

# The Economic Value of Water Quality

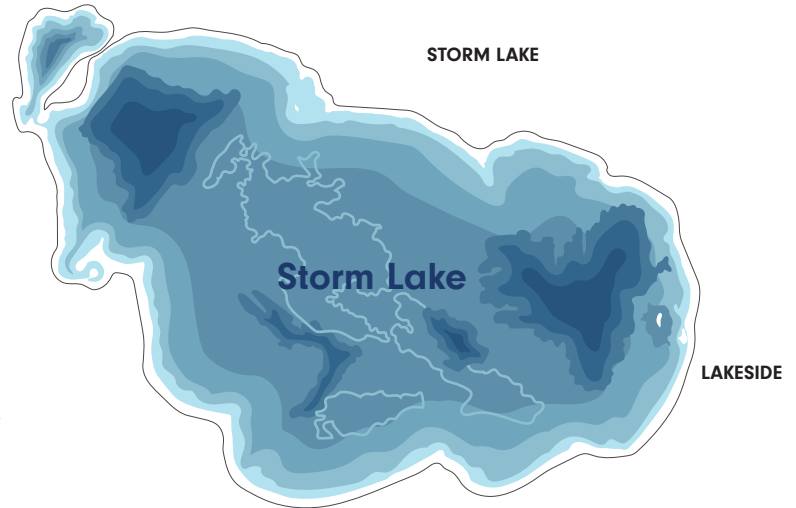
## Storm Lake Case Study

### Background

Storm Lake is a natural glacial lake in northwest Iowa (Buena Vista Co.) is the fourth largest natural lake in the state.<sup>1</sup> Storm Lake is adjacent to the city of Storm Lake, which is home to Buena Vista University, and the city of Lakeside.

#### Storm Lake

Max Depth: 20.3 Feet  
3,097 Surface Acres



#### City of Storm Lake<sup>2</sup>

Population	Median Income	Median Property Value
10,672	\$49,044	\$120,600

Buena Vista County received \$30.88 million in tourism-related expenditures in 2019. This resulted in:

- \$4.01 million in payroll.
- \$1.9 million in state tax receipts.
- 200 jobs.
- \$280,000 in local tax receipts.<sup>3</sup>

### Water Quality Efforts

Storm Lake has been listed as impaired for indicator bacteria (*E. coli*) since 2010 and for turbidity since 2002.<sup>4</sup> Efforts to improve and protect water quality resulted in the Storm Lake Dredging Project, with initial dredging in 2002.<sup>5</sup> The Lake Preservation Association, City of Storm Lake, and county partners then formed the Lake Improvement Commission in 2003 to operate the Storm Lake Dredging Project and implement other water quality projects.<sup>6</sup> Since 2002, more than \$17 million in state and local funds were spent on dredging and other water quality efforts.<sup>7, 8</sup> In the fiscal year 2020, the Lake Improvement Commission spent \$13,941.84.<sup>9</sup>

The City of Storm Lake has been awarded funding through the Water Quality Initiative totaling \$180,000 to implement urban stormwater mitigation projects, such as permeable pavers and stormwater wetlands.<sup>10, 11</sup> The city has also been awarded \$25 million in federal grants for flooding and water quality issues.<sup>12</sup>

#### Iowa Lake Survey (2014)<sup>13, 14</sup>

Category	Storm Lake	State Average
Predicted Annual Visits	195,000	65,000
Portion of visits with travel distance 10-30 miles	31%	37%
Portion of visits with travel distance 90+ miles	8%	13%
Perceived Water Quality (out of 10)	6.2	6.3
Direct Spending	\$28,505,912	\$7,075,421
Total Spending	\$45,124,859	\$11,200,391
Total Income Impact	\$7,118,852	\$1,766,963
Total Job Impact	348	86

“ The water quality of Storm Lake is recognized as a vital limited resource for economic development and quality of life. Water quality is a top priority for the citizens of Storm Lake and the surrounding communities.<sup>15</sup>  
- Lake Preservation Association, Storm Lake ”

