

LAKE SURVEY REPORT

DRAFT VERSION

PRELIMINARY DATA (AS OF 07/10/2023)

Lake Name: Flahtery **Survey Type: Standard Survey** DOW Number: 32-0045-00

Survey ID Date: 07/05/2023

Lake Identification

Alternate Lake Name: Flaherty DNR Sounding Map Number: N/A Primary Lake Class ID: 43 Alternate Lake Class ID: N/A

Lake Location

Primary County: Jackson Nearest Town: Lakefield

Legal Descriptions

Lake Center: Township - 103N Range - 36W Section - 7

PLS Section Lake Center: 10303607

All Legal Descriptions:

Section -Range -Township -

Area Office

Area Name: Windom ORG Code: F418 Region Name: Southern Region Number: 4

Lake Characteristics

Lake Area (planimetered acres): N/A GIS Shoreline Length (miles): 4.06

GIS Lake Area (acres): 457.33 Maximum Fetch (miles): N/A DOW Lake Area (acres): 464.00 Fetch Orientation (degrees): N/A Littoral Area (acres): 0.00 USGS Quad Map Number: X09b Area in MN (acres): 457.33 USGS Quad 24K GIS Index: 4617

Maximum Depth (feet): 6.2 Mean Depth (feet): N/A

Watershed Characteristics

Major Watershed Minor Watershed

Name: Des Moines-Headwaters Name: From L Flaherty Watershed Number: 51 Watershed Number: 100

Watershed size (acres): 798,595 Watershed size (acres): 5,133

Surveys and Investigations

Standard Survey: <u>07/05/2023</u>, 06/17/2019, 06/30/2015. Targeted Survey: 02/04/2020, 02/05/2019, 01/19/2018.

Current Water Level

Station ID Level Date Reading (feet) **Reading Type** BM - 1 07/06/2023 Normal -7.50 Above or below Benchmark



Benchmark and Gauge Descriptions / Locations

Station ID	Location Description

BM - 1 N/A

Water Level History - Readings

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	07/06/2023	Normal	-7.50	Above or below Benchmark
	06/19/2019	High	-6.60	Above or below Benchmark
	08/12/2015	Normal	-6.50	Above or below Benchmark

Water Level History - Station Summary

	Minimum Level		Maxim	um Level	Range	Average	Reading Type
Station ID	Feet	Date	Feet	Date	(feet)	Level (feet)	(and number of readings)
BM - 1	-7.50	07/06/2023	-6.50	08/12/2015	1.00	-6.87	Above or below Benchmark (3)

Dissolved Oxygen and Temperature Profile of Lake Water

Station ID	Sampling Date	Bottom Depth (Feet)	Sample Depth (Feet)	Water Temperature (°F)	Dissolved Oxygen (ppm)
WQ - 1	07/05/2023	6.0	Surface	75.0	5.7
			1.0	75.0	5.4
			2.0	75.0	5.3
			3.0	75.0	5.2
			4.0	75.0	5.2
			5.0	75.0	5.2
			6.0	75.0	4.9

Field Measurements of Water Quality

Station ID	Sampling Date	Sample Depth (Feet)	Secchi Depth (Feet)	Field pH	Alkalinity (ppm)	Water Color	Color Cause
WQ - 1	07/05/2023	Surface	0.7	8.70	220	Green	Algae

Net Catch Summary by Numbers for **GN**

Standard gill net sets

Number of Sets: 1

First Set Date: 07/05/2023 Last Lift Date: 07/06/2023 Target Species: N/A

				Quartiles	for Lake Cla	ss 43¹
Abbr	Species	Total Fish	Number Per Set	25%	50%	75%
BIB	Bigmouth Buffalo	18	18.00	0.75	2.58	6.96
BLB	Black Bullhead	79	79.00	30.34	75.58	150.62
CAP	Common Carp	3	3.00	1.00	3.33	13.75
WAE	Walleye	34	34.00	2.28	6.83	18.06
WTS	White Sucker	5	5.00	0.81	2.33	6.50
YEB	Yellow Bullhead	2	2.00	0.50	1.50	3.50
YEP	Yellow Perch	1	1.00	2.65	8.00	25.00
		Total Fish/Set:	142.00	¹ Quartile	s for Number P	er Set

Net Catch Summary by Weight for <u>GN</u> Standard gill net sets

		Total Weight	Pounds	Mean	Quartiles for Lake Class 431			
Abbr	Species	(Pounds)	Per Set	Weight ²	25%	50%	75%	
BIB	Bigmouth Buffalo	58.06	58.06	2.87	N/A	N/A	N/A	
BLB	Black Bullhead	13.59	13.59	0.17	0.17	0.26	0.39	
CAP	Common Carp	10.62	10.62	3.54	0.81	1.98	3.70	
WAE	Walleye	47.06	47.06	1.38	1.01	1.53	2.30	
WTS	White Sucker	4.95	4.95	0.99	0.93	1.58	2.02	
YEB	Yellow Bullhead	1.20	1.20	0.60	0.31	0.53	0.73	
YEP	Yellow Perch	0.13	0.13	0.13	0.13	0.21	0.31	
		Total Pounds Fish/Set:	135.63		¹ Quartil	es for Mean We	eight	

