

The Great Lakes

VITAL TO OUR NATION'S ECONOMY AND ENVIRONMENT



A new analysis of economic data shows that more than 1.5 million jobs are directly connected to the Great Lakes, generating \$62 billion in wages.

The Great Lakes have shaped the culture, history and economy of the eight states that border the freshwater seas. Historically, the lakes formed a water highway that promoted settlement, trade, resource mining and manufacturing that enabled the region to become the industrial heartland of the nation. The Great Lakes continue to provide a competitive advantage for businesses and support fantastic recreational opportunities that help attract talented workers to the region.

This analysis is based on 2009 employment data from the Bureau of Labor Statistics and represents a conservative estimate of direct employment related to the Great Lakes in the following industries: manufacturing, tourism and recreation, shipping, agriculture, science and engineering, utilities, and mining.

MANUFACTURING: 994,879 Jobs

The Great Lakes provide efficient transportation, which sustains manufacturing and steel production, while the clean, abundant water attracts chemical and pharmaceutical companies to the region. Historically, access to the lakes resulted in a concentration of technical skill, transportation and manufacturing infrastructure. Today, it continues to drive manufacturing and innovation.

TOURISM AND RECREATION: 217,635 Jobs

Great Lake beaches, resort communities and natural areas support a vibrant recreation and tourism industry and enhance the quality of life for residents. Over 4 million recreational vessels are registered in the region and people spend nearly \$16 billion annually on boating trips and equipment.¹ Many take advantage of the region's Great Lakes-dependent natural resources, including more than 9.2 million anglers, 4.6 million hunters and 23.2 million bird watchers each year.²

WHAT DO THESE NUMBERS INCLUDE?

The calculations in this summary are based on the most recent annual estimates for county employment from the Bureau of Labor Statistics' Quarterly Census of Employment & Wages and Occupational Employment Statistics programs. For all states, except Michigan, only jobs in specific industries in the counties bordering the Great Lakes were included. In Michigan, nearly all mined materials are transported by lake vessels and so all mining jobs, except those related to oil and gas, are considered connected to the lakes. Michigan's access to the Great Lakes created a concentration of manufacturing infrastructure that continues to drive industry today and therefore most manufacturing jobs are connected to the lakes. For further details, see: www.miseagrant.umich.edu/economy

SHIPPING, INCLUDING FREIGHT TRANSPORT AND WAREHOUSING: 118,550 Jobs

Great Lakes vessels transport an average of 163 million tons of cargo (e.g., iron ore, coal and grain) each year.³ Lake vessels can ship goods three times more efficiently than rail and 10 times more efficiently than trucks,⁴ which gives mining, manufacturing and agriculture in the region a competitive edge. Many of the transportation routes are multi-modal and involve transfers among lake-bound and international vessels, rail and trucks.

AGRICULTURE, FISHING AND FOOD PRODUCTION: 118,430 Jobs

The Great Lakes support a vibrant recreational and commercial fishery. The Lakes also moderate the climate of coastal areas, improving production and creating microclimates that are ideal for specialty crops such as cherries, asparagus and wine grapes. The high-value, specialty

crops also provide spin-off industries such as culinary festivals and beverage production.

SCIENCE AND ENGINEERING: 38,085 Jobs

Twenty science, engineering and conservation-oriented occupations are connected to the Great Lakes. That includes jobs that focus on the natural environment, such as an environmental scientist, and those tied to Great Lake industries, such as food scientists and nuclear engineers.

UTILITIES: 10,980 Jobs

Power plants are the largest user of surface water in the region. Nuclear, coal and natural gas power plants are often located on a coast where they have ready access to water for facility cooling. The Great Lakes also enable lucrative hydro-electricity production in Sault Ste. Marie, Niagara Falls and the Upper St. Lawrence River.

MINING: 10,003 Jobs

Mining operations flourish in the Great Lakes region because there are abundant natural resources, a regional market for the material, and access to inexpensive transportation.

