



Minnesota Department of Natural Resources
Fisheries Management



STANDARD LAKE SURVEY REPORT

DRAFT VERSION - PRELIMINARY DATA (AS OF 06/25/2012)

Lake Name: Little Spirit

Survey Type: Population Assessment

DOW Number: 32-0024-00

Survey ID Date: 06/11/2012

POPULATION ASSESSMENT
Beach Seine (1/8 inch 15 foot)
Beach Seine (1/8 inch 50 foot)
Backpack Electrofishing

Lake Identification

Alternate Lake Name: N/A
Primary Lake Class ID: 42

DNR Sounding Map Number: C2523
Alternate Lake Class ID: N/A

Lake Location

Primary County: Jackson

Nearest Town: Jackson

Legal Descriptions

Lake Center: Township - 101N Range - 36W Section - 35
PLS Section Lake Center: 10103635

All Legal Descriptions:

Jackson County: Township - 101N Range - 36W Sections - 26, 34, 35

Area Office

Area Name: Windom
Region Name: Southern

ORG Code: F418
Region Number: 4

Lake Access

(Information based on Re-Survey dated 07/26/1993)

Station ID	Ownership	Public Use	Type	Location / Comments
AC - 1	Bordering State	Open to Public use	Concrete	N/A
AC - 2	Bordering State	Open to Public use	Gravel	STATE OF IOWA PUBLIC ACCESS ON SOUTH SIDE OF THE LAKE.

Lake Characteristics

Lake Area (planimetered acres): 572.00
GIS Lake Area (acres): 609.00
DOW Lake Area (acres): 452.00
Littoral Area (acres): 419.38
Area in MN (acres): 419.38
Maximum Depth (feet): 8.0
Mean Depth (feet): N/A

GIS Shoreline Length (miles): 10.08
Maximum Fetch (miles): 1.50
Fetch Orientation (degrees): 22
USGS Quad Map Number: X09c
USGS Quad 24K GIS Index: 4717

Watershed Characteristics**Major Watershed**

Name: Little Sioux River
Watershed Number: 84
Watershed size (acres): 205,753

Minor Watershed

Name: unknown DNR Minor Wshd
Watershed Number: 28
Watershed size (acres): 23,506

Surveys And Investigations

Initial Survey: 07/29/1985.

Re-Survey: 07/23/2001, 07/26/1993, 07/30/1990.

Population Assessment: 06/11/2012, 06/16/2008, 07/26/2004, 07/28/1997.

Special Assessment: 10/10/2004, 06/17/2002, 05/11/1995.

Dissolved Oxygen Check: 02/17/2012, 01/26/2012, 12/28/2010, 01/04/2010.

Current Water Level

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	06/14/2012	Normal	-5.30	Above or below Benchmark

Benchmark and Gauge Descriptions / Locations

Station ID	Location Description
BM - 1	top or cement road box culvert

Water Level History - Readings

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	06/14/2012	Normal	-5.30	Above or below Benchmark
	06/17/2008	High	-4.90	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	-5.30	06/14/2012	-4.90	06/17/2008	0.40	-5.10	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	06/12/2012	9.0	Surface	71.4	11.1
			1.0	71.4	10.9
			2.0	71.2	10.7
			3.0	71.4	11.1
			4.0	71.4	11.0
			5.0	71.2	10.8
			6.0	71.2	10.6
			7.0	71.1	10.5
			8.0	71.1	10.5
			9.0	70.9	9.9

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	06/12/2012	Surface	0.6	8.50	239	Brown Grn	Algae

