

Lake Name: Stay
DOW Number: 41-0034-00

Survey Type: Standard Survey
Survey ID Date: 08/31/2020

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

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: 07/09/2012, 07/14/2008, 07/19/2004, 07/17/2000, 07/27/1992.
Special Assessment: 08/31/1967.
Winter Kill Assessment: 05/02/2013, 04/19/2010.
Dissolved Oxygen Check: 02/17/2016, 02/19/2015, 01/02/2014, 02/06/2013, 01/03/2013, 01/10/2012, 12/29/2010, 01/04/2010.
Standard Survey: 08/31/2020, 07/11/2016.
Targeted Survey: 01/19/2018, 09/12/2017, 01/07/2017.

Water Level History - Readings

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	07/20/2016	High	0.50	Above or below Benchmark
	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	0.33	Above or below Benchmark (3)

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	08/31/2020	6.6	Surface	69.6	7.1
			1.0	69.6	6.7
			2.0	69.6	6.6
			3.0	69.6	6.5
			4.0	69.6	6.5
			5.0	69.6	6.5
			6.0	69.6	6.4

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	08/31/2020	Surface	1.3	8.30	260	Brown Grn	Sediment

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 1
 First Set Date: 08/31/2020
 Last Lift Date: 09/01/2020
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 42*		
				25%	50%	75%
BIB	Bigmouth Buffalo	20	20.00	N/A	6.00	N/A
BLB	Black Bullhead	121	121.00	9.63	39.75	91.42
BLC	Black Crappie	21	21.00	1.50	5.50	14.69
CAP	Common Carp	47	47.00	0.33	1.25	4.20
NOP	Northern Pike	7	7.00	1.54	4.29	7.00
WAE	Walleye	26	26.00	1.00	2.50	7.33
YEP	Yellow Perch	187	187.00	3.00	8.00	26.50
Total Fish/Set:			429.00	* 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	3.29	3.29	0.16	N/A	N/A	N/A
BLB	Black Bullhead	16.40	16.40	0.14	0.18	0.28	0.49
BLC	Black Crappie	0.89	0.89	0.04	0.12	0.18	0.29
CAP	Common Carp	42.78	42.78	0.91	0.78	2.00	5.00
NOP	Northern Pike	25.69	25.69	3.67	1.49	2.17	3.40
WAE	Walleye	58.10	58.10	2.23	0.95	1.58	2.80
YEP	Yellow Perch	30.97	30.97	0.17	0.14	0.20	0.28
Total Pounds Fish/Set:			178.11	* 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: 08/31/2020
 Last Lift Date: 09/03/2020
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 42*		
				25%	50%	75%
BIB	Bigmouth Buffalo	6	0.67	N/A	0.30	N/A
BLB	Black Bullhead	602	66.89	2.20	17.30	60.46
BLC	Black Crappie	327	36.33	2.36	5.60	15.10
CAP	Common Carp	139	15.44	1.00	2.06	3.56
FRD	Freshwater Drum	1	0.11	0.11	1.33	7.00
GSF	Green Sunfish	12	1.33	0.20	0.40	2.00
LMB	Largemouth Bass	2	0.22	0.25	0.60	1.20
NOP	Northern Pike	13	1.44	N/A	N/A	N/A
OSS	Orangespotted Sunfish	4	0.44	N/A	N/A	N/A
TPM	Tadpole Madtom	3	0.33	N/A	N/A	N/A
WAE	Walleye	94	10.44	0.40	0.86	1.94
WTS	White Sucker	4	0.44	0.28	0.67	2.20
YEP	Yellow Perch	537	59.67	0.48	1.29	3.45
Total Fish/Set:			193.78	* 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	1.05	0.12	0.18	N/A	3.83	N/A
BLB	Black Bullhead	91.90	10.21	0.15	0.19	0.30	0.50
BLC	Black Crappie	13.72	1.52	0.04	0.17	0.25	0.36
CAP	Common Carp	72.14	8.02	0.52	2.10	3.55	5.29
FRD	Freshwater Drum	5.07	0.56	5.07	0.25	1.09	1.25
GSF	Green Sunfish	0.72	0.08	0.06	0.09	0.10	0.19
LMB	Largemouth Bass	0.28	0.03	0.14	0.37	0.61	1.20
NOP	Northern Pike	57.06	6.34	4.39	N/A	N/A	N/A
OSS	Orangespotted Sunfish	0.27	0.03	0.07	N/A	N/A	N/A
TPM	Tadpole Madtom	0.12	0.01	0.04	N/A	N/A	N/A
WAE	Walleye	196.60	21.84	2.09	0.59	1.53	2.56
WTS	White Sucker	8.69	0.97	2.17	1.14	1.79	2.50
YEP	Yellow Perch	63.54	7.06	0.12	0.10	0.17	0.27
Total Pounds Fish/Set:			56.79	* Quartiles for Mean Weight			

