

Lake Name: Iowa
DOW Number: 46-0049-00

Survey Type: Standard Survey
Survey ID Date: 07/31/2023

Lake Identification

Alternate Lake Name: N/A
Primary Lake Class ID: 41

DNR Sounding Map Number: N/A
Alternate Lake Class ID: N/A

Lake Location

Primary County: Martin

Nearest Town: Fairmont

Legal Descriptions

Lake Center: Township - 101N Range - 30W Section - 31
PLS Section Lake Center: 10103031

All Legal Descriptions:

Martin County: Township - 101N Range - 30W Sections - 30, 31, 32
Township - 101N Range - 31W Section - 25

Area Office

Area Name: Windom
Region Name: Southern

ORG Code: F418
Region Number: 4

Lake Access

(Information based on Population Assessment dated 09/12/1994)

<u>Station ID</u>	<u>Ownership</u>	<u>Public Use</u>	<u>Type</u>	<u>Location / Comments</u>
AC - 1	DNR	Open to Public use	Concrete	STATE-OWNED BOAT AND SHORE ACCESS ON SOUTHEAST CORNER.

Lake Characteristics

Lake Area (planimetered acres): 812.00	GIS Shoreline Length (miles): 12.37
GIS Lake Area (acres): 705.25	Maximum Fetch (miles): 4.60
DOW Lake Area (acres): 732.00	Fetch Orientation (degrees): 315
Littoral Area (acres): 477.60	USGS Quad Map Number: X12c
Area in MN (acres): 477.61	USGS Quad 24K GIS Index: 4723
Maximum Depth (feet): 9.4	
Mean Depth (feet): N/A	

Watershed Characteristics

Major Watershed

Name: Blue Earth River
Watershed Number: 30
Watershed size (acres): 777,240

Minor Watershed

Name: Iowa L
Watershed Number: 65
Watershed size (acres): 9,774

Surveys and Investigations

Re-Survey: 09/08/1998.
Population Assessment: 08/22/2005, 09/12/1994, 09/10/1990.
Dissolved Oxygen Check: 01/20/2016, 02/24/2015, 01/03/2014, 01/08/2013, 12/28/2012, 02/16/2012, 01/18/2010
01/15/2010.
Standard Survey: 07/31/2023, 08/28/2017.
Targeted Survey: 02/03/2020, 02/19/2019.

Current Water Level

<u>Station ID</u>	<u>Date</u>	<u>Level</u>	<u>Reading (feet)</u>	<u>Reading Type</u>
BM - 1	08/01/2023	Low	-2.30	Above or below Benchmark

Benchmark and Gauge Descriptions / Locations

<u>Station ID</u>	<u>Location Description</u>
BM - 1	N/A

Water Level History - Readings

<u>Station ID</u>	<u>Date</u>	<u>Level</u>	<u>Reading (feet)</u>	<u>Reading Type</u>
BM - 1	08/01/2023	Low	-2.30	Above or below Benchmark
	08/28/2017	Normal	-0.05	Above or below Benchmark

Water Level History - Station Summary

<u>Station ID</u>	<u>Minimum Level</u>		<u>Maximum Level</u>		<u>Range (feet)</u>	<u>Average Level (feet)</u>	<u>Reading Type (and number of readings)</u>
	<u>Feet</u>	<u>Date</u>	<u>Feet</u>	<u>Date</u>			
BM - 1	-2.30	08/01/2023	-0.05	08/28/2017	2.25	-1.18	Above or below Benchmark (2)

Dissolved Oxygen and Temperature Profile of Lake Water

<u>Station ID</u>	<u>Sampling Date</u>	<u>Bottom Depth (Feet)</u>	<u>Sample Depth (Feet)</u>	<u>Water Temperature (°F)</u>	<u>Dissolved Oxygen (ppm)</u>
WQ - 1	07/31/2023	8.7	Surface	79.5	8.7
			2.0	79.5	8.7
			4.0	79.5	8.0
			6.0	79.3	7.7
			8.0	79.3	7.5

Field Measurements of Water Quality

<u>Station ID</u>	<u>Sampling Date</u>	<u>Sample Depth (Feet)</u>	<u>Secchi Depth (Feet)</u>	<u>Field pH</u>	<u>Alkalinity (ppm)</u>	<u>Water Color</u>	<u>Color Cause</u>
WQ - 1	07/31/2023	Surface	0.5	9.40	180	Green	Algae