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 3
 First Set Date: 06/11/2012
 Last Lift Date: 06/14/2012
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 42*		
				25%	50%	75%
BIB	Bigmouth Buffalo	11	3.67	N/A	6.00	N/A
BLB	Black Bullhead	490	163.33	9.63	39.75	91.42
BLC	Black Crappie	10	3.33	1.50	5.50	14.69
CCF	Channel Catfish	3	1.00	N/A	N/A	N/A
CAP	Common Carp	74	24.67	0.33	1.25	4.20
FRD	Freshwater Drum	5	1.67	2.63	5.00	5.50
NOP	Northern Pike	1	0.33	1.54	4.29	7.00
SNG	Shortnose Gar	39	13.00	N/A	N/A	N/A
WAE	Walleye	11	3.67	1.00	2.50	7.33
YEB	Yellow Bullhead	3	1.00	0.63	3.00	6.75
Total Fish/Set:			215.67	* 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 42*		
					25%	50%	75%
BIB	Bigmouth Buffalo	28.34	9.45	2.58	N/A	N/A	N/A
BLB	Black Bullhead	95.17	31.72	0.19	0.18	0.28	0.49
BLC	Black Crappie	1.91	0.64	0.19	0.12	0.18	0.29
CCF	Channel Catfish	28.03	9.34	9.34	N/A	N/A	N/A
CAP	Common Carp	179.47	59.82	2.43	0.78	2.00	5.00
FRD	Freshwater Drum	7.08	2.36	1.42	0.43	1.05	2.64
NOP	Northern Pike	2.87	0.96	2.87	1.49	2.17	3.40
SNG	Shortnose Gar	66.41	22.14	1.70	N/A	N/A	N/A
WAE	Walleye	20.74	6.91	1.89	0.95	1.58	2.80
YEB	Yellow Bullhead	2.41	0.80	0.80	0.40	0.48	0.63
Total Pounds Fish/Set:			144.14	* Quartiles for Mean Weight			

Net Catch Summary by Numbers for TN

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

Number of Sets: 11
First Set Date: 06/11/2012
Last Lift Date: 06/14/2012
Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 42*		
				25%	50%	75%
BIB	Bigmouth Buffalo	5	0.45	N/A	0.30	N/A
BLB	Black Bullhead	668	60.73	2.20	17.30	60.46
BLC	Black Crappie	65	5.91	2.36	5.60	15.10
BLG	Bluegill	4	0.36	1.88	10.80	29.50
CCF	Channel Catfish	3	0.27	N/A	N/A	N/A
CAP	Common Carp	46	4.18	1.00	2.06	3.56
FRD	Freshwater Drum	2	0.18	0.11	1.33	7.00
MUE	Muskellunge	1	0.09	N/A	N/A	N/A
NOP	Northern Pike	2	0.18	N/A	N/A	N/A
PMK	Pumpkinseed	1	0.09	0.80	2.74	8.38
QBS	Quillback	1	0.09	N/A	N/A	N/A
SNG	Shortnose Gar	15	1.36	N/A	N/A	N/A
WAE	Walleye	11	1.00	0.40	0.86	1.94
WHB	White Bass	8	0.73	0.06	0.13	1.17
WHC	White Crappie	1	0.09	2.50	5.29	11.60
YEB	Yellow Bullhead	3	0.27	0.83	2.43	6.15
Total Fish/Set:			76.00	* 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	20.29	1.84	4.06	N/A	3.83	N/A
BLB	Black Bullhead	308.07	28.01	0.46	0.19	0.30	0.50
BLC	Black Crappie	15.82	1.44	0.24	0.17	0.25	0.36
BLG	Bluegill	0.84	0.08	0.21	0.15	0.20	0.30
CCF	Channel Catfish	12.90	1.17	4.30	N/A	N/A	N/A
CAP	Common Carp	141.29	12.84	3.07	2.10	3.55	5.29
FRD	Freshwater Drum	6.50	0.59	3.25	0.25	1.09	1.25
MUE	Muskellunge	2.87	0.26	2.87	N/A	N/A	N/A
NOP	Northern Pike	9.08	0.83	4.54	N/A	N/A	N/A
PMK	Pumpkinseed	0.00	0.00	0.00	0.09	0.14	0.20
QBS	Quillback	4.19	0.38	4.19	N/A	N/A	N/A
SNG	Shortnose Gar	20.96	1.91	1.40	N/A	N/A	N/A
WAE	Walleye	22.21	2.02	2.02	0.59	1.53	2.56
WHB	White Bass	9.39	0.85	1.17	1.13	1.55	2.35
WHC	White Crappie	0.20	0.02	0.20	0.20	0.30	0.40
YEB	Yellow Bullhead	1.36	0.12	0.45	0.43	0.56	0.69
Total Pounds Fish/Set:			52.36	* Quartiles for Mean Weight			