ENSURING A VIBRANT FUTURE

Water is huge draw for people — coastal trails, clean beaches and waterfront businesses add tremendous value to both metropolitan and semi-rural areas. In this new economic era, growth will be less linked to traditional manufacturing and more focused on quality of life and quality of the region's natural resources. Unless we protect and restore our best environmental asset — the Great Lakes — we will not be able to retain and attract strong new businesses and great human resources.

The Lakes are vital not only to the basin states, but are also an integral part of our nation's economic and environmental health. With 83 million people, the region produced 27% of the gross domestic product⁵ and 24% of country's exports in 2009.⁶ The Great Lakes basin is home to 38% of the Fortune 500 companies⁷ and one of the largest concentrations of research universities in the world.⁸ Great Lakes colleges and universities award 32% of the nation's advanced science and engineering degrees,⁹ providing the human capital needed for innovation and entrepreneurship.

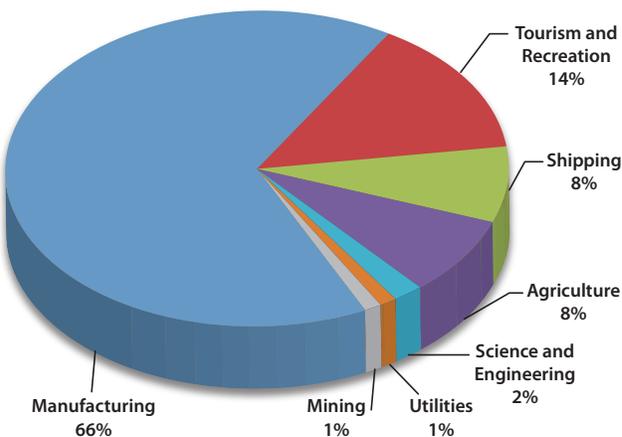
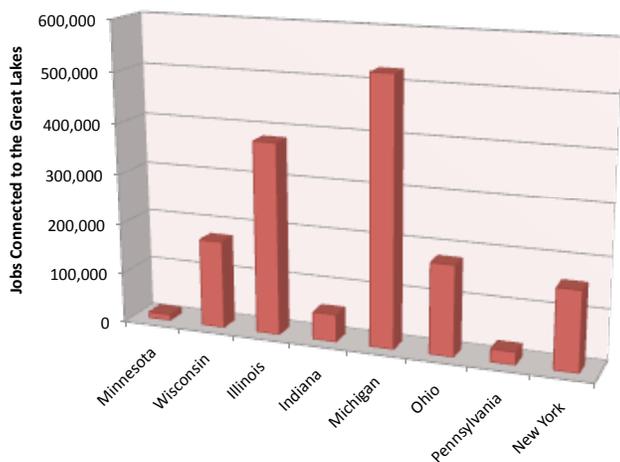


Figure 1. The number of jobs in each state that are connected to the Great Lakes (2009).

Figure 2. Percentage of Great Lakes jobs by industry (2009).

STATE	GREAT LAKES JOBS	INDUSTRY	GREAT LAKES JOBS
Minnesota	11,877	Manufacturing	994,879
Wisconsin	173,969	Tourism and Recreation	217,635
Illinois	380,786	Shipping	118,550
Indiana	54,397	Agriculture	118,430
Michigan	525,886	Science and Engineering	38,085
Ohio	178,621	Utilities	10,980
Pennsylvania	25,479	Mining	10,003
New York	157,547	Total	1.51 Million
Total	1.51 Million		

Table. Number of jobs connected to the Great Lakes by state and industry. All data is for 2009.

¹ Great Lakes Recreational Boating's Economic Punch. Great Lakes Commission. 2008.
² 2006 National Survey of Fishing, Hunting and Wildlife Associated Recreation. U.S. Fish and Wildlife Service.
³ Lake Carriers Association. 2009. Data are a five-year average for dry bulk commerce.
⁴ Great Lakes Navigation System: Economic Strength to the Nation. U.S. Army Corp of Engineers. 2009.

⁵ GDP by State. Bureau of Economic Analysis. 2009.
⁶ International Trade Administration. 2009 export statistics.
⁷ Fortune Magazine. April 2010.
⁸ The Vital Center. The Brookings Institution. 2006.
⁹ NSF Science and Engineering Indicators. 2010. (State indicator data is from 2007.)

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