



Minnesota Department of Natural Resources  
Fisheries Management



STANDARD LAKE SURVEY REPORT

**DRAFT VERSION - PRELIMINARY DATA (AS OF 06/27/2014)**

Lake Name: Long

Survey Type: Population Assessment

DOW Number: 83-0040-00

Survey ID Date: 06/23/2014

**Lake Identification**

Alternate Lake Name: N/A  
Primary Lake Class ID: 43

DNR Sounding Map Number: C0751  
Alternate Lake Class ID: N/A

**Lake Location**

Primary County: Watonwan

Nearest Town: Saint James

**Legal Descriptions**

Lake Center: Township - 105N Range - 32W Section - 14  
PLS Section Lake Center: 10503214

**All Legal Descriptions:**

Watonwan County: Township - 105N Range - 32W Sections - 10, 11, 14, 15

**Area Office**

Area Name: Windom  
Region Name: Southern

ORG Code: F418  
Region Number: 4

**Lake Access**

(Information based on Re-Survey dated 07/11/1994)

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

**Lake Characteristics**

Lake Area (planimetered acres): 264.00	GIS Shoreline Length (miles): 4.68
GIS Lake Area (acres): 263.29	Maximum Fetch (miles): 1.50
DOW Lake Area (acres): 256.00	Fetch Orientation (degrees): 315
Littoral Area (acres): 263.29	USGS Quad Map Number: W11b
Area in MN (acres): 263.29	USGS Quad 24K GIS Index: 4421
Maximum Depth (feet): 13.0	
Mean Depth (feet): N/A	

**Watershed Characteristics**

**Major Watershed**

Name: Watonwan River  
Watershed Number: 31  
Watershed size (acres): 558,963

**Minor Watershed**

Name: Co Ditch #1  
Watershed Number: 14  
Watershed size (acres): 8,782

**Surveys And Investigations**

Initial Survey: 07/08/1985.

Re-Survey: 06/24/2002, 07/11/1994, 07/10/1990.

Population Assessment: 06/23/2014, 06/28/2010, 06/26/2006, 07/06/1998.

Special Assessment: 06/05/2013, 10/18/1999, 09/08/1998, 10/30/1997, 05/15/1995.

External Management Survey: 07/14/2010.

**Current Water Level**

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	06/24/2014	High	-1.50	Above or below Benchmark
GA - 1	06/24/2014	High	2.80	Direct Gauge Reading

**Benchmark and Gauge Descriptions / Locations**

Station ID	Location Description
BM - 1	top of walkway at outlet on the north side of lake.
GA - 1	near the outlet on north side of lake

**Water Level History - Readings**

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	06/24/2014	High	-1.50	Above or below Benchmark
	06/29/2010	High	-1.60	Above or below Benchmark
	06/29/2006	Normal	-1.90	Above or below Benchmark
GA - 1	06/24/2014	High	2.80	Direct Gauge Reading
	06/29/2010	High	2.60	Direct Gauge Reading
	06/29/2006	Normal	2.15	Direct Gauge Reading

**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	-1.90	06/29/2006	-1.50	06/24/2014	0.40	-1.67	Above or below Benchmark (3)
GA - 1	2.15	06/29/2006	2.80	06/24/2014	0.65	2.52	Direct Gauge Reading (3)

**Dissolved Oxygen And Temperature Profile Of Lake Water**

Station ID	Sampling Date	Bottom Depth (Feet)	Sample Depth (Feet)	Water	Dissolved
				Temperature (°F)	Oxygen (ppm)
WQ - 1	06/23/2014	12.0	Surface	75.7	11.8
			1.0	75.7	11.7
			2.0	75.7	11.7
			3.0	75.6	11.6
			4.0	75.4	11.3
			5.0	74.8	10.7
			6.0	74.5	9.9
			7.0	73.6	7.0
			8.0	72.1	4.8
			9.0	71.4	3.9
			10.0	71.1	3.4
			11.0	70.2	1.4
12.0	69.8	0.6			