Electrofishing Catch Summary for EF

Standard electrofishing

Total run-time for all stations: 01:30:00
Total on-time for all stations: 01:30:39
First Sampling Date: 05/21/2012
Last Sampling Date: 05/21/2012
Daylight Sampling: No
Target Species: All ages largemouth bass

Abbr	Species	Summary By Numbers			Summary By Weight (pounds)			
		Total Number	Number per Hour Run-Time	On-Time	Total Weight	Lbs per Hour Run-Time	On-Time	Mean Weight
LMB	Largemouth Bass	14	9.33	9.27	31.79	21.19	21.04	2.27

Electrofishing Catch Summary for EFB

Electrofishing, Backpack

Total run-time for all stations: 277779:12:39

Total on-time for all stations: 00:52:14

First Sampling Date: 06/11/2012

Last Sampling Date: 06/18/2012

Daylight Sampling: Yes

Target Species: N/A

Abbr	Species	Summary By Numbers			Summary By Weight (pounds)			
		Total Number	Number per Hour Run-Time	On-Time	Total Weight	Lbs per Hour Run-Time	On-Time	Mean Weight
BLB	Black Bullhead	1	0.00	1.15	0.00	0.00	0.00	0.00
BLG	Bluegill	4	0.00	4.59	0.00	0.00	0.00	0.00
CAP	Common Carp	1	0.00	1.15	0.00	0.00	0.00	0.00
CSH	Common Shiner	1	0.00	1.15	0.00	0.00	0.00	0.00
GSF	Green Sunfish	4	0.00	4.59	0.00	0.00	0.00	0.00
HSF	Hybrid Sunfish	1	0.00	1.15	0.00	0.00	0.00	0.00
LMB	Largemouth Bass	3	0.00	3.45	6.81	0.00	7.82	2.27
SPO	Spottail Shiner	5	0.00	5.74	0.00	0.00	0.00	0.00
UK1	Unknown Fish One	2	0.00	2.30	0.00	0.00	0.00	0.00
YEP	Yellow Perch	1	0.00	1.15	0.00	0.00	0.00	0.00

Natural Reproduction Catch Summary for S58

Seining, 50 foot 1/8 in Beach Seine for IBI

Number of Hauls: 9
First Haul Date: 06/15/2012
Last Haul Date: 06/18/2012
Target Species: N/A

Abbr	Species	Age	Total Number	Number Measured	Mean Length (inches)	Length Range (inches)	
						Minimum	Maximum
BLB	Black Bullhead	All	181	0	N/A	N/A	N/A
BLG	Bluegill	All	31	0	N/A	N/A	N/A
CSH	Common Shiner	YOY	3	0	N/A	N/A	N/A
CSH	Common Shiner	≥ 1	2	0	N/A	N/A	N/A
FRD	Freshwater Drum	All	1	0	N/A	N/A	N/A
LMB	Largemouth Bass	All	2	0	N/A	N/A	N/A
PMK	Pumpkinseed	All	1	0	N/A	N/A	N/A
SNG	Shortnose Gar	All	1	0	N/A	N/A	N/A
SPO	Spottail Shiner	All	3	0	N/A	N/A	N/A
UK1	Unknown Fish One	YOY	1	0	N/A	N/A	N/A
UK1	Unknown Fish One	≥ 1	3	0	N/A	N/A	N/A
UK2	Unknown Fish Two	All	2	0	N/A	N/A	N/A
YEP	Yellow Perch	All	5	0	N/A	N/A	N/A

Natural Reproduction Catch Summary for S18

Seining, 15 foot 1/8 in Beach Seine for IBI

Number of Hauls: 2
First Haul Date: 06/18/2012
Last Haul Date: 06/18/2012
Target Species: N/A

Abbr	Species	Age	Total Number	Number Measured	Mean Length (inches)	Length Range (inches)	
						Minimum	Maximum
LMB	Largemouth Bass	All	287	0	N/A	N/A	N/A
SFS	Spotfin Shiner	All	7	0	N/A	N/A	N/A
SPO	Spottail Shiner	All	1	0	N/A	N/A	N/A
UK1	Unknown Fish One	All	1	0	N/A	N/A	N/A

