

LAKE ERIE GAZETTEER · LAKEERIE.INFO

LAKE ERIE FACT BOOK

How the lake works: its size, depth, temperature, ice, islands, storms and name, every number cited.

THE NUMBERS

Every figure in this book comes from one registry of cited values, the same one the website uses.

Measure	Value
Water area	9,910 sq mi (25,700 km ²)
Length	241 mi (388 km)
Greatest breadth	57 mi (92 km)
Average depth	62 ft (19 m)
Maximum depth (EPA)	210 ft (64 m)
Maximum depth (NOAA bathymetry)	63 m (about 207 ft)
Volume	116 mi ³ (484 km ³)
Shoreline, including islands	871 mi (1,402 km)
Land drainage area	30,140 sq mi (78,000 km ²)
Elevation (1995 atlas)	569 ft (173 m)
Retention time	2.6 years
Inflow from the Detroit River	80%
People living in the watershed	approximately 12 million people
People drinking Lake Erie water	about 11 million people
Islands	31
Warmest month, August (1995–2025 lake-wide mean)	74.8 °F (23.8 °C)
Coldest month, February (1995–2025 lake-wide mean)	33.1 °F (0.6 °C)
Average annual maximum ice cover, 1973–2026	80.5%
Lowest annual maximum ice cover (1998)	5.4%
Lighthouses in this gazetteer	45

SIZE AND DEPTH

How deep is Lake Erie?

Short answer. Lake Erie averages 62 ft (19 m) deep. Its deepest point, in the eastern basin, reaches 210 ft (64 m), according to the U.S. EPA; NOAA's detailed bathymetry puts the maximum at 63 m (about 207 ft).

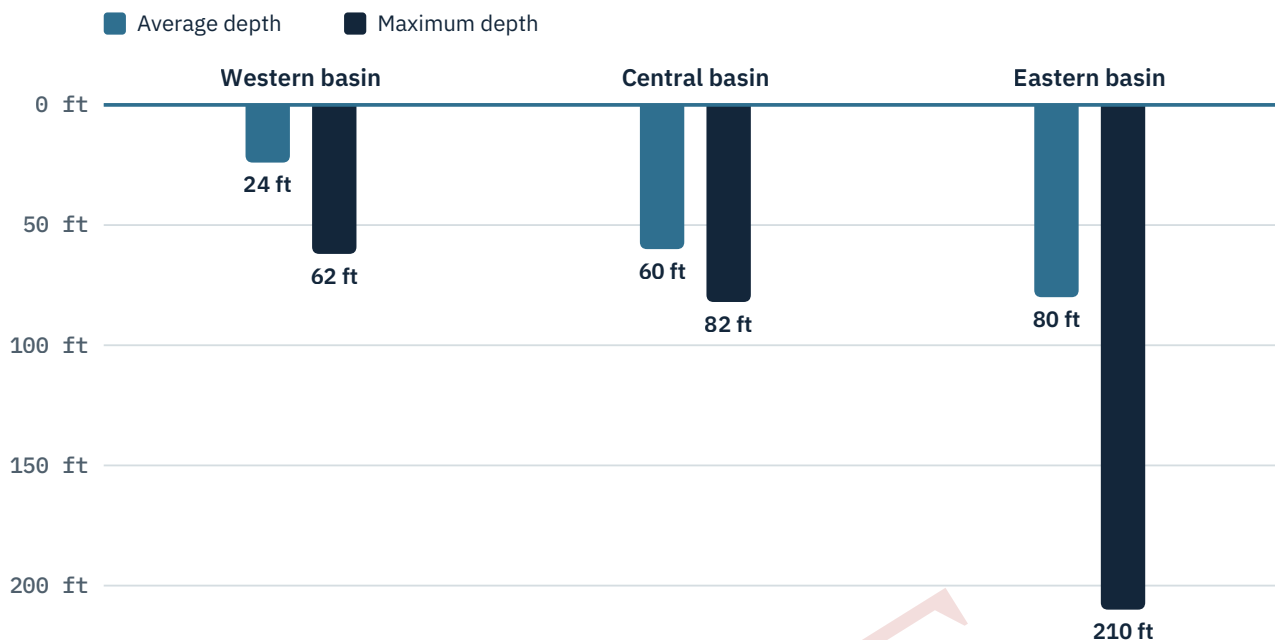
Key numbers	Value
Average depth (EPA)	62 ft / 19 m
Maximum depth (EPA)	210 ft / 64 m
Maximum depth (NOAA bathymetry)	63 m / about 207 ft
Western basin, average / maximum	24 ft / 7.4 m / 62 ft / 19 m
Central basin, average / maximum	60 ft / 18.3 m / 82 ft / 25 m
Eastern basin, average / maximum	80 ft / 24 m / 210 ft / 64 m

Three basins, three depths

Lake Erie is not one bowl but three, and they get deeper from west to east. The U.S. EPA describes the lake as naturally divided into western, central and eastern basins that behave almost like separate lakes.^[2] The western basin, about about 20% of the lake, averages only 24 ft (7.4 m) and reaches 62 ft at most; its fine bottom sediment is easily stirred up by wind and waves, which makes it the murkiest part of the lake. The central basin is remarkably even, averaging 60 ft (18.3 m) with a maximum of 82 ft. The eastern basin, beyond Long Point, is the deepest, averaging 80 ft (24 m) and reaching 210 ft (64 m).^[2]