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 2
 First Set Date: 07/31/2023
 Last Lift Date: 08/02/2023
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 41 ¹		
				25%	50%	75%
BIB	Bigmouth Buffalo	28	14.00	0.33	1.00	6.11
BLB	Black Bullhead	82	41.00	4.56	23.42	83.00
BLC	Black Crappie	41	20.50	0.83	2.63	11.10
CCF	Channel Catfish	4	2.00	N/A	N/A	N/A
CAP	Common Carp	7	3.50	0.52	1.80	9.13
FRD	Freshwater Drum	22	11.00	3.64	10.25	24.24
WAE	Walleye	41	20.50	3.22	7.67	15.33
WHC	White Crappie	2	1.00	0.78	2.00	11.00
YEP	Yellow Perch	40	20.00	3.00	8.94	22.50
Total Fish/Set:			133.50	¹ Quartiles for Number Per Set		

Net Catch Summary by Weight for GN

Standard gill net sets

Abbr	Species	Total Weight (Pounds)	Pounds Per Set	Mean Weight ²	Quartiles for Lake Class 41 ¹		
					25%	50%	75%
BIB	Bigmouth Buffalo	42.54	21.27	1.57	N/A	N/A	N/A
BLB	Black Bullhead	37.14	18.57	0.45	0.21	0.38	0.60
BLC	Black Crappie	9.31	4.65	0.23	0.17	0.25	0.37
CCF	Channel Catfish	6.70	3.35	1.67	N/A	N/A	N/A
CAP	Common Carp	12.86	6.43	1.84	1.00	2.39	4.88
FRD	Freshwater Drum	20.30	10.15	0.92	0.25	0.45	1.00
WAE	Walleye	18.68	9.34	0.44	0.88	1.37	1.90
WHC	White Crappie	0.39	0.20	0.20	0.20	0.24	0.40
YEP	Yellow Perch	10.02	5.01	0.25	0.14	0.24	0.36
Total Pounds Fish/Set:			78.97	¹ Quartiles for Mean Weight			

² Mean Weights are based on measured fish counts only.

Net Catch Summary by Numbers for TN

Standard 3/4-in mesh, double frame trap net sets

Number of Sets: 9
 First Set Date: 07/31/2023
 Last Lift Date: 08/03/2023
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 41 ¹		
				25%	50%	75%
BIB	Bigmouth Buffalo	7	0.78	0.22	0.48	1.45
BLB	Black Bullhead	42	4.67	1.33	14.73	78.13
BLC	Black Crappie	147	16.33	0.98	2.96	12.33
BLG	Bluegill	13	1.44	1.05	3.00	14.93
CAP	Common Carp	82	9.11	0.70	1.80	5.11
FRD	Freshwater Drum	37	4.11	0.36	0.95	4.00
HSF	Hybrid Sunfish	1	0.11	N/A	N/A	N/A
LMB	Largemouth Bass	1	0.11	0.13	0.40	0.75
OSS	Orangespotted Sunfish	9	1.00	N/A	N/A	N/A
WAE	Walleye	12	1.33	0.31	0.73	1.69
WHB	White Bass	1	0.11	0.38	1.09	1.91
WHC	White Crappie	1	0.11	0.53	1.82	15.86
YEB	Yellow Bullhead	17	1.89	0.50	1.60	4.05
YEP	Yellow Perch	12	1.33	0.25	0.81	2.62
Total Fish/Set:			42.44	¹ Quartiles for Number Per Set		

Net Catch Summary by Weight for TN

Standard 3/4-in mesh, double frame trap net sets

Abbr	Species	Total Weight (Pounds)	Pounds Per Set	Mean Weight ²	Quartiles for Lake Class 41 ¹		
					25%	50%	75%
BIB	Bigmouth Buffalo	32.82	3.65	4.69	1.25	3.18	5.07
BLB	Black Bullhead	16.49	1.83	0.39	0.21	0.36	0.59
BLC	Black Crappie	33.09	3.68	0.22	0.23	0.34	0.49
BLG	Bluegill	4.28	0.48	0.33	0.16	0.25	0.38
CAP	Common Carp	374.88	41.65	5.24	2.33	4.10	5.64
FRD	Freshwater Drum	41.73	4.64	1.13	0.49	0.85	1.74
HSF	Hybrid Sunfish	0.13	0.01	0.13	N/A	N/A	N/A
LMB	Largemouth Bass	1.46	0.16	1.46	0.41	1.00	1.54
OSS	Orangespotted Sunfish	0.37	0.04	0.04	N/A	N/A	N/A
WAE	Walleye	6.59	0.73	0.57	0.85	1.63	2.41
WHB	White Bass	1.11	0.12	1.11	0.18	0.63	0.79
WHC	White Crappie	0.19	0.02	0.19	0.21	0.34	0.53
YEB	Yellow Bullhead	6.20	0.69	0.36	0.40	0.60	0.84
YEP	Yellow Perch	3.23	0.36	0.28	0.13	0.20	0.31
Total Pounds Fish/Set:			58.06	¹ Quartiles for Mean Weight			

