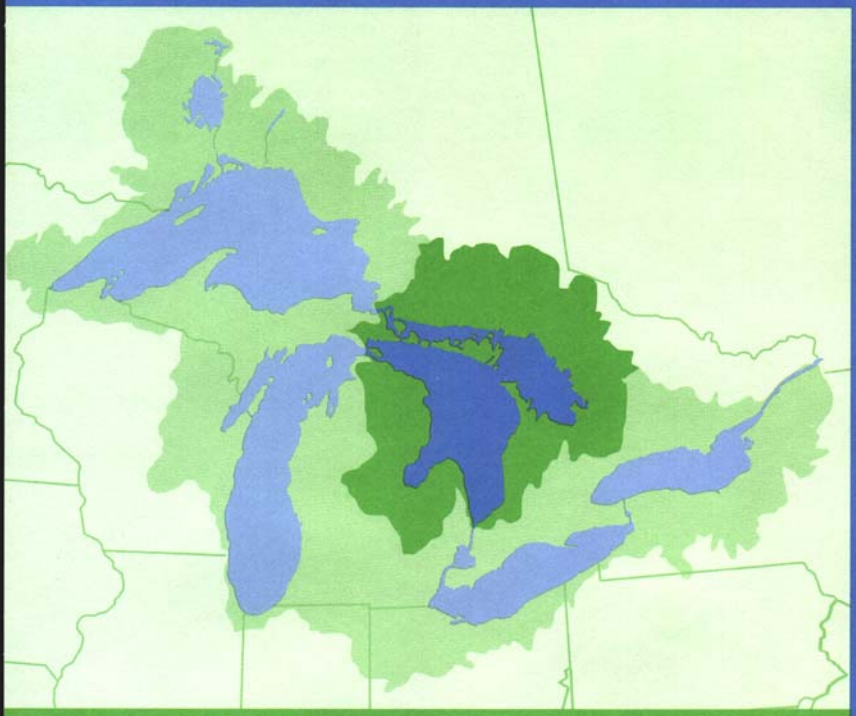
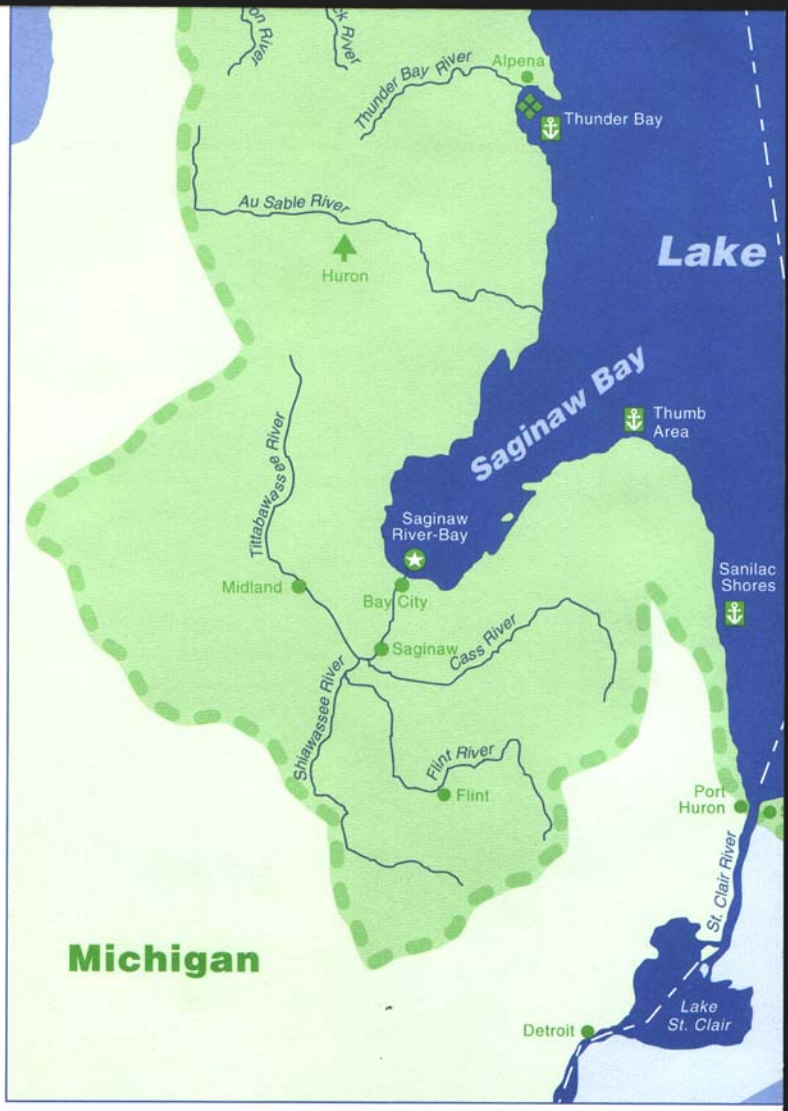


