

Lake Name: Fox
DOW Number: 46-0109-00

Survey Type: Standard Survey
Survey ID Date: 09/08/2020

Lake Identification

Alternate Lake Name: N/A
Primary Lake Class ID: 24

DNR Sounding Map Number: D0266
Alternate Lake Class ID: N/A

Lake Location

Primary County: Martin

Nearest Town: Sherburn

Legal Descriptions

Lake Center: Township - 103N Range - 32W Section - 33
PLS Section Lake Center: 10303233

All Legal Descriptions:

Martin County: Township - 102N Range - 32W Sections - 4, 5, 6
Township - 103N Range - 32W Sections - 31, 32, 33, 34

Area Office

Area Name: Windom
Region Name: Southern

ORG Code: F418
Region Number: 4

Lake Access

(Information based on Population Assessment dated 09/07/1993)

Station ID	Ownership	Public Use	Type	Location / Comments
AC - 1	DNR	Open to Public use	Concrete	State access on the NE end of lake. 103N 32W S34. State access on the NE end of lake. 103N; 32W; S34.
AC - 2	Private Property	Client Use Only	Concrete	Fox Lake Club access on east end of lake. 103N 32W S34. Fox Lake Club access on east end of lake. 103N; 32W; S34.

(Data excludes records where public use is not designated or is designated "No Public Use")

Lake Characteristics

Lake Area (planimetered acres): 1,041.00	GIS Shoreline Length (miles): 11.31
GIS Lake Area (acres): 951.02	Maximum Fetch (miles): 3.40
DOW Lake Area (acres): 967.00	Fetch Orientation (degrees): 90
Littoral Area (acres): 780.00	USGS Quad Map Number: X11b
Area in MN (acres): 951.02	USGS Quad 24K GIS Index: 4621
Maximum Depth (feet): 20.0	
Mean Depth (feet): N/A	

Watershed Characteristics

Major Watershed

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

Minor Watershed

Name: Fox L
 Watershed Number: 77
 Watershed size (acres): 4,023

Surveys and Investigations

Re-Survey: 09/07/2010, 09/11/2006, 09/11/2000, 09/04/1991, 09/23/1986, 09/16/1985.
Population Assessment: 09/02/2014, 09/03/2013, 09/04/2012, 09/06/2011, 09/08/2009, 09/02/2008, 09/10/2007, 09/12/2005, 09/07/2004, 09/08/2003, 09/09/2002, 09/10/2001, 08/30/1999, 08/31/1998, 09/02/1997, 09/03/1996, 09/05/1995, 09/06/1994, 09/07/1993, 09/01/1992, 09/13/1988, 09/08/1987, 10/05/1981.
Special Assessment: 04/29/2013, 03/20/2012, 04/25/2011, 07/28/2010, 05/20/2010, 04/21/2009, 05/01/2008, 05/10/2007, 04/16/2007, 09/25/2000, 09/08/1999, 10/21/1997.
Dissolved Oxygen Check: 01/20/2016, 02/24/2015, 01/03/2014, 01/08/2013, 12/28/2012, 02/16/2012, 02/24/2010.
Standard Survey: 09/08/2020, 09/03/2019, 09/04/2018, 09/05/2017, 09/06/2016, 08/31/2015.
Targeted Survey: 08/04/2017, 04/24/2017, 04/25/2016, 04/27/2015.

Current Water Level

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	09/10/2020	Normal	-2.40	Above or below Benchmark

Benchmark and Gauge Descriptions / Locations

Station ID	Location Description
BM - 1	Top of concrete abutment at dam outlet.