Length Frequency Distribution For GN

Standard gill net sets

(Field work conducted between 06/11/2012 and 06/14/2012)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>NOP</u>	<u>SNG</u>	<u>YSNG</u>	<u>WAE</u>	<u>YEB</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	-	5	-	-	-	-	-	-	-	-	-
6.00 - 6.49	-	177	-	-	-	-	-	-	-	-	-
6.50 - 6.99	-	208	3	-	-	-	-	-	-	-	-
7.00 - 7.49	-	70	5	-	-	-	-	-	-	-	-
7.50 - 7.99	-	9	2	-	-	-	-	-	-	-	-
8.00 - 8.49	-	-	-	-	-	-	-	-	-	-	-
8.50 - 8.99	-	-	-	-	-	-	-	-	-	-	-
9.00 - 9.49	-	-	-	-	-	-	-	-	-	-	-
9.50 - 9.99	-	-	-	-	-	-	-	-	-	-	-
10.00 - 10.49	-	3	-	-	-	-	-	-	-	-	1
10.50 - 10.99	-	1	-	-	-	-	-	-	-	-	-
11.00 - 11.49	-	3	-	-	-	-	-	-	-	-	1
11.50 - 11.99	-	2	-	-	-	-	-	-	-	-	-
12.00 - 12.99	-	4	-	-	-	-	-	-	-	1	1
13.00 - 13.99	-	4	-	-	-	1	-	-	-	1	-
14.00 - 14.99	3	3	-	1	-	4	-	-	-	-	-
15.00 - 15.99	6	-	-	20	-	-	-	-	-	1	-
16.00 - 16.99	1	-	-	37	-	-	-	-	-	2	-
17.00 - 17.99	-	-	-	9	-	-	-	-	-	2	-
18.00 - 18.99	-	-	-	5	-	-	-	-	-	1	-
19.00 - 19.99	-	-	-	-	-	-	-	2	-	1	-
20.00 - 20.99	1	-	-	-	-	-	-	5	-	-	-
21.00 - 21.99	-	-	-	-	-	-	-	8	1	2	-
22.00 - 22.99	-	-	-	-	1	-	-	5	-	-	-
23.00 - 23.99	-	1	-	-	-	-	-	3	2	-	-
24.00 - 24.99	-	-	-	-	-	-	1	4	-	-	-
25.00 - 25.99	-	-	-	-	-	-	-	4	-	-	-
26.00 - 26.99	-	-	-	-	-	-	-	1	-	-	-
27.00 - 27.99	-	-	-	1	1	-	-	4	-	-	-
28.00 - 28.99	-	-	-	-	-	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	1	-	-	-	-	-	-
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>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>NOP</u>	<u>SNG</u>	<u>YSNG</u>	<u>WAE</u>	<u>YEB</u>
Total	11	490	10	74	3	5	1	36	3	11	3
Min. Length	14.37	5.67	6.65	14.72	22.48	13.03	24.41	19.21	21.10	12.64	10.20
Max. Length	20.67	23.23	7.56	30.98	29.92	14.96	24.41	27.99	23.39	21.89	12.01
Mean Length	15.81	7.63	7.15	16.76	26.67	14.29	24.41	23.09	22.53	17.52	11.19
# Measured	11	139	10	74	3	5	1	36	3	11	3
No Lengths for	0	351	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 TN (for fish < 36.00 inches)