Lake Huron Basin Statistics

ength	206 mi/332 km
readth	183 mi/ 295 km
epth	195 ft/59 m average 750 ft/229 m maximum
olume	849 mi^3/3,538 km^3
ater Surface Area	23,000 mi^2/59,565 km^2
rainage Basin Area	50,700 mi^2/131,303 km^2
Shoreline Length (including islands)	3,830 mi/6,164 km
Elevation	577.5 ft/176.0 m
Outlet	St. Clair River to Lake Erie
Retention/Replacement Time	21 years
Population	2,960,359
United States	1,483,872
Canada	1,476,487

Lake Hu


Lake
Superior
Sault
Ste.
Marie
Soo Locks
Michigan
Sault Ste. Marie
St. Marys
River
Mississagi River
Hiawatha
Detour
Passage
North Channel
Straits of Mackinac
Straits of Mackinac
Mackinac Island
Drummond
Island


Thunder Bay River
Alpena
Thunder Bay
Au Sable River
Huron
Lake
Saginaw Bay
Thumb Area
Tittabawassee River
Saginaw River-Bay
Midland
Bay City
Saginaw
Cass River
Shiawassee River
Flint River
Flint
Sanilac Shores
Port Huron
St. Clair River
Lake St. Clair
Detroit
Michigan

Lake Huron is the second largest of the Great Lakes and the fourth largest freshwater lake in the world. It is hydrologically connected to Lake Michigan at the Straits of Mackinac, so the two could actually be one lake. Lake Huron also includes the two largest bays on the Great Lakes — Georgian Bay and Saginaw Bay. Georgian Bay alone is large enough to be one of the world's 20 largest lakes. Lake Huron has inflow from both Lake Superior and Lake Michigan but has a shorter retention time than either — 21 years.

The state of Michigan and the province of Ontario surround Lake Huron. The United States/Canada border divides Lake Huron almost exactly in half. The southern portion of the Lake Huron basin is more developed than the northern portion and is dominated by residential areas and agriculture. The northern portion of the basin is heavily forested, sparsely populated, scenically beautiful and economically dependent on its rich natural resources.

Shoreline Use

United States		Canada
27.3%	Residential	13.9%
5.0%	Commercial/Industrial	1.0%
0.3%	Agricultural	1.7%
67.5%*	Other	83.4%**

* U.S. "other" classification includes public, beaches, forests, barren lands.

** Canadian "other" classification includes transportation and communications, recreation, extraction, water, wetlands, forestry, grassland, barren and unknown.

Economy

The Lake Huron basin supports a varied economy with strong industrial, agricultural and recreational sectors.

Industry: One of the largest U.S. chemical producers is located in the basin at Midland, Michigan, and one of Canada's largest petrochemical centers is at Sarnia, Ontario.

Mining: Large nickel reserves are located in Ontario just north of the lake. The world's largest limestone quarry is located in the basin near Rogers City, Michigan.

Manitoulin Island is the largest freshwater island in the world. On that island is a lake (Manitoulin Lake), which is the largest lake on an island in a lake in the world. Manitoulin Lake has an island that is the largest island on a lake on an island in a lake in the world!

Shipping: Lake Huron functions as a conveyer within the Great Lakes system. Vessels loaded with raw materials and finished goods move from Lake Superior and Lake Michigan through Lake Huron to the urban and industrial centers along Lake Erie and Lake Ontario. The lock system in the St. Marys River at Sault Ste. Marie makes this transfer possible.

Agriculture: Huron County in Michigan's Thumb region produces more dry beans than any other county in the nation. Other crops grown in the basin include soybeans, potatoes, cucumbers, corn and sugar beets.

Fisheries: In 1996, Lake Huron produced a commercial harvest of more than 9 million pounds of fish, primarily lake whitefish and chubs. Recreational fishing is also important, attracting 230,000 U.S. anglers in 1991 and 443,000 Canadians in 1985.

When Lake Huron's 30,000 islands are included, the lake has the longest shoreline of any of the Great Lakes.

Tourism/Recreation: Many vacation cottages cluster on the Lake Huron shoreline, and each year more than 6.5 million people visit national, provincial and state parks, and underwater preserves/parks in the Lake Huron basin. Underwater preserves/parks are special areas in the lakes designated by Michigan/Ontario to protect shipwrecks and other cultural and geologic resources. In 2000, Michigan's Thunder Bay Underwater Preserve near Alpena, Michigan, also became the United States' first National Marine Sanctuary in the Great Lakes.

