



Minnesota Department of Natural Resources
 Fisheries Management
LAKE SURVEY REPORT



DRAFT VERSION - PRELIMINARY DATA (AS OF 07/27/2016)

Lake Name: Bloody
DOW Number: 51-0040-00

Survey Type: Standard Survey
Survey ID Date: 07/05/2016

Lake Identification

Alternate Lake Name: N/A
 Primary Lake Class ID: 42
 DNR Sounding Map Number: C0472
 Alternate Lake Class ID: N/A

Lake Location

Primary County: Murray
 Nearest Town: Currie

Legal Descriptions

Lake Center: Township - 108N Range - 40W Section - 29
 PLS Section Lake Center: 10804029

All Legal Descriptions:

Murray County: Township - 108N Range - 40W Sections - 20, 28, 29

Area Office

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

Lake Access

(Information based on Population Assessment dated 07/08/1996)

Station ID	Ownership	Public Use	Type	Location / Comments
AC - 1	DNR	Open to Public use	Concrete	STATE OWNED ACCESS ON NORTHEAST SIDE OF LAKE.

Lake Characteristics

Lake Area (planimetered acres):	248.00	GIS Shoreline Length (miles):	5.61
GIS Lake Area (acres):	274.14	Maximum Fetch (miles):	1.34
DOW Lake Area (acres):	248.00	Fetch Orientation (degrees):	315
Littoral Area (acres):	274.14	USGS Quad Map Number:	V07b
Area in MN (acres):	274.14	USGS Quad 24K GIS Index:	4213
Maximum Depth (feet):	9.0		
Mean Depth (feet):	N/A		

Watershed Characteristics

Major Watershed	Minor Watershed
Name: Des Moines-Headwaters	Name: L Shetek
Watershed Number: 51	Watershed Number: 78
Watershed size (acres): 798,595	Watershed size (acres): 21,416

Surveys and Investigations

Re-Survey: 07/08/2002.
 Population Assessment: 07/06/2010, 07/08/1996, 07/02/1990.
 Special Assessment: 10/05/1993, 04/11/1990.
 Winter Kill Assessment: 04/13/2010.
 Dissolved Oxygen Check: 02/16/2016, 02/18/2015, 12/31/2013, 01/02/2013, 01/11/2012, 12/28/2010, 01/04/2010.
 Standard Survey: 07/05/2016.

Current Water Level

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	07/05/2016	Normal	5.50	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	07/05/2016	Normal	5.50	Above or below Benchmark
	07/09/2010	High	5.20	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	5.20	07/09/2010	5.50	07/05/2016	0.30	5.35	Above or below Benchmark (2)

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	07/05/2016	9.6	0.5	75.9	7.3
			1.0	75.9	7.1
			2.0	75.9	7.0
			3.0	75.7	6.8
			4.0	75.7	6.2
			5.0	75.6	5.9
			6.0	75.6	5.6
			7.0	75.4	5.3
			8.0	75.4	5.1
			9.0	75.4	5.0

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	07/05/2016	Surface	1.0	7.90	187	Green	Algae

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 1
 First Set Date: 07/05/2016
 Last Lift Date: 07/06/2016
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 42*		
				25%	50%	75%
BIB	Bigmouth Buffalo	2	2.00	N/A	6.00	N/A
BLB	Black Bullhead	29	29.00	9.63	39.75	91.42
BLC	Black Crappie	22	22.00	1.50	5.50	14.69
CCF	Channel Catfish	8	8.00	N/A	N/A	N/A
NOP	Northern Pike	2	2.00	1.54	4.29	7.00
WAE	Walleye	9	9.00	1.00	2.50	7.33
YEP	Yellow Perch	6	6.00	3.00	8.00	26.50
Total Fish/Set:			78.00	* 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 42*		
					25%	50%	75%
BIB	Bigmouth Buffalo	18.63	18.63	9.32	N/A	N/A	N/A
BLB	Black Bullhead	15.53	15.53	0.54	0.18	0.28	0.49
BLC	Black Crappie	6.71	6.71	0.30	0.12	0.18	0.29
CCF	Channel Catfish	20.16	20.16	2.52	N/A	N/A	N/A
NOP	Northern Pike	4.59	4.59	2.29	1.49	2.17	3.40
WAE	Walleye	11.21	11.21	1.25	0.95	1.58	2.80
YEP	Yellow Perch	1.63	1.63	0.27	0.14	0.20	0.28
Total Pounds Fish/Set:			78.46	* Quartiles for Mean Weight			