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

(Field work conducted between 06/11/2012 and 06/14/2012)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>MUE</u>	<u>NOP</u>	<u>QBS</u>	<u>SNG</u>	<u>YSNG</u>	<u>WAE</u>	<u>WHB</u>	<u>WHC</u>
< 3.00	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.00 - 4.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.50 - 4.99	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
5.00 - 5.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.50 - 5.99	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
6.00 - 6.49	-	114	3	3	-	-	-	-	-	-	-	-	-	-	-
6.50 - 6.99	-	230	17	-	-	-	-	-	-	-	-	-	-	-	-
7.00 - 7.49	-	51	36	-	-	-	-	-	-	-	-	-	-	-	-
7.50 - 7.99	-	10	3	-	-	-	-	-	-	-	-	-	-	-	-
8.00 - 8.49	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-
8.50 - 8.99	-	8	-	-	-	-	-	-	-	-	-	-	-	-	1
9.00 - 9.49	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
9.50 - 9.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.00 - 10.49	-	8	1	-	-	-	-	-	-	-	-	-	-	-	-
10.50 - 10.99	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-
11.00 - 11.49	-	13	1	-	-	-	-	-	-	-	-	-	-	1	-
11.50 - 11.99	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-
12.00 - 12.99	-	58	1	-	-	-	-	-	-	-	-	-	1	2	-
13.00 - 13.99	-	83	-	-	-	-	-	-	-	-	-	-	2	2	-
14.00 - 14.99	1	47	-	-	4	-	-	-	-	-	-	3	-	-	-
15.00 - 15.99	2	-	-	-	10	-	-	-	-	-	-	-	-	1	-
16.00 - 16.99	-	-	-	-	17	-	1	-	-	-	-	-	1	2	-
17.00 - 17.99	-	-	-	-	8	-	-	-	-	-	-	1	1	-	-
18.00 - 18.99	-	-	-	-	2	-	-	-	-	1	2	-	1	-	-
19.00 - 19.99	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
20.00 - 20.99	-	-	-	-	1	-	-	-	-	-	2	-	1	-	-
21.00 - 21.99	1	-	-	-	1	-	-	-	-	-	3	1	1	-	-
22.00 - 22.99	-	-	-	-	-	2	1	-	-	-	-	-	1	-	-
23.00 - 23.99	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
24.00 - 24.99	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
25.00 - 25.99	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
28.00 - 28.99	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
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	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>MUE</u>	<u>NOP</u>	<u>QBS</u>	<u>SNG</u>	<u>YSNG</u>	<u>WAE</u>	<u>WHB</u>	<u>WHC</u>
Total	5	669	64	4	46	3	2	1	2	1	10	5	10	8	1
Min. Length	14.57	2.76	6.30	4.72	14.17	22.40	16.81	24.21	26.73	18.66	18.70	14.09	12.20	11.06	8.74
Max. Length	25.24	14.76	12.40	6.42	36.81	23.39	22.87	24.21	27.99	18.66	28.15	21.65	22.52	16.77	8.74
Mean Length	18.34	8.72	7.45	5.96	17.48	22.87	19.84	24.21	27.36	18.66	22.35	16.50	17.47	13.97	8.74
# Measured	5	247	62	4	46	3	2	1	2	1	10	5	10	8	1
No Lengths for	0	421	3	0	0	0	0	0	0	0	0	0	1	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 (for fish < 36.00 inches) (Continued)

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

(Field work conducted between 06/11/2012 and 06/14/2012)

	<u>YEB</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	-
6.50 - 6.99	-
7.00 - 7.49	-
7.50 - 7.99	-
8.00 - 8.49	-
8.50 - 8.99	1
9.00 - 9.49	1
9.50 - 9.99	1
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	-
18.00 - 18.99	-
19.00 - 19.99	-
20.00 - 20.99	-
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>YEB</u>
Total	3
Min. Length	8.90
Max. Length	9.57
Mean Length	9.29
# Measured	3
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.

Length Frequency Distribution For TN (for fish ≥ 36.00 inches)

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

(Field work conducted between 06/11/2012 and 06/14/2012)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>MUE</u>	<u>NOP</u>	<u>QBS</u>	<u>SNG</u>	<u>YSNG</u>	<u>WAE</u>	<u>WHB</u>	<u>WHC</u>
< 36.00	5	668	65	4	45	3	2	1	2	1	10	5	11	8	1
36.00 - 36.99	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
37.00 - 37.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38.00 - 38.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39.00 - 39.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40.00 - 40.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41.00 - 41.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42.00 - 42.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43.00 - 43.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44.00 - 44.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45.00 - 45.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46.00 - 46.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47.00 - 47.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48.00 - 48.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49.00 - 49.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50.00 - 50.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51.00 - 51.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52.00 - 52.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53.00 - 53.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54.00 - 54.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55.00 - 55.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56.00 - 56.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57.00 - 57.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58.00 - 58.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59.00 - 59.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60.00 - 60.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61.00 - 61.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62.00 - 62.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63.00 - 63.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64.00 - 64.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65.00 - 65.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66.00 - 66.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67.00 - 67.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68.00 - 68.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69.00 - 69.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70.00 - 70.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71.00 - 71.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72.00 - 72.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73.00 - 73.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74.00 - 74.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75.00 - 75.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76.00 - 76.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77.00 - 77.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
= > 78.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>CCF</u>	<u>FRD</u>	<u>MUE</u>	<u>NOP</u>	<u>QBS</u>	<u>SNG</u>	<u>YSNG</u>	<u>WAE</u>	<u>WHB</u>	<u>WHC</u>
Total	5	668	65	4	46	3	2	1	2	1	10	5	11	8	1
Min. Length	14.57	2.76	6.30	4.72	14.17	22.40	16.81	24.21	26.73	18.66	18.70	14.09	12.20	11.06	8.74
Max. Length	25.24	14.76	12.40	6.42	36.81	23.39	22.87	24.21	27.99	18.66	28.15	21.65	22.52	16.77	8.74
Mean Length	18.34	8.72	7.45	5.96	17.48	22.87	19.84	24.21	27.36	18.66	22.35	16.50	17.47	13.97	8.74
# Measured	5	247	62	4	46	3	2	1	2	1	10	5	10	8	1
No Lengths for	0	421	3	0	0	0	0	0	0	0	0	0	1	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 (for fish \geq 36.00 inches) (Continued)