Ecology

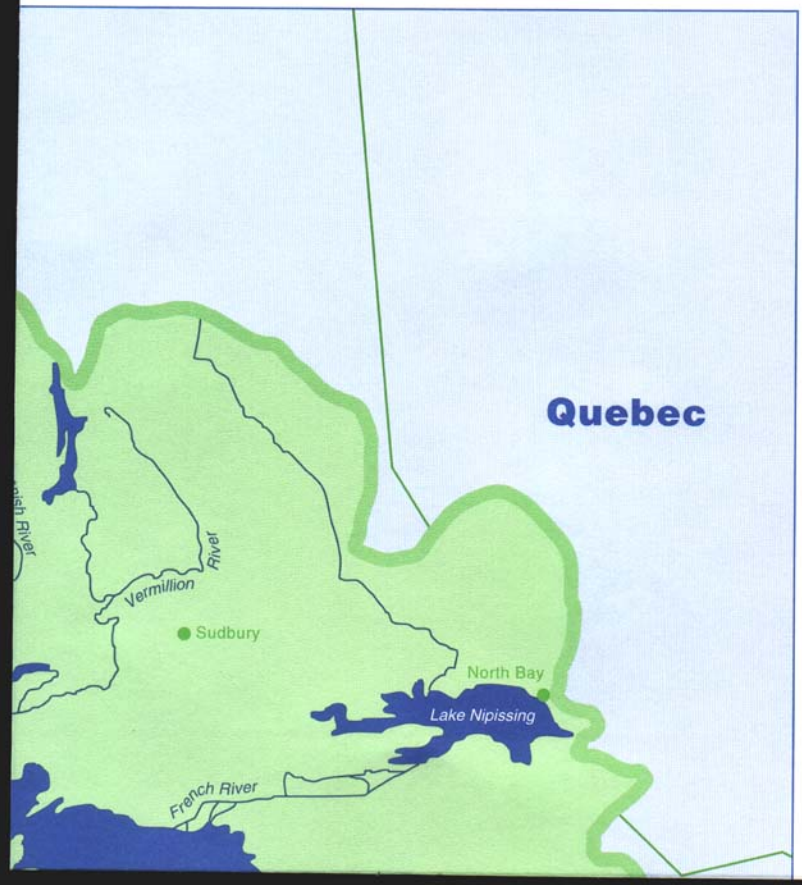
Many types of forests are located in the Lake Huron basin, including northern hardwood and pine forests in the north and oak-hickory forests in the south.

Thirty-seven percent of all wetlands found in Michigan are in the Lake Huron basin. Lake Huron's coastal wetlands are home to more than 40 species of rare plants, five species of reptiles and more than 80 species of fish. Birds in the basin include the bald eagle, great blue heron and snowy owl.

A wide array of mammals live in the Lake Huron basin, including moose, elk, black bear, gray wolf, Canada lynx, beaver, coyote, porcupine and flying squirrels, along with 10 species of frogs and Michigan's only poisonous snake, the eastern massasauga rattlesnake.


Georgian Bay
Bruce Peninsula
Muskota Ri
Severn River
Severn Sound
Owen Sound
Lake Simcoe
Saugeen River
Goderich
Lake Ontario
City
Area of Concern
Underwater Preserve/Park
National Park/Sanctuary
National Forest
State/Provincial Boundary
International Boundary
Lake Basin Boundary
Great Lakes Basin Boundary
tario
Lake Erie
Canada
United States
New York

on Basin


Quebec
Vermillion River
Sudbury
North Bay
Lake Nipissing
French River

Natural Resource and Environmental Issues

Loss of Wetlands: Thirty-seven percent of all coastal wetlands in Michigan are in the Lake Huron basin. Wetlands help to replenish and purify groundwater, prevent flooding and erosion, and support a wide diversity of plant and animal life. However, wetlands continue to be drained and filled — mostly on the U.S. shoreline, where it is estimated that 50 percent of the original Saginaw Bay wetlands have been lost to urban encroachment, cottage development and agriculture.

Water Quality: Pollution is not as severe in Lake Huron as it is in some other Great Lakes basins, but problem areas do exist. The sources of this pollution are agricultural runoff, industrial plants and municipal wastewater treatment plants. Toxins enter the lake from direct discharge and atmospheric deposition. These toxins can be harmful to fish and wildlife. Consumption advisories have been placed on some Lake Huron sport-caught fish because of concern that contaminants may affect humans who eat fish in large amounts. The U.S. and Canadian governments have designated three places on the Lake Huron shoreline as areas of concern where beneficial uses have been impaired and environmental standards are not being met. Improvements have occurred in the Lake Huron basin, however. One result of these efforts was the delisting of one area of concern — Collingwood Harbour at the southern end of Georgian Bay — the first in the Great Lakes Basin to be removed from the list.

Exotic Species: Several aquatic nuisance species have found their way into the waters of Lake Huron and are disrupting its ecological dynamics. Sea lamprey, which entered Lake Huron in 1932, prey on and have decimated valued species of fish such as lake trout, whitefish and chinook salmon. Because these lampreys have no natural predators in the Great Lakes, alternative control methods are being used to sustain important fisheries. Zebra mussels have also caused ecological and economic problems in Lake Huron. These small, striped mussels cluster inside water pipes, disrupting normal inflow necessary for industry, agriculture and residential use. In addition, they can affect recreation if large numbers of them wash ashore, leaving behind their sharp shells and producing a foul odor. Zebra mussels are damaging populations of native mussels by attaching to their shells, impairing the natives' ability to function, and eventually killing them.

Sea Grant MICHIGAN

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