Length Frequency Distribution for GN

Standard gill net sets

(Field work conducted between 08/31/2020 and 09/01/2020)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-
3.50 - 3.99	-	2	-	-	-	-	-
4.00 - 4.49	-	-	17	-	-	-	-
4.50 - 4.99	-	3	4	1	-	-	-
5.00 - 5.49	-	30	-	-	-	-	-
5.50 - 5.99	1	28	-	2	-	-	27
6.00 - 6.49	7	31	-	2	-	-	59
6.50 - 6.99	9	12	-	3	-	-	51
7.00 - 7.49	3	5	-	3	-	1	14
7.50 - 7.99	-	4	-	-	-	3	12
8.00 - 8.49	-	1	-	-	-	7	9
8.50 - 8.99	-	-	-	-	-	1	2
9.00 - 9.49	-	2	-	-	-	-	3
9.50 - 9.99	-	1	-	-	-	-	4
10.00 - 10.49	-	2	-	-	-	-	3
10.50 - 10.99	-	1	-	1	-	-	2
11.00 - 11.49	-	-	-	-	-	-	2
11.50 - 11.99	-	-	-	9	-	-	-
12.00 - 12.99	-	-	-	23	-	-	-
13.00 - 13.99	-	-	-	2	-	-	-
14.00 - 14.99	-	-	-	-	-	2	-
15.00 - 15.99	-	-	-	-	-	-	-
16.00 - 16.99	-	-	-	-	-	-	-
17.00 - 17.99	-	-	-	-	-	-	-
18.00 - 18.99	-	-	-	-	-	1	-
19.00 - 19.99	-	-	-	-	-	-	-
20.00 - 20.99	-	-	-	-	1	2	-
21.00 - 21.99	-	-	-	-	-	4	-
22.00 - 22.99	-	-	-	-	-	2	-
23.00 - 23.99	-	-	-	-	1	-	-
24.00 - 24.99	-	-	-	-	1	1	-
25.00 - 25.99	-	-	-	-	-	1	-
26.00 - 26.99	-	-	-	1	2	1	-
27.00 - 27.99	-	-	-	-	-	-	-
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>NOP</u>	<u>WAE</u>	<u>YEP</u>
Total	20	122	21	47	7	26	188
Min. Length	5.83	3.58	4.17	4.53	20.51	7.44	5.55
Max. Length	7.20	10.63	4.76	26.57	30.35	26.06	11.18
Mean Length	6.53	6.26	4.42	11.20	25.82	15.04	7.35
# Measured	20	94	21	47	7	26	102
No Lengths for	0	27	0	0	0	0	85