Net Catch Summary by Numbers for TN

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

Number of Sets: 9
 First Set Date: 07/05/2016
 Last Lift Date: 07/07/2016
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 42*		
				25%	50%	75%
BIB	Bigmouth Buffalo	14	1.56	N/A	0.30	N/A
BLB	Black Bullhead	6	0.67	2.20	17.30	60.46
BLC	Black Crappie	38	4.22	2.36	5.60	15.10
BLG	Bluegill	5	0.56	1.88	10.80	29.50
CCF	Channel Catfish	2	0.22	N/A	N/A	N/A
CAP	Common Carp	5	0.56	1.00	2.06	3.56
NOP	Northern Pike	11	1.22	N/A	N/A	N/A
OSS	Orangespotted Sunfish	3	0.33	N/A	N/A	N/A
QBS	Quillback	2	0.22	N/A	N/A	N/A
WAE	Walleye	6	0.67	0.40	0.86	1.94
WHC	White Crappie	2	0.22	2.50	5.29	11.60
YEB	Yellow Bullhead	1	0.11	0.83	2.43	6.15
Total Fish/Set:			10.56	* 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 42*		
					25%	50%	75%
BIB	Bigmouth Buffalo	91.55	10.17	6.54	N/A	3.83	N/A
BLB	Black Bullhead	3.09	0.34	0.51	0.19	0.30	0.50
BLC	Black Crappie	12.55	1.39	0.33	0.17	0.25	0.36
BLG	Bluegill	1.89	0.21	0.38	0.15	0.20	0.30
CCF	Channel Catfish	10.91	1.21	5.46	N/A	N/A	N/A
CAP	Common Carp	27.35	3.04	5.47	2.10	3.55	5.29
NOP	Northern Pike	33.75	3.75	3.07	N/A	N/A	N/A
OSS	Orangespotted Sunfish	0.09	0.01	0.03	N/A	N/A	N/A
QBS	Quillback	4.35	0.48	2.17	N/A	N/A	N/A
WAE	Walleye	3.44	0.38	0.57	0.59	1.53	2.56
WHC	White Crappie	0.58	0.06	0.29	0.20	0.30	0.40
YEB	Yellow Bullhead	1.01	0.11	1.01	0.43	0.56	0.69
Total Pounds Fish/Set:			21.18	* Quartiles for Mean Weight			

Length Frequency Distribution for GN

Standard gill net sets

(Field work conducted between 07/05/2016 and 07/06/2016)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CCF</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-
4.00 - 4.49	-	-	-	-	-	-	-
4.50 - 4.99	-	-	2	-	-	-	-
5.00 - 5.49	-	-	1	-	-	-	-
5.50 - 5.99	-	-	-	-	-	-	-
6.00 - 6.49	-	-	-	-	-	-	-
6.50 - 6.99	-	-	-	-	-	-	-
7.00 - 7.49	-	-	-	-	-	-	-
7.50 - 7.99	-	-	3	-	-	-	-
8.00 - 8.49	-	-	-	-	-	-	1
8.50 - 8.99	-	2	9	-	-	-	4
9.00 - 9.49	-	1	5	-	-	-	-
9.50 - 9.99	-	6	-	-	-	-	-
10.00 - 10.49	-	10	1	-	-	-	-
10.50 - 10.99	-	10	-	-	-	-	-
11.00 - 11.49	-	-	-	-	-	2	-
11.50 - 11.99	-	-	-	1	-	1	-
12.00 - 12.99	-	-	-	2	-	3	-
13.00 - 13.99	-	-	-	-	-	1	-
14.00 - 14.99	-	-	-	-	-	-	-
15.00 - 15.99	-	-	-	-	-	-	-
16.00 - 16.99	-	-	-	-	-	-	-
17.00 - 17.99	-	-	-	-	-	-	-
18.00 - 18.99	-	-	-	-	-	-	-
19.00 - 19.99	-	-	-	1	-	1	-
20.00 - 20.99	-	-	-	2	-	-	-
21.00 - 21.99	-	-	-	-	1	-	-
22.00 - 22.99	-	-	-	1	1	-	-
23.00 - 23.99	-	-	-	1	-	1	-
24.00 - 24.99	1	-	-	-	-	-	-
25.00 - 25.99	1	-	-	-	-	-	-
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>BLB</u>	<u>BLC</u>	<u>CCF</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
Total	2	29	21	8	2	9	5
Min. Length	24.06	8.62	4.84	11.73	21.10	11.02	8.39
Max. Length	25.16	10.91	10.08	23.74	22.68	23.86	8.74
Mean Length	24.61	10.13	8.26	17.96	21.89	14.47	8.54
# Measured	2	29	21	8	2	8	5
No Lengths for	0	0	1	0	0	1	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