² Mean Weights are based on measured fish counts only.

Length Frequency Distribution for GN

Standard gill net sets

(Field work conducted between 07/31/2023 and 08/02/2023)

	<u>BIB</u>	<u>YBIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>YCAP</u>	<u>CCF</u>	<u>FRD</u>	<u>YFRD</u>	<u>WAE</u>	<u>WHC</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	1	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-	1	-	-	-
4.00 - 4.49	-	7	-	-	-	2	-	-	-	-	-	-
4.50 - 4.99	-	5	-	-	-	-	-	-	-	1	-	-
5.00 - 5.49	-	-	-	-	-	1	-	-	-	-	-	-
5.50 - 5.99	-	-	1	8	-	-	-	-	-	-	-	-
6.00 - 6.49	-	-	1	8	-	1	-	-	-	-	-	2
6.50 - 6.99	-	-	4	11	-	-	-	-	-	-	-	8
7.00 - 7.49	-	-	3	1	-	-	-	-	-	-	1	8
7.50 - 7.99	-	-	4	4	-	-	-	-	-	-	1	2
8.00 - 8.49	-	-	4	3	-	-	-	-	-	-	-	6
8.50 - 8.99	-	-	5	1	-	-	-	-	-	-	-	8
9.00 - 9.49	-	-	17	2	-	-	-	-	-	5	-	6
9.50 - 9.99	-	-	20	-	-	-	-	1	-	6	-	-
10.00 - 10.49	-	-	18	-	-	-	-	1	-	11	-	-
10.50 - 10.99	-	-	4	-	-	-	-	-	-	13	-	-
11.00 - 11.49	-	-	1	1	-	-	-	-	-	1	-	-
11.50 - 11.99	-	-	-	1	-	-	-	-	-	1	-	-
12.00 - 12.99	-	-	-	-	-	-	-	2	-	-	-	-
13.00 - 13.99	1	-	-	-	-	-	-	8	-	-	-	-
14.00 - 14.99	6	-	-	-	-	-	-	5	-	-	-	-
15.00 - 15.99	2	-	-	-	-	-	-	2	-	-	-	-
16.00 - 16.99	-	-	-	-	-	-	1	-	-	-	-	-
17.00 - 17.99	2	-	-	-	-	-	-	-	-	1	-	-
18.00 - 18.99	2	-	-	-	1	-	3	-	-	-	-	-
19.00 - 19.99	2	-	-	-	1	-	-	-	-	1	-	-
20.00 - 20.99	-	-	-	-	-	-	-	-	-	-	-	-
21.00 - 21.99	-	-	-	-	-	-	-	-	-	-	-	-
22.00 - 22.99	-	-	-	-	-	-	-	-	-	-	-	-
23.00 - 23.99	-	-	-	-	1	-	-	-	-	-	-	-
24.00 - 24.99	-	-	-	-	-	-	-	-	-	-	-	-
25.00 - 25.99	-	-	-	-	-	-	-	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	-	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	-	-	-	-	-	-
28.00 - 28.99	-	-	-	-	-	-	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	-	-	-	-	-	-
30.00 - 30.99	-	-	-	-	-	-	-	-	-	-	-	-
31.00 - 31.99	-	-	-	-	-	-	-	-	-	-	-	-
32.00 - 32.99	-	-	-	-	-	-	-	-	-	-	-	-
33.00 - 33.99	-	-	-	-	-	-	-	-	-	-	-	-
34.00 - 34.99	-	-	-	-	-	-	-	-	-	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-	-	-	-

