

The Economic Value of Water Quality

West Okoboji Lake Case Study

Background

West Okoboji Lake is a natural glacial lake in northwest Iowa. West Okoboji is part of a chain of lakes in Dickinson County known as the Iowa Great Lakes, which includes Big Spirit Lake, East Okoboji Lake, and several smaller lakes.¹

Dickinson County²

Population	Median Income	Median Property Value
17,056	\$58,099	\$179,300

Dickinson County is the only county in Iowa with a tourism-based economy.³ In 2019, \$146.69 million was spent on tourism within the county. This resulted in:

- \$27.01 million in payroll.
- 1,080 jobs.
- \$7.43 million in state tax receipts.
- \$2.14 million in local tax receipts.⁴

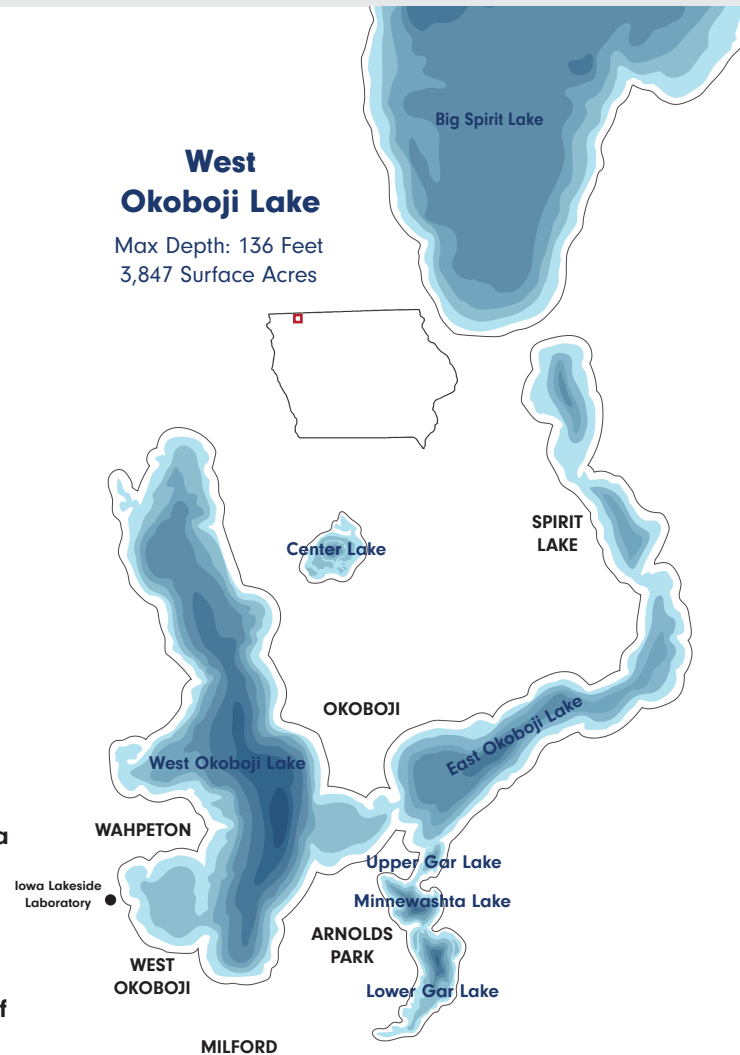
Water Quality Efforts

West Okoboji Lake is known for its exceptional water quality, being designated one of only two Outstanding Iowa Waters in western Iowa along with Big Spirit Lake.⁵ However, the lake has been listed as impaired for indicator bacteria (*E. coli*) at Emerson Bay since 2006.⁶ Multiple efforts, including the Iowa Great Lakes (IGL) Project, have been undertaken over the years to protect water quality in West Okoboji. The IGL Project has included restoration of wetlands north of the lake in the Welch Lake complex, east of the lake in the Okoboji View complex, and east of the lake in the Center Lake complex.

Through the IGL Project, the following practices have been implemented (these figures include all of the recreational lakes in the county):⁷

- More than 150 urban low impact development structures installed since
- More than 1000 feet of shoreline currently being restored to native short-grass prairie
- More than 500 acres of wetlands and 2000 acres of prairie restored through CRP.⁸

The IGL Project has totaled \$2,135,000 in projects to implement these practices and resulted in significant reductions in sediment, nitrogen, and phosphorus. The lakes have received more than \$5 million from the Iowa Department of Natural Resources Lakes Restoration Program and other partners since 2010 for water quality improvement projects.^{9, 10}



Iowa Lake Survey (2014)^{11,12}

Category	West Okoboji Lake	State Average
Predicted Annual Visits	336,000	65,000
Portion of visits with travel distance 10-30 miles	16%	37%
Portion of visits with travel distance 90+ miles	38%	13%
Perceived Water Quality (out of 10)	7.9	6.3
Direct Spending	\$49,191,185	\$7,075,421
Total Spending	\$77,869,645	\$11,200,391
Total Income Impact	\$12,284,637	\$1,766,963
Total Job Impact	600	86

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Endnotes

¹ For simplicity, this infographic will focus on West Okoboji Lake.

² Numbers include the cities of Okoboji, Arnolds Park, Milford, and Spirit Lake. DATA USA, <https://datausa.io/profile/geo/dickinson-county-ia>.

³ Phone call with Okoboji resident David Thoreson, Feb. 17, 2021.

⁴ Iowa Travel Federation and Iowa Economic Development Authority, The Economic Impact of Travel on Iowa Counties 2019 (Aug. 2020), available at https://www.traveliowa.com/userdocs/pages/IA_2019_Report_Aug._28,_2020.pdf.

⁵ Antidegradation, IOWA DEPT. OF NAT. RESOURCES, <https://www.iowadnr.gov/environmental-protection/water-quality/water-quality-standards/antidegradation> (last visited Feb. 28, 2021).

⁶ Water Quality Assessments Impaired Waters List, IOWA DEPT. OF NAT. RESOURCES, available at <https://programs.iowadnr.gov/adbnnet/Segments/2066/Assessment/2018>.

⁷ Dickinson County Clean Water Alliance, IGL Project, <https://cleanwateralliance.net/igl-project/> (last visited Feb. 28, 2021).

⁸ Conservation Reserve Program.

⁹ Lake Restoration Program 2019 Report and 2020 Plan, IOWA DEPT. OF NAT. RESOURCES, available at: <https://www.legis.iowa.gov/docs/publications/DF/1126197.pdf>.

¹⁰ Dickinson County Clean Water Alliance, IGL Project, <https://cleanwateralliance.net/igl-project/> (last visited Feb. 28, 2021).

¹¹ Center for Agricultural and Rural Development, Iowa State University, Iowa Lake Survey 2014 Interactive Map, https://www.card.iastate.edu/ag_policy_review/f15-lakes/#133 (last visited Feb. 28, 2021).

¹² Center for Agricultural and Rural Development, Iowa State University, A Report to the Iowa Department of Natural Resources: The Iowa Lakes Valuation Project 2014 (Feb. 2016), available at <https://www.card.iastate.edu/lakes/report-to-the-iowa-department-of-natural-resources-2014.pdf>.