Length Frequency Distribution for TN

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

(Field work conducted between 07/05/2016 and 07/07/2016)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>CCF</u>	<u>NOP</u>	<u>OSS</u>	<u>QBS</u>	<u>WAE</u>	<u>WHC</u>	<u>YEB</u>
< 3.00	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	2	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-	-	-	-	-
4.00 - 4.49	-	-	-	-	-	-	-	1	-	-	-	-
4.50 - 4.99	-	-	1	-	-	-	-	-	-	-	-	-
5.00 - 5.49	-	-	3	-	-	-	-	-	-	-	-	-
5.50 - 5.99	-	-	1	-	-	-	-	-	-	-	-	-
6.00 - 6.49	-	-	-	1	-	-	-	-	-	-	-	-
6.50 - 6.99	-	-	-	3	-	-	-	-	-	-	-	-
7.00 - 7.49	-	-	2	-	-	-	-	-	-	-	-	-
7.50 - 7.99	-	-	6	-	-	-	-	-	-	-	-	-
8.00 - 8.49	-	-	1	-	-	-	-	-	-	-	-	-
8.50 - 8.99	-	-	7	-	-	-	-	-	-	-	1	-
9.00 - 9.49	-	1	9	1	-	-	-	-	-	-	1	-
9.50 - 9.99	-	1	4	-	-	-	-	-	-	1	-	-
10.00 - 10.49	-	2	2	-	-	-	-	-	-	-	-	-
10.50 - 10.99	-	1	-	-	-	-	-	-	-	-	-	-
11.00 - 11.49	-	1	-	-	-	-	-	-	-	1	-	-
11.50 - 11.99	-	-	-	-	-	-	-	-	-	-	-	1
12.00 - 12.99	-	-	-	-	-	-	-	-	-	1	-	-
13.00 - 13.99	-	-	-	-	-	-	-	-	1	3	-	-
14.00 - 14.99	-	-	-	-	-	-	-	-	-	-	-	-
15.00 - 15.99	-	-	-	-	-	-	-	-	-	-	-	-
16.00 - 16.99	-	-	-	-	1	-	-	-	-	-	-	-
17.00 - 17.99	-	-	-	-	1	-	1	-	1	-	-	-
18.00 - 18.99	-	-	-	-	1	-	-	-	-	-	-	-
19.00 - 19.99	2	-	-	-	-	-	-	-	-	-	-	-
20.00 - 20.99	3	-	-	-	1	-	-	-	-	-	-	-
21.00 - 21.99	3	-	-	-	-	-	2	-	-	-	-	-
22.00 - 22.99	3	-	-	-	-	1	-	-	-	-	-	-
23.00 - 23.99	-	-	-	-	-	-	2	-	-	-	-	-
24.00 - 24.99	1	-	-	-	-	-	1	-	-	-	-	-
25.00 - 25.99	2	-	-	-	-	1	-	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	2	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	2	-	-	-	-	-
28.00 - 28.99	-	-	-	-	-	-	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	-	-	-	-	-	-
30.00 - 30.99	-	-	-	-	-	-	-	-	-	-	-	-
31.00 - 31.99	-	-	-	-	1	-	-	-	-	-	-	-
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>CCF</u>	<u>NOP</u>	<u>OSS</u>	<u>QBS</u>	<u>WAE</u>	<u>WHC</u>	<u>YEB</u>
Total	14	6	36	5	5	2	10	3	2	6	2	1
Min. Length	19.57	9.06	4.96	6.22	16.30	22.72	17.32	3.35	13.19	9.65	8.98	11.54
Max. Length	25.55	11.10	10.28	9.49	31.50	25.67	27.83	4.17	17.99	13.66	9.29	11.54
Mean Length	21.99	10.22	8.35	7.23	20.82	24.19	24.07	3.65	15.59	12.25	9.13	11.54
# Measured	14	6	34	5	5	2	10	3	2	6	2	1
No Lengths for	0	0	4	0	0	0	1	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

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	1	0	N/A	0	N/A
	Snapping Turtle	1	1	14.45	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 07/27/2016), 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: 20160309-RJE. Data Date: 07/27/2016 at 2:10 pm .

REPORT OVERVIEW - FOR OFFICE USE ONLY

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

Lake Name: Bloody
DOW Number: 51-0040-00

Survey Type: Standard Survey
Survey ID Date: 07/05/2016

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 07/27/2016 may not be reflected in the Distribution tables until 07/28/2016.

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