	<u>BIB</u>	<u>YBIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>YCAP</u>	<u>CCF</u>	<u>FRD</u>	<u>YFRD</u>	<u>WAE</u>	<u>WHC</u>	<u>YEP</u>
Total	15	12	82	40	3	4	4	19	2	40	2	40
Min. Length	13.54	4.13	5.71	5.71	18.19	4.33	16.26	9.88	3.31	4.88	7.48	6.10
Max. Length	19.88	4.80	11.42	11.77	23.62	6.34	18.70	15.43	3.74	19.37	7.60	9.49
Mean Length	16.22	4.43	9.26	7.12	20.51	5.08	17.87	13.50	3.52	10.57	7.54	7.85
# Measured	15	12	82	38	3	4	4	19	2	38	2	40
No Lengths for	1	0	0	3	0	0	0	0	1	3	0	0

Note: Unless all fish were measured in the catch, totals shown for some length-frequency distributions may differ from the total number of fish in the catch, due to rounding of fractions used in the estimation of length frequency from a subsample of measured fish.

Length Frequency Distribution for TN

Standard 3/4-in mesh, double frame trap net sets

(Field work conducted between 07/31/2023 and 08/03/2023)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>FRD</u>	<u>LMB</u>	<u>OSS</u>	<u>WAE</u>	<u>WHB</u>	<u>YEB</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	1	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	3	-	-	-	-
4.00 - 4.49	-	-	-	-	-	-	-	1	-	-	-	-
4.50 - 4.99	-	-	-	-	-	1	-	-	-	-	-	-
5.00 - 5.49	-	-	-	-	-	-	-	-	-	-	-	-
5.50 - 5.99	-	-	11	-	-	-	-	-	-	-	-	-
6.00 - 6.49	-	-	18	1	-	-	-	-	-	-	1	-
6.50 - 6.99	-	-	18	2	-	-	-	-	-	-	-	2
7.00 - 7.49	-	6	5	-	-	-	-	-	-	-	-	-
7.50 - 7.99	-	1	22	2	-	-	-	-	-	-	-	-
8.00 - 8.49	-	2	24	1	-	-	-	-	-	-	2	1
8.50 - 8.99	-	5	2	-	-	-	-	-	-	-	3	2
9.00 - 9.49	-	7	8	-	-	-	-	-	1	-	2	2
9.50 - 9.99	-	1	3	-	-	2	-	-	2	-	-	-
10.00 - 10.49	-	4	2	-	-	1	-	-	2	-	1	-
10.50 - 10.99	-	1	-	-	-	1	-	-	1	-	-	-
11.00 - 11.49	-	-	-	-	-	-	-	-	1	-	-	-
11.50 - 11.99	-	-	-	-	-	-	-	-	-	-	-	-
12.00 - 12.99	-	-	-	-	16	3	-	-	-	1	1	-
13.00 - 13.99	-	-	-	-	1	4	1	-	-	-	-	-
14.00 - 14.99	-	-	-	-	1	12	-	-	-	-	-	-
15.00 - 15.99	-	-	-	-	-	-	-	-	-	-	-	-
16.00 - 16.99	-	-	-	-	1	2	-	-	1	-	-	-
17.00 - 17.99	-	-	-	-	1	-	-	-	-	-	-	-
18.00 - 18.99	2	-	-	-	3	-	-	-	-	-	-	-
19.00 - 19.99	2	-	-	-	2	-	-	-	-	-	-	-
20.00 - 20.99	-	-	-	-	2	-	-	-	-	-	-	-
21.00 - 21.99	-	-	-	-	1	-	-	-	-	-	-	-
22.00 - 22.99	-	-	-	-	3	-	-	-	-	-	-	-
23.00 - 23.99	-	-	-	-	-	-	-	-	-	-	-	-
24.00 - 24.99	-	-	-	-	5	-	-	-	-	-	-	-
25.00 - 25.99	-	-	-	-	2	-	-	-	-	-	-	-
26.00 - 26.99	-	-	-	-	2	-	-	-	-	-	-	-
27.00 - 27.99	-	-	-	-	2	-	-	-	-	-	-	-
28.00 - 28.99	-	-	-	-	1	-	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	-	-	-	-	-	-
30.00 - 30.99	-	-	-	-	1	-	-	-	-	-	-	-
31.00 - 31.99	-	-	-	-	-	-	-	-	-	-	-	-
32.00 - 32.99	-	-	-	-	-	-	-	-	-	-	-	-
33.00 - 33.99	-	-	-	-	-	-	-	-	-	-	-	-
34.00 - 34.99	-	-	-	-	-	-	-	-	-	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-	-	-	-

