



# Minnesota Department of Natural Resources Fisheries Management



## STANDARD LAKE SURVEY REPORT

**DRAFT VERSION - PRELIMINARY DATA (AS OF 08/30/2012)**

**Lake Name: Laura**

**Survey Type: Population Assessment**

**DOW Number: 64-0150-00**

**Survey ID Date: 08/27/2012**

### Lake Identification

Alternate Lake Name: N/A  
Primary Lake Class ID: 33

DNR Sounding Map Number: C2919  
Alternate Lake Class ID: N/A

### Lake Location

Primary County: Redwood

Nearest Town: Walnut Grove

### Legal Descriptions

Lake Center: Township - 109N Range - 39W Section - 26  
PLS Section Lake Center: 10903926

**All Legal Descriptions:**

Redwood County: Township - 109N Range - 39W Sections - 26, 35

### Area Office

Area Name: Windom  
Region Name: Southern

ORG Code: F418  
Region Number: 4

### Lake Access

(Information based on Population Assessment dated 08/09/1995)

Station ID	Ownership	Public Use	Type	Location / Comments
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(Data excludes records where public use is not designated or is designated "No Public Use")

### Lake Characteristics

Lake Area (planimetered acres): 22.00	GIS Shoreline Length (miles): 1.65
GIS Lake Area (acres): 22.24	Maximum Fetch (miles): 0.30
DOW Lake Area (acres): 24.00	Fetch Orientation (degrees): 45
Littoral Area (acres): 16.00	USGS Quad Map Number: V08b
Area in MN (acres): 22.24	USGS Quad 24K GIS Index: 4215
Maximum Depth (feet): 21.0	
Mean Depth (feet): N/A	

### Watershed Characteristics

**Major Watershed**

Name: Cottonwood River  
Watershed Number: 29  
Watershed size (acres): 840,782

**Minor Watershed**

Name: unknown DNR Minor Wshd  
Watershed Number: 44  
Watershed size (acres): 4,055

**Surveys And Investigations**

Initial Survey: 08/10/1987.

Re-Survey: 08/16/1999, 08/05/1991.

Population Assessment: 08/27/2012, 08/28/2006, 08/09/1995.**Current Water Level**

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	08/27/2012	Normal	5.80	Above or below Benchmark

**Benchmark and Gauge Descriptions / Locations**

Station ID	Location Description
BM - 1	Top surface of concrete apron (center in front of grate) on lake side of outlet.

**Water Level History - Readings**

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	08/27/2012	Normal	5.80	Above or below Benchmark
	09/05/2006	Normal	-0.40	Above or below Benchmark
BM - 2	09/05/2006	Normal	-6.00	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	-0.40	09/05/2006	5.80	08/27/2012	6.20	2.70	Above or below Benchmark (2)
BM - 2	-6.00	09/05/2006	-6.00	09/05/2006	0.00	-6.00	Above or below Benchmark (1)

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

Station ID	Sampling Date	Bottom Depth (Feet)	Sample Depth (Feet)	Water		Dissolved Oxygen (ppm)
				Temperature (°F)		
WQ - 1	08/27/2012	16.6	Surface	75.9	11.6	
			2.0	75.6	11.9	
			4.0	75.0	10.1	
			6.0	74.3	7.8	
			8.0	73.2	2.5	
			10.0	71.8	0.1	
			12.0	69.3	0.0	
			14.0	66.9	0.0	
			15.0	65.3	0.0	
			16.6	63.5	0.0	