“ The health of Storm Lake is vitally important to our community members and continued growth as a city. The work that has been done has aided in the clarity and sustainability of the lake.  
- Keri Navratil, Storm Lake City Manager<sup>16</sup> ”

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## Endnotes

- <sup>1</sup> Lake Details – Storm Lake, IOWA DEPT. OF NAT. RESOURCES, <https://www.iowadnr.gov/Fishing/Where-to-Fish/Lakes-Ponds-Reservoirs/LakeDetails?lakeCode=STL11> (last visited Feb. 28, 2021).
- <sup>2</sup> DATA USA, <https://datausa.io/profile/geo/storm-lake-ia>
- <sup>3</sup> 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](https://www.traveliowa.com/userdocs/pages/IA_2019_Report_Aug._28,_2020.pdf).
- <sup>4</sup> Water Quality Assessments Impaired Waters List, IOWA DEPT. OF NAT. RESOURCES, available at <https://programs.iowadnr.gov/adbnnet/Segments/1143/Assessment/2018>.
- <sup>5</sup> Dredging Operations, City of Storm Lake, <https://www.stormlake.org/268/Dredging-Operations> (last visited April 18, 2021).
- <sup>6</sup> Restoration Project, LAKE PRESERVATION ASSOCIATION, <http://www.savethelake.com/restoration.html> (last visited April 18, 2021)
- <sup>7</sup> Nick Hytrek, After 15 Years, Dredging of Storm Lake Ends, SIOUX CITY JOURNAL (Dec. 24, 2017), available at [https://siouxcityjournal.com/news/state-and-regional/iowa/after-15-years-dredging-of-storm-lake-ends/article\\_fa963eb5-f4c4-5157-8233-c786709120e2.html](https://siouxcityjournal.com/news/state-and-regional/iowa/after-15-years-dredging-of-storm-lake-ends/article_fa963eb5-f4c4-5157-8233-c786709120e2.html). The county sold the dredge in 2018.
- <sup>8</sup> DNR Fisheries Biologist Gives City Council A Storm Lake Water Quality Update, STORM LAKE RADIO (Sept. 8, 2020), available at <https://stormlakeradio.com/news/2020/09/08/dnr-fisheries-biologist-gives-city-council-a-storm-lake-water-quality-update>.
- <sup>9</sup> Brian Oakleaf, Finance Director, Report to Lake Improvement Commission (Aug. 31, 2020), available at <https://stormlake.novusagenda.com/agendapublic/CoverSheet.aspx?ItemID=4220&MeetingID=569>.
- <sup>10</sup> Restoring Storm Lake Stormwater, CLEANWATER IOWA, <https://www.cleanwateriowa.org/restoring-storm-lake-storm-water> (last visited April 18, 2021).
- <sup>11</sup> Restoring Storm Lake Water, CLEANWATER IOWA, <https://www.cleanwateriowa.org/restoring-storm-lake-water> (last visited April 18, 2021).
- <sup>12</sup> Orlan Love, Cedar Rapids, Storm Lake Model How to ‘Treat All Water’, CEDAR RAPIDS GAZETTE (July 7, 2017), available at <https://www.thegazette.com/lowalideas/stories/agriculture/cedar-rapids-storm-lake-model-how-to-treat-all-water-20170707>
- <sup>13</sup> Water Clarity, LAKE PRESERVATION ASSOCIATION, <http://www.savethelake.com/clarity.html> (last visited April 18, 2021)
- <sup>14</sup> Storm Lake Partners with Farmers on Water Quality. MORNING AG CLIPS (Dec. 14, 2020), <https://www.morningagclips.com/storm-lake-partners-with-farmers-on-water-quality/>.
- <sup>15</sup> 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/#122](https://www.card.iastate.edu/ag_policy_review/f15-lakes/#122) (last visited Feb. 28, 2021).
- <sup>16</sup> 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>.