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>FRD</u>	<u>LMB</u>	<u>OSS</u>	<u>WAE</u>	<u>WHB</u>	<u>YEB</u>	<u>YEP</u>
Total	4	27	113	6	44	26	1	5	8	1	10	7
Min. Length	18.50	7.17	5.71	6.10	12.01	4.65	13.43	3.31	9.29	12.99	6.02	6.81
Max. Length	19.80	10.94	10.35	8.03	30.43	16.69	13.43	4.09	16.02	12.99	12.60	9.25
Mean Length	19.22	8.84	7.49	7.25	21.42	13.15	13.43	3.85	10.85	12.99	9.11	8.25
# Measured	4	27	100	6	31	26	1	5	8	1	10	7
No Lengths for	0	0	14	0	45	0	0	0	1	0	0	1

Note: Unless all fish were measured in the catch, totals shown for some length-frequency distributions may differ from the total number of fish in the catch, due to rounding of fractions used in the estimation of length frequency from a subsample of measured fish.

Other Species

Gear Type (1)	Other Species (Gender) (2)	Total Num	Number Measured	Length (inches) Min - Mean - Max	Number Weighed	Weight (pounds) Min - Mean - Max
TN	Painted Turtle	7	0	N/A	0	N/A
	Snapping Turtle	1	1	9.76	0	N/A

(1) Key to sampling gear abbreviations:

TN = Standard 3/4-in mesh, double frame trap net sets

(2) Gender: If identified and reported.

Approval Dates And Notices

Date Approved By Windom Area Fisheries Supervisor: _____

Date Approved By Southern Region Fisheries Manager: _____

This DRAFT VERSION of the Lake Survey Report contains preliminary data (as of 08/03/2023), and is therefore subject to change at any time.



Minnesota Department of Natural Resources



By accepting the data in this report, the user agrees the data will be used for personal benefit and not for profit. Any other uses or publication of the data needs the consent of the Department. The Minnesota Department of Natural Resources assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on the data.

Lake Survey Report revision: 20230207-RJE. Data Date: 08/03/2023 at 1:58 pm .

REPORT OVERVIEW - FOR OFFICE USE ONLY

(This page is not part of the Lake Survey Report and should be discarded)

Lake Name: Iowa
DOW Number: 46-0049-00

Survey Type: Standard Survey
Survey ID Date: 07/31/2023

Survey Status: Field Work Complete

The following 21 (of 34) report components are not included in this Lake Survey Report:

1. Water Level History¹
2. Lake Inlets
3. Additional Inlet Information
4. Lake Outlets
5. Additional Outlet Information
6. Water Control Structure (Dam)
7. Surrounding Watershed Characteristics, Shoreline Characteristics, and Riparian Landscape Observations²
8. Resorts And Campgrounds
9. Fish Spawning Conditions
10. Erosion And Pollution
11. Fish Diseases And Parasites
12. Aquatic Vegetation And Shoalwater Substrates
13. Water Quality (Winter Observations) (added to revision 01/21/2010)
14. Laboratory Analysis Of Water Chemistry
15. Zooplankton Sampling (added to revision 20221130)
16. Catch Summary (Pre-1993 Format) (added to revision 20201001)
17. Length At Capture With Last Incremental Length*
18. Back-Calculated Lengths
19. Age Class Frequency Distributions
20. Status Of Fishery And Field Notes
21. Survey Attachments (added to revision 20150622)

¹ Water Level History report: This data has not yet been migrated into the Fisheries LSM database. On 01/08/2009, two additional Water Level History report components (Readings and Station Summary) were added.

² Effective 03/25/2014, the Surrounding Watershed Characteristics, Shoreline Characteristics, and Riparian Landscape Observations report component was modified to be included in the Lake Survey report if it did not include any Watershed and Shoreline characteristics and only consisted of Riparian Landscape Observations.

* Length At Capture With Last Incremental Length report: The following criteria must be met for a report to be generated:

1. The fish species must have an assigned body scale constant.
2. Fish must have an "official" age assigned.
3. Fish must have a digitized measurement marked for back calculation use.

Note: The data source for Length and Age Class Frequency Distribution tables is updated twice daily - once at noon and once overnight. Any changes to the data made after noon on 08/03/2023 may not be reflected in the Distribution tables until 08/04/2023.

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