**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	06/23/2014	Surface	2.8	8.80	180	Green	Algae

**Net Catch Summary by Numbers for GN**

Standard gill net sets

**Number of Sets:** 3  
**First Set Date:** 06/23/2014  
**Last Lift Date:** 06/26/2014  
**Target Species:** N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BIB	Bigmouth Buffalo	1	0.33	0.75	2.58	6.96
BLB	Black Bullhead	77	25.67	30.34	75.58	150.62
BLC	Black Crappie	5	1.67	1.41	3.71	13.75
CCF	Channel Catfish	2	0.67	N/A	N/A	N/A
CAP	Common Carp	10	3.33	1.00	3.33	13.75
FRD	Freshwater Drum	26	8.67	0.50	2.56	8.33
NOP	Northern Pike	4	1.33	1.08	3.00	8.00
WAE	Walleye	7	2.33	2.28	6.83	18.06
YEP	Yellow Perch	61	20.33	2.65	8.00	25.00
Total Fish/Set:			64.33	* 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 43*		
					25%	50%	75%
BIB	Bigmouth Buffalo	0.30	0.10	0.30	N/A	N/A	N/A
BLB	Black Bullhead	51.99	17.33	0.68	0.17	0.26	0.39
BLC	Black Crappie	0.32	0.11	0.06	0.16	0.25	0.35
CCF	Channel Catfish	14.00	4.67	7.00	N/A	N/A	N/A
CAP	Common Carp	42.86	14.29	4.29	0.81	1.98	3.70
FRD	Freshwater Drum	32.47	10.82	1.25	0.40	0.82	1.67
NOP	Northern Pike	9.65	3.22	2.41	1.82	2.50	3.35
WAE	Walleye	12.63	4.21	1.80	1.01	1.53	2.30
YEP	Yellow Perch	7.92	2.64	0.13	0.13	0.21	0.31
Total Pounds Fish/Set:			57.38	* Quartiles for Mean Weight			

**Net Catch Summary by Numbers for TN**

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

Number of Sets: 7  
 First Set Date: 06/23/2014  
 Last Lift Date: 06/26/2014  
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BLB	Black Bullhead	20	2.86	11.50	42.00	132.61
BLC	Black Crappie	7	1.00	1.17	4.88	20.50
BLG	Bluegill	5	0.71	1.17	3.89	20.00
CCF	Channel Catfish	1	0.14	N/A	N/A	N/A
CAP	Common Carp	7	1.00	1.00	2.44	5.51
FRD	Freshwater Drum	33	4.71	0.23	0.92	3.25
LMB	Largemouth Bass	1	0.14	0.23	0.38	0.67
NOP	Northern Pike	1	0.14	N/A	N/A	N/A
WAE	Walleye	3	0.43	0.50	1.33	2.95
YEP	Yellow Perch	12	1.71	0.33	1.37	3.76
Total Fish/Set:			12.86	* 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 43*		
					25%	50%	75%
BLB	Black Bullhead	12.51	1.79	0.63	0.18	0.28	0.40
BLC	Black Crappie	1.16	0.17	0.17	0.22	0.34	0.50
BLG	Bluegill	0.40	0.06	0.08	0.13	0.24	0.39
CCF	Channel Catfish	0.76	0.11	0.76	N/A	N/A	N/A
CAP	Common Carp	31.32	4.47	4.47	1.42	2.92	4.58
FRD	Freshwater Drum	44.86	6.41	1.36	0.28	0.60	0.95
LMB	Largemouth Bass	5.18	0.74	5.18	0.30	0.85	1.53
NOP	Northern Pike	7.83	1.12	7.83	N/A	N/A	N/A
WAE	Walleye	6.47	0.92	2.16	0.82	1.44	2.28
YEP	Yellow Perch	1.01	0.14	0.08	0.11	0.18	0.30
Total Pounds Fish/Set:			15.93	* Quartiles for Mean Weight			

**Electrofishing Catch Summary for EF**

**Standard electrofishing**

**Total run-time for all stations:** 01:00:00

**Total on-time for all stations:** 01:00:24

**First Sampling Date:** 05/28/2014

**Last Sampling Date:** 05/28/2014

**Daylight Sampling:** No

**Target Species:** N/A

<b>Abbr</b>	<b>Species</b>	<b>Summary By Numbers</b>			<b>Summary By Weight (pounds)</b>			
		<b>Total Number</b>	<b>Number per Hour</b>		<b>Total Weight</b>	<b>Lbs per Hour</b>		<b>Mean Weight</b>
			<b>Run-Time</b>	<b>On-Time</b>		<b>Run-Time</b>	<b>On-Time</b>	
LMB	Largemouth Bass	21	21.00	20.86	16.18	16.18	16.08	0.77