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

(Field work conducted between 06/11/2012 and 06/14/2012)

	<u>YEB</u>
< 36.00	3
36.00 - 36.99	-
37.00 - 37.99	-
38.00 - 38.99	-
39.00 - 39.99	-
40.00 - 40.99	-
41.00 - 41.99	-
42.00 - 42.99	-
43.00 - 43.99	-
44.00 - 44.99	-
45.00 - 45.99	-
46.00 - 46.99	-
47.00 - 47.99	-
48.00 - 48.99	-
49.00 - 49.99	-
50.00 - 50.99	-
51.00 - 51.99	-
52.00 - 52.99	-
53.00 - 53.99	-
54.00 - 54.99	-
55.00 - 55.99	-
56.00 - 56.99	-
57.00 - 57.99	-
58.00 - 58.99	-
59.00 - 59.99	-
60.00 - 60.99	-
61.00 - 61.99	-
62.00 - 62.99	-
63.00 - 63.99	-
64.00 - 64.99	-
65.00 - 65.99	-
66.00 - 66.99	-
67.00 - 67.99	-
68.00 - 68.99	-
69.00 - 69.99	-
70.00 - 70.99	-
71.00 - 71.99	-
72.00 - 72.99	-
73.00 - 73.99	-
74.00 - 74.99	-
75.00 - 75.99	-
76.00 - 76.99	-
77.00 - 77.99	-
= > 78.00	-

	<u>YEB</u>
Total	3
Min. Length	8.90
Max. Length	9.57
Mean Length	9.29
# Measured	3
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.

Length Frequency Distribution For EF

Standard electrofishing

(Field work conducted on 05/21/2012)

	<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	-
6.50 - 6.99	-
7.00 - 7.49	-
7.50 - 7.99	-
8.00 - 8.49	-
8.50 - 8.99	-
9.00 - 9.49	2
9.50 - 9.99	2
10.00 - 10.49	-
10.50 - 10.99	-
11.00 - 11.49	-
11.50 - 11.99	-
12.00 - 12.99	-
13.00 - 13.99	1
14.00 - 14.99	-
15.00 - 15.99	1
16.00 - 16.99	3
17.00 - 17.99	4
18.00 - 18.99	-
19.00 - 19.99	1
20.00 - 20.99	-
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	14
Min. Length	9.21
Max. Length	19.41
Mean Length	14.81
# Measured	14
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.

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	5	0	N/A	0	N/A
	Snapping Turtle	1	1	12.24	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 Standard Lake Survey Report contains preliminary data (as of 06/25/2012), 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.

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REPORT OVERVIEW - FOR OFFICE USE ONLY

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

Lake Name: Little Spirit

Survey Type: Population Assessment

DOW Number: 32-0024-00

Survey ID Date: 06/11/2012

Beach Seine (1/8 inch 15 foot), Beach Seine (1/8 inch 50 foot), Backpack Electrofishing

Survey Status: Active

The following 18 (of 31) report components are not included in this report:

1. Water Level History*
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
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)

* 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.

* 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 06/25/2012 may not be reflected in the Distribution tables until 06/26/2012.