Water Level History - Readings

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	09/10/2020	Normal	-2.40	Above or below Benchmark
	09/03/2019	Normal	-2.45	Above or below Benchmark
	09/05/2017	Normal	-2.00	Above or below Benchmark
	09/06/2016	Normal	-1.95	Above or below Benchmark
	09/01/2015	Normal	-2.40	Above or below Benchmark
	09/03/2014	Normal	-2.10	Above or below Benchmark
	09/06/2013	Low	-2.80	Above or below Benchmark
	09/04/2012	Low	-2.70	Above or below Benchmark
	09/07/2011	Low	-2.60	Above or below Benchmark
	09/10/2010	Normal	-1.80	Above or below Benchmark
	09/05/2009	N/A	N/A	Above or below Benchmark
	09/05/2008	N/A	-2.20	Above or below Benchmark
	09/10/2007	Normal	-0.90	Above or below Benchmark
	09/12/2006	Normal	-2.10	Above or below Benchmark

Water Level History - Station Summary

Station ID	Minimum Level		Maximum Level		Range (feet)	Average Level (feet)	Reading Type (and number of readings)
	Feet	Date	Feet	Date			
BM - 1	-2.80	09/06/2013	-0.90	09/10/2007	1.90	-2.18	Above or below Benchmark (13)

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	09/10/2020	16.6	Surface	62.8	6.5
			2.0	62.8	6.2
			4.0	62.8	6.2
			6.0	62.8	6.2
			8.0	62.8	6.0
			10.0	62.8	6.0
			12.0	62.8	6.0
			14.0	62.8	5.9
			16.0	62.6	5.6

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	09/10/2020	Surface	0.5	N/A	200	Green	Algae

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 6
 First Set Date: 09/08/2020
 Last Lift Date: 09/11/2020
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 24*		
				25%	50%	75%
BIB	Bigmouth Buffalo	95	15.83	0.25	0.55	1.69
BLC	Black Crappie	72	12.00	2.50	6.91	16.50
CCF	Channel Catfish	1	0.17	N/A	N/A	N/A
CAP	Common Carp	5	0.83	0.33	1.00	3.00
FRD	Freshwater Drum	186	31.00	4.00	11.75	32.25
WAE	Walleye	3	0.50	1.17	2.82	6.33
WHC	White Crappie	20	3.33	0.67	2.65	10.38
Total Fish/Set:			63.67	* 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	Quartiles for Lake Class 24*		
					25%	50%	75%
BIB	Bigmouth Buffalo	119.97	19.99	1.26	N/A	N/A	N/A
BLC	Black Crappie	9.10	1.52	0.13	0.15	0.20	0.26
CCF	Channel Catfish	6.84	1.14	6.84	N/A	N/A	N/A
CAP	Common Carp	33.93	5.66	6.79	1.87	3.41	5.24
FRD	Freshwater Drum	92.20	15.37	0.50	0.25	0.50	1.13
WAE	Walleye	4.27	0.71	1.42	1.20	1.81	2.69
WHC	White Crappie	1.63	0.27	0.08	0.17	0.24	0.33
Total Pounds Fish/Set:			44.66	* Quartiles for Mean Weight			

Net Catch Summary by Numbers for TN

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

Number of Sets: 12
 First Set Date: 09/08/2020
 Last Lift Date: 09/11/2020
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 24*		
				25%	50%	75%
BIB	Bigmouth Buffalo	159	13.25	0.20	0.25	0.75
BLC	Black Crappie	633	52.75	1.83	6.50	21.16
BLG	Bluegill	1	0.08	7.54	23.13	62.50
CAP	Common Carp	10	0.83	0.38	0.74	2.00
FRD	Freshwater Drum	63	5.25	0.50	1.17	4.19
GOS	Golden Shiner	3	0.25	0.17	0.30	0.83
QBS	Quillback	8	0.67	N/A	N/A	N/A
WAE	Walleye	11	0.92	0.27	0.60	1.24
WHC	White Crappie	72	6.00	0.50	1.50	6.55
YEP	Yellow Perch	1	0.08	0.25	0.60	1.67
Total Fish/Set:			80.08	* 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	Quartiles for Lake Class 24*		
					25%	50%	75%
BIB	Bigmouth Buffalo	746.71	62.23	4.70	2.50	4.13	5.65
BLC	Black Crappie	104.43	8.70	0.16	0.18	0.24	0.33
BLG	Bluegill	0.07	0.01	0.07	0.13	0.18	0.25
CAP	Common Carp	102.47	8.54	10.25	2.58	4.07	6.02
FRD	Freshwater Drum	34.12	2.84	0.54	0.43	0.79	1.21
GOS	Golden Shiner	0.23	0.02	0.08	0.07	0.10	0.13
QBS	Quillback	39.37	3.28	4.92	N/A	N/A	N/A
WAE	Walleye	14.36	1.20	1.31	0.80	1.50	2.78
WHC	White Crappie	11.37	0.95	0.16	0.23	0.30	0.40
YEP	Yellow Perch	0.10	0.01	0.10	0.10	0.13	0.20
Total Pounds Fish/Set:			87.77	* Quartiles for Mean Weight			