**Length Frequency Distribution For GN**

**Standard gill net sets**

(Field work conducted between 06/23/2014 and 06/26/2014)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-	-
4.00 - 4.49	-	-	1	-	-	-	-	-	-
4.50 - 4.99	-	-	3	-	-	-	-	-	-
5.00 - 5.49	-	-	1	-	-	-	-	-	9
5.50 - 5.99	-	-	-	-	-	-	-	-	35
6.00 - 6.49	-	-	-	-	-	-	-	-	6
6.50 - 6.99	-	-	-	-	-	-	-	-	-
7.00 - 7.49	-	-	-	-	-	-	-	-	-
7.50 - 7.99	-	1	-	-	-	-	-	-	-
8.00 - 8.49	1	1	-	-	-	-	-	-	2
8.50 - 8.99	-	-	-	-	-	-	-	-	4
9.00 - 9.49	-	1	-	-	-	-	-	-	1
9.50 - 9.99	-	9	-	-	-	-	-	-	2
10.00 - 10.49	-	34	-	-	-	-	-	-	1
10.50 - 10.99	-	25	-	-	-	-	-	-	-
11.00 - 11.49	-	6	-	-	-	-	-	1	-
11.50 - 11.99	-	-	-	-	-	-	-	-	-
12.00 - 12.99	-	-	-	-	-	-	-	-	-
13.00 - 13.99	-	-	-	-	-	6	-	-	-
14.00 - 14.99	-	-	-	-	-	16	-	2	-
15.00 - 15.99	-	-	-	-	-	3	-	1	-
16.00 - 16.99	-	-	-	-	-	1	-	-	-
17.00 - 17.99	-	-	-	-	-	-	-	-	-
18.00 - 18.99	-	-	-	1	-	-	2	2	-
19.00 - 19.99	-	-	-	2	-	-	-	-	-
20.00 - 20.99	-	-	-	1	-	-	-	-	-
21.00 - 21.99	-	-	-	2	-	-	-	-	-
22.00 - 22.99	-	-	-	1	-	-	-	-	-
23.00 - 23.99	-	-	-	2	-	-	-	-	-
24.00 - 24.99	-	-	-	-	-	-	1	1	-
25.00 - 25.99	-	-	-	-	1	-	1	-	-
26.00 - 26.99	-	-	-	-	1	-	-	-	-
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>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
Total	1	77	5	9	2	26	4	7	60
Min. Length	8.03	7.64	4.41	18.70	25.35	13.27	18.03	11.06	5.31
Max. Length	8.03	11.42	5.47	23.86	26.65	16.10	25.04	24.06	10.20
Mean Length	8.03	10.37	4.79	21.29	26.00	14.48	21.56	16.60	6.27
# Measured	1	77	5	9	2	26	4	7	59
No Lengths for	0	0	0	1	0	0	0	0	2