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: 07/05/2023 Last Lift Date: 07/07/2023 Target Species: N/A

				Quartiles	Quartiles for Lake Class 43 ¹		
Abbr	Species	Total Fish	Number Per Set	25%	50%	75%	
BIB	Bigmouth Buffalo	6	0.67	0.17	0.38	1.04	
BLB	Black Bullhead	365	40.56	11.50	42.00	132.61	
CAP	Common Carp	2	0.22	1.00	2.44	5.51	
FRD	Freshwater Drum	1	0.11	0.23	0.92	3.25	
NOP	Northern Pike	1	0.11	N/A	N/A	N/A	
oss	Orangespotted Sunfish	20	2.22	N/A	N/A	N/A	
WAE	Walleye	8	0.89	0.50	1.33	2.95	
WTS	White Sucker	1	0.11	0.34	0.88	2.58	
YEB	Yellow Bullhead	6	0.67	0.50	1.13	2.50	
YEP	Yellow Perch	19	2.11	0.33	1.37	3.76	
		Total Fish/Set:	47.67	¹ Quartile	s for Number P	er Set	

Net Catch Summary by Weight for TN

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

		Total Weight	Pounds	Mean	Quartiles	for Lake Cla	ss 43¹
Abbr	Species	(Pounds)	Per Set	Weight ²	25%	50%	75%
BIB	Bigmouth Buffalo	32.37	3.60	5.40	2.56	3.75	5.83
BLB	Black Bullhead	43.12	4.79	0.10	0.18	0.28	0.40
CAP	Common Carp	9.91	1.10	4.96	1.42	2.92	4.58
FRD	Freshwater Drum	0.43	0.05	0.43	0.28	0.60	0.95
NOP	Northern Pike	3.42	0.38	3.42	N/A	N/A	N/A
OSS	Orangespotted Sunfish	0.47	0.05	0.02	N/A	N/A	N/A
WAE	Walleye	13.15	1.46	1.64	0.82	1.44	2.28
WTS	White Sucker	1.90	0.21	1.90	1.05	1.47	2.04
YEB	Yellow Bullhead	4.67	0.52	0.78	0.31	0.48	0.67
YEP	Yellow Perch	2.24	0.25	0.12	0.11	0.18	0.30
	Total F	Pounds Fish/Set:	12.41		¹ Quartil	es for Mean We	eight

² Mean Weights are based on measured fish counts only.

Length Frequency Distribution for **GN**

Standard gill net sets

(Field work conducted between 07/05/2023 and 07/06/2023)

	BIB	BLB	CAP	WAE	<u>WTS</u>	<u>YEB</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-
4.00 - 4.49	-	3	-	-	-	-	-
4.50 - 4.99	-	12	-	-	-	-	-
5.00 - 5.49	-	13	-	-	-	-	-
5.50 - 5.99	-	15	-	-	-	-	-
6.00 - 6.49	-	11	-	-	-	-	1
6.50 - 6.99	-	8	-	-	-	-	-
7.00 - 7.49	-	_	-	-	-	-	-
7.50 - 7.99	-	5	-	-	-	-	-
8.00 - 8.49	2	9	-	-	1	-	-
8.50 - 8.99	4	-	-	-	-	-	-
9.00 - 9.49	-	1	-	-	-	1	-
9.50 - 9.99	-	2	-	-	-	-	-
10.00 - 10.49	-	-	-	-	-	1	-
10.50 - 10.99	-	-	-	-	2	-	-
11.00 - 11.49	-	-	-	1	-	-	-
11.50 - 11.99	-	-	1	2	-	-	-
12.00 - 12.99	1	-	-	-	-	-	-
13.00 - 13.99	1	-	1	1	-	-	-
14.00 - 14.99	1	-	-	14	1	-	-
15.00 - 15.99	1	-	-	10	1	-	-
16.00 - 16.99	1	-	-	3	-	-	-
17.00 - 17.99	-	-	-	2	-	-	-
18.00 - 18.99	-	-	-	-	-	-	-
19.00 - 19.99	-	-	-	-	-	-	-
20.00 - 20.99	1	-	-	-	-	-	-
21.00 - 21.99	4	-	-	1	-	-	-
22.00 - 22.99	-	-	-	-	-	-	-
23.00 - 23.99	2	-	-	-	-	-	-
24.00 - 24.99	-	-	-	-	-	-	-
25.00 - 25.99	-	-	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	-
27.00 - 27.99	-	-	1	-	-	-	-
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	-	-	-	-	-	-	
	BIB	BLB	CAP	WAE	<u>wts</u>	<u>YEB</u>	<u>YEP</u>
Total	18	<u>79</u>	3	34	5	2	1
Min. Length	8.35	4.17	11.65	11.38	8.35	9.09	6.38
Max. Length	23.70	9.92	27.64	21.14	15.51	10.35	6.38
Mean Length	14.99	6.18	17.51	15.08	11.98	9.72	6.38
# Measured	14.99	79	3	34	5	2	0.50
No Lengths for	3	0	0	0	0	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 07/05/2023 and 07/07/2023)