Basin	Average depth	Maximum depth
Western	24 ft (7.4 m)	62 ft (19 m)
Central	60 ft (18.3 m)	82 ft (25 m)
Eastern	80 ft (24 m)	210 ft (64 m)

Lake Erie depth by basin, west to east



Source: U.S. EPA, Lake Erie basin depths. Schematic: basins not drawn to horizontal scale · Chart: Lake Erie Gazetteer, lakeerie.info

Where the deepest water is

Both federal sources place the deepest water in the eastern basin. The EPA's table of Great Lakes physical features gives a maximum of 210 ft (64 m), measured at low water.^[1] NOAA's bathymetry of Lake Erie, compiled from more than a century of soundings, describes the western basin as reaching 10–11 m, the central basin 24–25 m, and the eastern basin more than 40 m, with a maximum of 63 m.^[4] The one-meter difference between the two maximums comes from different methods and datums, so this page shows both. NOAA also notes some striking features of the lake floor: the sandy Long Point spit runs about about 35 km out from the Ontario shore and rises 55 m above the floor of the eastern basin, the greatest relief anywhere in the lake, while in the shallow west the sharpest relief, about about 15–20 m, surrounds the Bass Islands.^[4]

Why the shallowness matters

Lake Erie is the shallowest of the Great Lakes and the smallest by volume. That is why it warms quickly in spring and summer, cools quickly in autumn and often freezes over in winter, and the EPA calls it the most biologically productive of the five.^[2] Shallow water also means rough water: the lake's waves build fast in a strong wind, and storms can pile water up at one end of the lake. See the pages on water temperature, ice cover and seiches for more.

Questions people ask

What is the deepest part of Lake Erie? The eastern basin, east of Long Point. The U.S. EPA gives a maximum depth of 210 ft (64 m); NOAA's bathymetry gives 63 m.

How deep is the western basin of Lake Erie? Very shallow: it averages 24 ft (7.4 m) and reaches no more than 62 ft (19 m), according to the EPA.

Is Lake Erie the shallowest Great Lake? Yes. Its average depth of 62 ft is far less than any of the other four Great Lakes, according to EPA figures.

Online: lakeerie.info/facts/how-deep-is-lake-erie

SAMPLE

Is Lake Erie the shallowest Great Lake?

Short answer. Yes. Lake Erie's average depth is 62 ft (19 m). The next shallowest, Lake Huron, averages 195 ft (59 m), and Lake Superior 483 ft (147 m), according to the U.S. EPA.

Key numbers	Value
Lake Erie, average / maximum depth	62 ft / 19 m / 210 ft / 64 m
Lake Huron, average depth	195 ft / 59 m

Depth of the five Great Lakes

The EPA's table of Great Lakes physical features makes the comparison plain. Lake Erie's average depth of 62 ft is less than a third of Lake Huron's and about an eighth of Lake Superior's, and even its deepest point, 210 ft, is shallower than the average depth of Lakes Michigan and Ontario.^[1]

Lake	Average depth	Maximum depth
Superior	483 ft (147 m)	1,332 ft (406 m)
Michigan	279 ft (85 m)	925 ft (282 m)
Huron	195 ft (59 m)	750 ft (229 m)
Erie	62 ft (19 m)	210 ft (64 m)
Ontario	283 ft (86 m)	802 ft (244 m)

Why so shallow

Lake Erie sits in a basin carved mostly from soft shale and carbonate rock, and NOAA's geomorphology summary describes a floor that was later smoothed by sediment after the glaciers retreated.^[4] Wikipedia's account of the lake's geology notes that differential glacial erosion and the influence of structures like the Niagara Escarpment limited how deeply its basin was overdeepened compared with Lakes Superior and Ontario.^[8] The western basin, a broad shallow shelf averaging 24 ft (7.4 m), is the shallowest part of all.^[2]

What shallowness does

Being shallow shapes almost everything about the lake. The EPA notes that Erie warms quickly in spring and summer, cools quickly in autumn and frequently freezes in winter, and that its shallowness and warmth make it the most biologically productive of the Great Lakes.^[2] It also holds the least water of the five, 116 mi³ (484 km³), and replaces it fastest, in about 2.6 years.^[1]

Shallow, deeper, deepest

Even within Lake Erie, depth changes a great deal from west to east. The EPA gives average depths of 24 ft in the western basin, 60 ft in the central basin and 80 ft in the eastern basin, where the lake reaches its maximum of 210 ft.^[2] NOAA's bathymetry shows the same west-to-east steps: about 10–11 m, then 24–25 m, then more than 40 m in the east.^[4]

Questions people ask

Which Great Lake is the shallowest? Lake Erie, with an average depth of 62 ft (19 m), according to the EPA.

Which Great Lake is the deepest? Lake Superior, with a maximum depth of 1,332 ft (406 m), according to the EPA.

Online: lakeerie.info/facts/is-lake-erie-the-shallowest-great-lake

SAMPLE

Sources

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About this edition

This is a free sample. The full book covers all twenty questions, storms, a glossary and a kids' quiz.

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