



Minnesota Department of Natural Resources Fisheries Management



STANDARD LAKE SURVEY REPORT

DRAFT VERSION - PRELIMINARY DATA (AS OF 07/13/2012)

Lake Name: Stay

Survey Type: Population Assessment

DOW Number: 41-0034-00

Survey ID Date: 07/09/2012

Lake Identification

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

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

Lake Location

Primary County: Lincoln

Nearest Town: Arco

Legal Descriptions

Lake Center: Township - 111N Range - 44W Section - 29
PLS Section Lake Center: 11104429

All Legal Descriptions:

Lincoln County: Township - 111N Range - 44W Sections - 29, 32

Area Office

Area Name: Windom
Region Name: Southern

ORG Code: F418
Region Number: 4

Lake Access

(Information based on Re-Survey dated 07/22/1996)

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

Lake Characteristics

Lake Area (planimetered acres): 224.00	GIS Shoreline Length (miles): 2.95
GIS Lake Area (acres): 221.20	Maximum Fetch (miles): 0.88
DOW Lake Area (acres): 220.00	Fetch Orientation (degrees): 360
Littoral Area (acres): 221.20	USGS Quad Map Number: U05b
Area in MN (acres): 221.20	USGS Quad 24K GIS Index: 4009
Maximum Depth (feet): 6.0	
Mean Depth (feet): N/A	

Watershed Characteristics

Major Watershed

Name: Minn R-Yellow Medicine R.
Watershed Number: 25
Watershed size (acres): 1,332,769

Minor Watershed

Name: Co Ditch #4
Watershed Number: 143
Watershed size (acres): 7,863

Surveys And Investigations

Re-Survey: 07/22/1996, 07/26/1988.
 Population Assessment: 07/14/2008, 07/19/2004, 07/17/2000, 07/27/1992.
 Special Assessment: 08/31/1967.
 Winter Kill Assessment: 04/19/2010.
 Dissolved Oxygen Check: 01/10/2012, 12/29/2010, 01/04/2010.

Current Water Level

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	07/09/2012	Normal	4.80	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	07/09/2012	Normal	4.80	Above or below Benchmark
	07/16/2008	Low	-4.30	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	-4.30	07/16/2008	4.80	07/09/2012	9.10	0.25	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	07/09/2012	N/A	Surface	81.5	10.6
			1.0	81.5	10.6
			2.0	81.5	10.6
			3.0	81.7	10.7
			4.0	80.6	10.2
			5.0	79.5	5.1

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	07/09/2012	Surface	2.3	NA	153	Green	Algae

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 2
 First Set Date: 07/09/2012
 Last Lift Date: 07/11/2012
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 42*		
				25%	50%	75%
BLB	Black Bullhead	196	98.00	9.63	39.75	91.42
CAP	Common Carp	8	4.00	0.33	1.25	4.20
NOP	Northern Pike	14	7.00	1.54	4.29	7.00
WAE	Walleye	12	6.00	1.00	2.50	7.33
WTS	White Sucker	52	26.00	0.50	2.00	7.44
YEP	Yellow Perch	368	184.00	3.00	8.00	26.50
Total Fish/Set:			325.00	* 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%
BLB	Black Bullhead	24.20	12.10	0.12	0.18	0.28	0.49
CAP	Common Carp	6.98	3.49	0.87	0.78	2.00	5.00
NOP	Northern Pike	49.01	24.51	3.50	1.49	2.17	3.40
WAE	Walleye	25.90	12.95	2.16	0.95	1.58	2.80
WTS	White Sucker	78.50	39.25	1.51	0.99	1.78	2.24
YEP	Yellow Perch	88.04	44.02	0.24	0.14	0.20	0.28
Total Pounds Fish/Set:			136.31	* Quartiles for Mean Weight			

Net Catch Summary by Numbers for TN

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

Number of Sets: 8
 First Set Date: 07/09/2012
 Last Lift Date: 07/12/2012
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 42*		
				25%	50%	75%
BLB	Black Bullhead	348	43.50	2.20	17.30	60.46
CAP	Common Carp	44	5.50	1.00	2.06	3.56
GSF	Green Sunfish	16	2.00	0.20	0.40	2.00
NOP	Northern Pike	1	0.13	N/A	N/A	N/A
OSS	Orangespotted Sunfish	3	0.38	N/A	N/A	N/A
TPM	Tadpole Madtom	6	0.75	N/A	N/A	N/A
WAE	Walleye	4	0.50	0.40	0.86	1.94
WTS	White Sucker	3	0.38	0.28	0.67	2.20
YEP	Yellow Perch	421	52.63	0.48	1.29	3.45
Total Fish/Set:			105.75	* 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%
BLB	Black Bullhead	58.46	7.31	0.17	0.19	0.30	0.50
CAP	Common Carp	48.65	6.08	1.11	2.10	3.55	5.29
GSF	Green Sunfish	0.57	0.07	0.04	0.09	0.10	0.19
NOP	Northern Pike	3.86	0.48	3.86	N/A	N/A	N/A
OSS	Orangespotted Sunfish	0.07	0.01	0.02	N/A	N/A	N/A
TPM	Tadpole Madtom	0.29	0.04	0.05	N/A	N/A	N/A
WAE	Walleye	6.22	0.78	1.56	0.59	1.53	2.56
WTS	White Sucker	3.81	0.48	1.27	1.14	1.79	2.50
YEP	Yellow Perch	67.16	8.40	0.16	0.10	0.17	0.27
Total Pounds Fish/Set:			23.64	* Quartiles for Mean Weight			

Length Frequency Distribution For GN

Standard gill net sets

(Field work conducted between 07/09/2012 and 07/11/2012)