	BIB	BLB	CAP	<u>FRD</u>	NOP	oss	WAE	WTS	<u>YEB</u>	<u>YEP</u>
< 3.00						14				
3.00 - 3.49	_	_	-	_	_	2	_	_	_	_
3.50 - 3.99	_	1	-	_	_	4	_	_	_	_
4.00 - 4.49	_	4	_	_	_	_	_	_	_	2
4.50 - 4.99	_	28	_	_	_	_	_	_	_	_
5.00 - 5.49	_	66	_	_	_	_	_	_	_	5
5.50 - 5.99	_	151	_	_	_	_	_	_	_	2
6.00 - 6.49	_	63	_	_	_	_	_	_	_	7
6.50 - 6.99	_	13	_	_	_	_	_	_	1	1
7.00 - 7.49	_	13	_	_	_	_	_	_	'	1
7.50 - 7.49 7.50 - 7.99	_	13	-	_	_	_	_	_	_	'
	_	-	-	_	-	_	_	_	_	_
8.00 - 8.49	-	1	-	-	-	-	-	-	-	-
8.50 - 8.99	-	-	-	- 1	-	-	-	-	-	-
9.00 - 9.49	_	1	-	1	-	_	-	-	2	-
9.50 - 9.99	-	13	-	-	-	-	-	-	-	-
10.00 - 10.49	-	-	-	-	-	-	-	-	1	-
10.50 - 10.99	-	-	-	-	-	-	-	-	_	-
11.00 - 11.49	-	-	-	-	-	-	1	-	_	-
11.50 - 11.99	-	-	-	-	-	-	-	-	-	-
12.00 - 12.99	-	-	-	-	-	-	-	-	2	-
13.00 - 13.99	2	-	1	-	-	-	-	-	_	-
14.00 - 14.99	-	-	-	-	-	-	3	-	-	-
15.00 - 15.99	-	-	-	-	-	-	2	-	-	-
16.00 - 16.99	-	-	-	-	-	-	-	1	-	-
17.00 - 17.99	_	-	-	-	-	-	-	-	_	-
18.00 - 18.99	-	-	-	-	-	-	1	-	-	-
19.00 - 19.99	-	-	-	-	-	-	-	-	-	-
20.00 - 20.99	1	-	-	-	_	_	-	-	_	_
21.00 - 21.99	_	_	-	_	-	_	_	-	_	_
22.00 - 22.99	1	_	-	_	_	_	1	_	_	_
23.00 - 23.99	_	_	_	_	_	_	_	_	_	_
24.00 - 24.99	_	_	_	_	1	_	_	_	_	_
25.00 - 25.99	_	_	_	_	-	_	_	_	_	_
26.00 - 26.99	_	_	_	_	_	_	_	_	_	_
27.00 - 27.99	1	_	1	_	_	_	_	_	_	_
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>	BLB	CAP	FRD	NOP	oss	WAE	<u>wts</u>	<u>YEB</u>	<u>YEP</u>
Total	5	367	2	1	1	20	8	1	6	18
Min. Length	13.46	3.58	13.07	9.29	24.45	2.40	11.38	16.57	6.61	4.41
Max. Length	27.87	9.76	27.87	9.29	24.45	3.98	22.48	16.57	12.68	7.36
Mean Length	19.53	5.51	20.47	9.29	24.45	2.90	15.87	16.57	10.08	5.81
		74	20.47			2.90		10.57		16
# Measured	5			1	1		8		6	
No Lengths for	1	291	0	0	0	0	0	0	0	3

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	35	0	N/A	0	N/A
	Snapping Turtle	2	2	10.63 - 11.62 - 12.60	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 07/10/2023), 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.

REPORT OVERVIEW - FOR OFFICE USE ONLY

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

Lake Name: Flahtery

DOW Number: 32-0045-00

Survey Type: Standard Survey

Survey ID Date: 07/05/2023

Survey Status: Field Work Complete

The following 22 (of 34) report components are not included in this Lake Survey Report:

- 1. Lake Access
- 2. Water Level History¹
- 3. Lake Inlets
- 4. Additional Inlet Information
- 5. Lake Outlets
- 6. Additional Outlet Information
- 7. Water Control Structure (Dam)
- 8. Surrounding Watershed Characteristics, Shoreline Characteristics, and Riparian Landscape Observations²
- 9. Resorts And Campgrounds
- 10. Fish Spawning Conditions
- 11. Erosion And Pollution
- 12. Fish Diseases And Parasites
- 13. Aquatic Vegetation And Shoalwater Substrates
- 14. Water Quality (Winter Observations) (added to revision 01/21/2010)
- 15. Laboratory Analysis Of Water Chemistry
- 16. Zooplankton Sampling (added to revision 20221130)
- 17. Catch Summary (Pre-1993 Format) (added to revision 20201001)
- 18. Length At Capture With Last Incremental Length*
- 19. Back-Calculated Lengths
- 20. Age Class Frequency Distributions
- 21. Status Of Fishery And Field Notes
- 22. 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 07/10/2023 may not be reflected in the Distribution tables until 07/11/2023.

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