Length Frequency Distribution for GN

Standard gill net sets

(Field work conducted between 09/08/2020 and 09/11/2020)

	<u>BIB</u>	<u>BLC</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>WAE</u>	<u>WHC</u>
< 3.00	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-
4.00 - 4.49	-	4	-	-	-	-	-
4.50 - 4.99	-	5	-	-	-	-	-
5.00 - 5.49	-	2	-	-	-	-	13
5.50 - 5.99	-	18	-	-	-	-	5
6.00 - 6.49	-	17	-	-	4	-	1
6.50 - 6.99	-	8	-	-	5	-	-
7.00 - 7.49	-	12	-	-	13	-	-
7.50 - 7.99	-	4	-	-	4	-	1
8.00 - 8.49	-	1	-	-	9	-	-
8.50 - 8.99	-	-	-	-	13	-	-
9.00 - 9.49	-	-	-	-	12	-	-
9.50 - 9.99	-	-	-	-	19	-	-
10.00 - 10.49	-	-	-	-	34	-	-
10.50 - 10.99	-	-	-	-	22	1	-
11.00 - 11.49	4	-	-	-	10	-	-
11.50 - 11.99	6	-	-	-	1	-	-
12.00 - 12.99	41	-	-	-	9	-	-
13.00 - 13.99	36	-	-	-	23	-	-
14.00 - 14.99	8	-	-	-	7	1	-
15.00 - 15.99	-	-	-	-	-	-	-
16.00 - 16.99	-	-	-	-	-	-	-
17.00 - 17.99	-	-	1	-	-	-	-
18.00 - 18.99	-	-	-	-	-	-	-
19.00 - 19.99	-	-	-	-	-	-	-
20.00 - 20.99	-	-	-	-	-	1	-
21.00 - 21.99	-	-	-	-	-	-	-
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	-	-	2	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>	<u>BLC</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>WAE</u>	<u>WHC</u>
Total	95	71	5	1	185	3	20
Min. Length	11.46	4.41	17.95	27.52	6.22	10.59	5.16
Max. Length	14.25	8.11	27.56	27.52	14.61	20.08	7.72
Mean Length	12.84	6.28	24.08	27.52	10.29	14.90	5.56
# Measured	49	70	5	1	163	3	20
No Lengths for	46	2	0	0	23	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 09/08/2020 and 09/11/2020)