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 08/31/2020 and 09/03/2020)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>FRD</u>	<u>GSF</u>	<u>LMB</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	-	16	-	-	-	-	-	-	1	-	-	-	-
3.50 - 3.99	-	-	27	4	-	6	-	-	1	-	-	-	-
4.00 - 4.49	-	8	237	24	-	3	-	-	-	3	-	-	-
4.50 - 4.99	-	23	60	31	-	2	-	-	-	-	-	-	10
5.00 - 5.49	-	44	-	16	-	-	-	-	-	-	-	-	50
5.50 - 5.99	1	197	-	19	-	1	-	-	-	-	-	-	163
6.00 - 6.49	-	102	-	9	-	-	-	-	-	-	-	-	158
6.50 - 6.99	3	64	-	9	-	-	2	-	-	-	-	-	74
7.00 - 7.49	2	53	3	1	-	-	-	-	1	-	2	-	29
7.50 - 7.99	-	45	-	1	-	-	-	-	-	-	16	-	33
8.00 - 8.49	-	12	-	-	-	-	-	-	-	-	28	-	8
8.50 - 8.99	-	10	-	-	-	-	-	-	-	-	10	-	4
9.00 - 9.49	-	8	-	-	-	-	-	-	-	-	1	-	1
9.50 - 9.99	-	8	-	-	-	-	-	-	-	-	-	-	1
10.00 - 10.49	-	10	-	3	-	-	-	-	-	-	-	-	5
10.50 - 10.99	-	-	-	-	-	-	-	-	-	-	-	-	-
11.00 - 11.49	-	-	-	1	-	-	-	-	-	-	-	-	-
11.50 - 11.99	-	2	-	3	-	-	-	1	-	-	-	-	-
12.00 - 12.99	-	-	-	6	-	-	-	-	-	-	-	1	-
13.00 - 13.99	-	-	-	8	-	-	-	-	-	-	-	-	-
14.00 - 14.99	-	-	-	-	-	-	-	-	-	-	-	-	-
15.00 - 15.99	-	-	-	-	-	-	-	-	-	-	1	-	-
16.00 - 16.99	-	-	-	-	-	-	-	-	-	-	-	-	-
17.00 - 17.99	-	-	-	-	-	-	-	-	-	-	-	1	-
18.00 - 18.99	-	-	-	-	-	-	-	-	-	-	-	1	-
19.00 - 19.99	-	-	-	-	-	-	-	1	-	-	1	1	-
20.00 - 20.99	-	-	-	-	1	-	-	1	-	-	5	-	-
21.00 - 21.99	-	-	-	-	-	-	-	-	-	-	5	-	-
22.00 - 22.99	-	-	-	1	-	-	-	1	-	-	5	-	-
23.00 - 23.99	-	-	-	-	-	-	-	1	-	-	5	-	-
24.00 - 24.99	-	-	-	-	-	-	-	-	-	-	7	-	-
25.00 - 25.99	-	-	-	1	-	-	-	1	-	-	5	-	-
26.00 - 26.99	-	-	-	2	-	-	-	-	-	-	3	-	-
27.00 - 27.99	-	-	-	-	-	-	-	2	-	-	-	-	-
28.00 - 28.99	-	-	-	-	-	-	-	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	-	2	-	-	-	-	-
30.00 - 30.99	-	-	-	1	-	-	-	2	-	-	-	-	-
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>CAP</u>	<u>FRD</u>	<u>GSF</u>	<u>LMB</u>	<u>NOP</u>	<u>OSS</u>	<u>TPM</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
Total	6	602	327	140	1	12	2	13	4	3	94	4	536
Min. Length	5.55	3.19	3.70	3.90	20.91	3.66	6.54	11.85	2.87	4.09	7.13	12.80	4.76
Max. Length	7.17	11.97	7.32	30.75	20.91	5.75	6.61	31.81	7.32	4.29	26.42	19.25	10.47
Mean Length	6.65	6.31	4.35	7.64	20.91	4.25	6.57	25.46	4.24	4.17	14.05	16.90	6.38
# Measured	6	173	172	93	1	12	2	13	4	3	93	4	192
No Lengths for	0	429	155	46	0	0	0	0	0	0	1	0	345

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	33	0	N/A	0	N/A
	Snapping Turtle	1	1	6.77	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 09/04/2020), 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: 09/04/2020 at 7:15 am .

REPORT OVERVIEW - FOR OFFICE USE ONLY

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

Lake Name: Stay

Survey Type: Standard Survey

DOW Number: 41-0034-00

Survey ID Date: 08/31/2020

Survey Status: Field Work Complete

The following 21 (of 32) report components are not included in this Lake Survey Report:

1. Current Water Level
2. Benchmark And Gauge Descriptions / Locations
3. Water Level History¹
4. Lake Inlets
5. Additional Inlet Information
6. Lake Outlets
7. Additional Outlet Information
8. Water Control Structure (Dam)
9. Surrounding Watershed Characteristics, Shoreline Characteristics, and Riparian Landscape Observations²
10. Resorts And Campgrounds
11. Fish Spawning Conditions
12. Erosion And Pollution
13. Fish Diseases And Parasites
14. Aquatic Vegetation And Shoalwater Substrates
15. Laboratory Analysis Of Water Chemistry
16. Length At Capture With Last Incremental Length*
17. Back-Calculated Lengths
18. Age Class Frequency Distributions
19. Status Of Fishery And Field Notes
20. Water Quality (Winter Observations) (added to revision 01/21/2010)
21. 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 before noon on 09/04/2020 may not be reflected in the Distribution tables until after 12:30 pm on 09/04/2020.

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