**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 06/23/2014 and 06/26/2014)

	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>LMB</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	2	-	-	-	-	-	-	-
3.50 - 3.99	-	1	2	-	-	-	-	-	-	-
4.00 - 4.49	-	1	-	-	-	-	-	-	-	-
4.50 - 4.99	-	1	-	-	-	-	-	-	-	-
5.00 - 5.49	-	1	-	-	-	-	-	-	-	5
5.50 - 5.99	-	1	-	-	-	-	-	-	-	7
6.00 - 6.49	-	-	-	-	-	-	-	-	-	-
6.50 - 6.99	-	-	1	-	-	-	-	-	-	-
7.00 - 7.49	-	-	-	-	-	-	-	-	-	-
7.50 - 7.99	-	-	-	-	-	-	-	-	-	-
8.00 - 8.49	-	1	-	-	-	-	-	-	-	-
8.50 - 8.99	-	-	-	-	-	-	-	-	-	-
9.00 - 9.49	-	-	-	-	-	-	-	-	-	-
9.50 - 9.99	3	-	-	-	-	-	-	-	-	-
10.00 - 10.49	11	1	-	-	-	-	-	-	-	-
10.50 - 10.99	4	-	-	-	-	-	-	-	-	-
11.00 - 11.49	1	-	-	-	-	-	-	-	-	-
11.50 - 11.99	-	-	-	-	-	-	-	-	-	-
12.00 - 12.99	-	-	-	-	-	-	-	-	-	-
13.00 - 13.99	-	-	-	-	1	5	-	-	-	-
14.00 - 14.99	-	-	-	-	-	17	-	-	-	-
15.00 - 15.99	-	-	-	-	-	7	-	-	-	-
16.00 - 16.99	-	-	-	-	-	2	-	-	1	-
17.00 - 17.99	-	-	-	-	-	-	-	-	-	-
18.00 - 18.99	-	-	-	1	-	1	-	-	1	-
19.00 - 19.99	-	-	-	-	-	1	-	-	1	-
20.00 - 20.99	-	-	-	2	-	-	1	-	-	-
21.00 - 21.99	-	-	-	-	-	-	-	-	-	-
22.00 - 22.99	-	-	-	2	-	-	-	-	-	-
23.00 - 23.99	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	1	-	-
32.00 - 32.99	-	-	-	-	-	-	-	-	-	-
33.00 - 33.99	-	-	-	-	-	-	-	-	-	-
34.00 - 34.99	-	-	-	-	-	-	-	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-	-
	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>LMB</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
Total	19	7	5	7	1	33	1	1	3	12
Min. Length	9.92	3.94	3.19	18.82	13.27	13.58	20.67	31.34	16.38	5.35
Max. Length	11.06	10.28	6.97	25.87	13.27	19.02	20.67	31.34	19.88	5.94
Mean Length	10.32	6.06	4.21	22.00	13.27	14.97	20.67	31.34	18.41	5.58
# Measured	19	7	5	7	1	33	1	1	3	12
No Lengths for	1	0	0	0	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 EF**

**Standard electrofishing**

(Field work conducted on 05/28/2014)

	<u>LMB</u>
< 3.00	-
3.00 - 3.49	-
3.50 - 3.99	-
4.00 - 4.49	-
4.50 - 4.99	-
5.00 - 5.49	-
5.50 - 5.99	-
6.00 - 6.49	4
6.50 - 6.99	1
7.00 - 7.49	5
7.50 - 7.99	6
8.00 - 8.49	2
8.50 - 8.99	-
9.00 - 9.49	-
9.50 - 9.99	-
10.00 - 10.49	-
10.50 - 10.99	-
11.00 - 11.49	-
11.50 - 11.99	-
12.00 - 12.99	-
13.00 - 13.99	-
14.00 - 14.99	-
15.00 - 15.99	-
16.00 - 16.99	-
17.00 - 17.99	2
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	-
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>LMB</u>
Total	21
Min. Length	6.22
Max. Length	20.98
Mean Length	8.88
# Measured	21
No Lengths for	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

**Approval Dates And Notices**

Date Approved By Windom Area Fisheries Supervisor: \_\_\_\_\_

Date Approved By Southern Region Fisheries Manager: \_\_\_\_\_

**This DRAFT VERSION of the Standard Lake Survey Report contains preliminary data (as of 06/27/2014), 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 Standard Lake Survey Report and should be discarded )

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**Lake Name: Long**

**Survey Type: Population Assessment**

**DOW Number: 83-0040-00**

**Survey ID Date: 06/23/2014**

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**Survey Status:** Active

The following 19 (of 31) report components are not included in this report:

1. Water Level History<sup>1</sup>
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 Observations<sup>2</sup>
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. Other Species (added to revision 03/24/2009)
19. Water Quality (Winter Observations) (added to revision 01/21/2010)

<sup>1</sup> 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.

<sup>2</sup> Effective 03/25/2014, the Surrounding Watershed Characteristics, Shoreline Characteristics, and Riparian Landscape Observations report component was modified to be included in the Standard 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 before noon on 06/27/2014 may not be reflected in the Distribution tables until after 12:30 pm on 06/27/2014.**

The following 2 survey components were flagged to be specifically excluded from this report:

1. TN - 3
2. TN - 9