	<u>BLB</u>	<u>CAP</u>	<u>NOP</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-
4.00 - 4.49	4	-	-	-	-	-
4.50 - 4.99	45	-	-	-	-	-
5.00 - 5.49	75	-	-	-	-	3
5.50 - 5.99	14	-	-	-	-	49
6.00 - 6.49	5	-	-	-	-	62
6.50 - 6.99	8	-	-	-	-	62
7.00 - 7.49	11	-	-	-	-	44
7.50 - 7.99	14	-	-	-	-	15
8.00 - 8.49	14	-	-	-	-	13
8.50 - 8.99	2	1	-	-	1	13
9.00 - 9.49	3	1	-	-	-	15
9.50 - 9.99	1	2	-	-	-	34
10.00 - 10.49	-	-	-	-	-	34
10.50 - 10.99	-	-	-	-	-	8
11.00 - 11.49	-	-	-	-	-	5
11.50 - 11.99	-	-	-	-	-	4
12.00 - 12.99	-	3	-	-	-	-
13.00 - 13.99	-	1	-	-	10	-
14.00 - 14.99	-	-	-	1	27	-
15.00 - 15.99	-	-	-	2	8	-
16.00 - 16.99	-	-	-	3	2	-
17.00 - 17.99	-	-	-	4	4	-
18.00 - 18.99	-	-	-	1	-	-
19.00 - 19.99	-	-	-	-	-	-
20.00 - 20.99	-	-	1	-	-	-
21.00 - 21.99	-	-	1	-	-	-
22.00 - 22.99	-	-	2	1	-	-
23.00 - 23.99	-	-	2	-	-	-
24.00 - 24.99	-	-	4	-	-	-
25.00 - 25.99	-	-	2	-	-	-
26.00 - 26.99	-	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-
28.00 - 28.99	-	-	-	-	-	-
29.00 - 29.99	-	-	1	-	-	-
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>BLB</u>	<u>CAP</u>	<u>NOP</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
Total	196	8	13	12	52	361
Min. Length	4.09	8.74	20.91	14.76	8.94	5.24
Max. Length	9.53	13.31	29.53	22.17	17.87	11.77
Mean Length	6.25	11.11	24.05	17.16	14.63	8.35
# Measured	113	8	13	12	51	174
No Lengths for	83	0	1	0	1	194

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 07/09/2012 and 07/12/2012)

	<u>BLB</u>	<u>CAP</u>	<u>GSF</u>	<u>NOP</u>	<u>OSS</u>	<u>TPM</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
< 3.00	-	-	-	-	1	-	-	-	-
3.00 - 3.49	-	2	1	-	1	-	-	-	-
3.50 - 3.99	-	8	10	-	1	-	-	-	-
4.00 - 4.49	8	6	5	-	-	2	-	-	-
4.50 - 4.99	72	1	-	-	-	4	-	-	-
5.00 - 5.49	60	-	-	-	-	-	-	-	12
5.50 - 5.99	22	-	-	-	-	-	-	-	101
6.00 - 6.49	-	-	-	-	-	-	-	-	90
6.50 - 6.99	18	-	-	-	-	-	-	-	90
7.00 - 7.49	36	2	-	-	-	-	-	-	58
7.50 - 7.99	59	4	-	-	-	-	-	-	32
8.00 - 8.49	52	3	-	-	-	-	-	-	5
8.50 - 8.99	13	1	-	-	-	-	-	-	4
9.00 - 9.49	3	-	-	-	-	-	-	-	6
9.50 - 9.99	5	2	-	-	-	-	-	-	16
10.00 - 10.49	-	1	-	-	-	-	-	-	4
10.50 - 10.99	-	1	-	-	-	-	-	-	2
11.00 - 11.49	-	-	-	-	-	-	-	-	2
11.50 - 11.99	-	3	-	-	-	-	-	-	-
12.00 - 12.99	-	-	-	-	-	-	-	-	-
13.00 - 13.99	-	1	-	-	-	-	-	2	-
14.00 - 14.99	-	2	-	-	-	-	-	1	-
15.00 - 15.99	-	1	-	-	-	-	-	-	-
16.00 - 16.99	-	1	-	-	-	-	3	-	-
17.00 - 17.99	-	-	-	-	-	-	1	-	-
18.00 - 18.99	-	-	-	-	-	-	-	-	-
19.00 - 19.99	-	2	-	-	-	-	-	-	-
20.00 - 20.99	-	2	-	-	-	-	-	-	-
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	-	1	-	1	-	-	-	-	-
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>BLB</u>	<u>CAP</u>	<u>GSF</u>	<u>NOP</u>	<u>OSS</u>	<u>TPM</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
Total	348	44	16	1	3	6	4	3	422
Min. Length	4.25	3.31	3.43	29.80	2.99	4.13	16.73	13.58	5.20
Max. Length	9.76	29.84	4.45	29.80	3.54	4.92	17.13	14.13	11.46
Mean Length	6.69	9.24	3.87	29.80	3.22	4.60	16.85	13.87	6.87
# Measured	129	44	15	1	3	6	4	3	159
No Lengths for	219	0	1	0	0	0	0	0	262

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	13	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 Standard Lake Survey Report contains preliminary data (as of 07/13/2012), 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.

REPORT OVERVIEW - FOR OFFICE USE ONLY

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

Lake Name: Stay

Survey Type: Population Assessment

DOW Number: 41-0034-00

Survey ID Date: 07/09/2012

Survey Status: Proposed

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 before noon on 07/13/2012 may not be reflected in the Distribution tables until after 12:30 pm on 07/13/2012.

The following survey component was flagged to be specifically excluded from this report: TN - 6