	<u>BIB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>FRD</u>	<u>GOS</u>	<u>QBS</u>	<u>WAE</u>	<u>WHC</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-	-	-
4.00 - 4.49	-	4	-	-	-	-	-	-	-	-
4.50 - 4.99	-	12	1	-	-	-	-	-	-	-
5.00 - 5.49	-	4	-	-	-	1	-	-	4	-
5.50 - 5.99	-	54	-	-	-	-	-	-	7	-
6.00 - 6.49	-	64	-	-	5	2	-	-	12	1
6.50 - 6.99	-	225	-	-	5	-	-	-	18	-
7.00 - 7.49	-	235	-	-	2	-	-	-	15	-
7.50 - 7.99	-	28	-	-	4	-	-	-	4	-
8.00 - 8.49	-	5	-	-	3	-	-	-	3	-
8.50 - 8.99	-	2	-	-	2	-	-	2	4	-
9.00 - 9.49	-	1	-	-	2	-	-	2	1	-
9.50 - 9.99	-	-	-	-	-	-	-	1	1	-
10.00 - 10.49	9	-	-	-	2	-	-	-	-	-
10.50 - 10.99	22	-	-	-	4	-	-	-	1	-
11.00 - 11.49	17	-	-	-	10	-	-	-	-	-
11.50 - 11.99	18	-	-	-	11	-	-	-	-	-
12.00 - 12.99	18	-	-	-	6	-	-	2	-	-
13.00 - 13.99	21	-	-	-	4	-	-	1	-	-
14.00 - 14.99	1	-	-	-	1	-	-	-	-	-
15.00 - 15.99	1	-	-	-	1	-	-	-	-	-
16.00 - 16.99	-	-	-	-	1	-	-	-	-	-
17.00 - 17.99	-	-	-	-	-	-	-	-	-	-
18.00 - 18.99	-	-	-	-	-	-	-	1	-	-
19.00 - 19.99	-	-	-	-	-	-	1	-	-	-
20.00 - 20.99	-	-	-	-	-	-	-	-	-	-
21.00 - 21.99	-	-	-	-	-	-	2	-	-	-
22.00 - 22.99	-	-	-	-	-	-	3	1	-	-
23.00 - 23.99	-	-	-	3	-	-	2	1	-	-
24.00 - 24.99	-	-	-	1	-	-	-	-	-	-
25.00 - 25.99	-	-	-	1	-	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	-	-	-	-
27.00 - 27.99	52	-	-	-	-	-	-	-	-	-
28.00 - 28.99	-	-	-	1	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	-	-	-	-
30.00 - 30.99	-	-	-	1	-	-	-	-	-	-
31.00 - 31.99	-	-	-	-	-	-	-	-	-	-
32.00 - 32.99	-	-	-	2	-	-	-	-	-	-
33.00 - 33.99	-	-	-	1	-	-	-	-	-	-
34.00 - 34.99	-	-	-	-	-	-	-	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-	-

	<u>BIB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>FRD</u>	<u>GOS</u>	<u>QBS</u>	<u>WAE</u>	<u>WHC</u>	<u>YEP</u>
Total	159	634	1	10	63	3	8	11	70	1
Min. Length	10.20	4.29	4.80	23.19	6.38	5.35	19.69	8.58	5.16	6.18
Max. Length	27.64	9.09	4.80	33.54	16.38	6.26	23.70	23.66	10.67	6.18
Mean Length	12.04	6.58	4.80	27.77	10.38	5.94	22.15	13.63	6.97	6.18
# Measured	86	160	1	10	63	3	8	11	68	1
No Lengths for	73	473	0	0	0	0	0	0	4	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

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	8	0	N/A	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 09/14/2020), 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: 20190410-RJE. Data Date: 09/14/2020 at 2:57 pm .

(This page is intentionally blank)

(This page is intentionally blank)

REPORT OVERVIEW - FOR OFFICE USE ONLY

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

Lake Name: Fox

Survey Type: Standard Survey

DOW Number: 46-0109-00

Survey ID Date: 09/08/2020

Survey Status: Field Work Complete

The following 19 (of 32) 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. Laboratory Analysis Of Water Chemistry
14. Length At Capture With Last Incremental Length*
15. Back-Calculated Lengths
16. Age Class Frequency Distributions
17. Status Of Fishery And Field Notes
18. Water Quality (Winter Observations) (added to revision 01/21/2010)
19. 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 09/14/2020 may not be reflected in the Distribution tables until 09/15/2020.

FOR OFFICE USE ONLY: As of revision 20150622, this page is automatically suppressed on signed versions of this report (area supervisor, region manager, research biologist, research supervisor, program staff, or program manager signed).