**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	08/27/2012	Surface	5.5	N/A	170	Brown Grn	Sediment

**Net Catch Summary by Numbers for GN**

Standard gill net sets

Number of Sets: 1  
 First Set Date: 08/27/2012  
 Last Lift Date: 08/28/2012  
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 33*		
				25%	50%	75%
BLB	Black Bullhead	7	7.00	1.50	5.00	16.75
BLC	Black Crappie	42	42.00	1.00	2.00	4.25
CAP	Common Carp	1	1.00	0.50	1.00	4.25
NOP	Northern Pike	3	3.00	2.67	6.00	9.33
OSS	Orangespotted Sunfish	5	5.00	N/A	N/A	N/A
WHC	White Crappie	1	1.00	0.50	0.75	4.50
WTS	White Sucker	14	14.00	0.50	1.00	2.50
YEB	Yellow Bullhead	1	1.00	1.00	3.67	10.00
YEP	Yellow Perch	31	31.00	1.88	5.50	19.13
Total Fish/Set:			105.00	* 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 33*		
					25%	50%	75%
BLB	Black Bullhead	3.13	3.13	0.45	0.17	0.31	0.62
BLC	Black Crappie	3.86	3.86	0.09	0.17	0.27	0.48
CAP	Common Carp	6.62	6.62	6.62	1.42	2.35	4.26
NOP	Northern Pike	12.29	12.29	4.10	1.56	2.08	2.91
OSS	Orangespotted Sunfish	0.31	0.31	0.06	N/A	N/A	N/A
WHC	White Crappie	0.06	0.06	0.06	0.12	0.19	0.31
WTS	White Sucker	12.35	12.35	0.88	1.00	1.94	2.39
YEB	Yellow Bullhead	0.80	0.80	0.80	0.42	0.54	0.74
YEP	Yellow Perch	4.80	4.80	0.15	0.10	0.14	0.22
Total Pounds Fish/Set:			44.21	* Quartiles for Mean Weight			

**Net Catch Summary by Numbers for TN**

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

Number of Sets: 4  
 First Set Date: 08/27/2012  
 Last Lift Date: 08/29/2012  
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 33*		
				25%	50%	75%
BLB	Black Bullhead	6	1.50	0.67	2.00	16.40
BLC	Black Crappie	134	33.50	0.67	1.75	4.25
BLG	Bluegill	35	8.75	2.92	13.83	41.19
CAP	Common Carp	1	0.25	0.33	0.71	1.66
HSF	Hybrid Sunfish	14	3.50	N/A	N/A	N/A
LMB	Largemouth Bass	1	0.25	0.43	1.00	2.00
OSS	Orangespotted Sunfish	2	0.50	N/A	N/A	N/A
PMK	Pumpkinseed	8	2.00	1.50	3.29	7.38
WHC	White Crappie	9	2.25	1.50	3.00	9.10
WTS	White Sucker	7	1.75	0.25	0.50	1.29
YEB	Yellow Bullhead	3	0.75	1.35	3.50	7.00
YEP	Yellow Perch	12	3.00	0.67	1.50	3.56
Total Fish/Set:			58.00	* 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 33*		
					25%	50%	75%
BLB	Black Bullhead	2.54	0.64	0.42	0.19	0.32	0.64
BLC	Black Crappie	17.51	4.38	0.13	0.21	0.30	0.45
BLG	Bluegill	3.13	0.78	0.09	0.11	0.15	0.27
CAP	Common Carp	3.58	0.90	3.58	2.14	3.08	5.50
HSF	Hybrid Sunfish	2.11	0.53	0.15	N/A	N/A	N/A
LMB	Largemouth Bass	1.44	0.36	1.44	0.23	0.40	0.90
OSS	Orangespotted Sunfish	0.07	0.02	0.03	N/A	N/A	N/A
PMK	Pumpkinseed	1.09	0.27	0.14	0.10	0.14	0.20
WHC	White Crappie	0.91	0.23	0.10	0.21	0.32	0.43
WTS	White Sucker	7.35	1.84	1.05	1.10	1.75	2.44
YEB	Yellow Bullhead	0.84	0.21	0.28	0.46	0.61	0.81
YEP	Yellow Perch	2.03	0.51	0.17	0.10	0.20	0.28
Total Pounds Fish/Set:			10.65	* Quartiles for Mean Weight			

**Electrofishing Catch Summary for EF**

**Standard electrofishing**

**Total run-time for all stations:** 01:06:00

**Total on-time for all stations:** 01:03:01

**First Sampling Date:** 05/16/2012

**Last Sampling Date:** 05/16/2012

**Daylight Sampling:** No

**Target Species:** N/A

Abbr	Species	Summary By Numbers			Summary By Weight (pounds)			
		Total Number	Number per Hour		Total Weight	Lbs per Hour		Mean Weight
			Run-Time	On-Time		Run-Time	On-Time	
LMB	Largemouth Bass	26	23.64	24.76	45.76	41.60	43.57	1.76

Length Frequency Distribution For GN

Standard gill net sets

(Field work conducted between 08/27/2012 and 08/28/2012)

	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>NOP</u>	<u>OSS</u>	<u>WHC</u>	<u>WTS</u>	<u>YEB</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	2	-	-	-	-
4.00 - 4.49	-	3	-	-	1	-	-	-	-
4.50 - 4.99	-	25	-	-	-	-	-	-	-
5.00 - 5.49	-	4	-	-	2	1	-	-	-
5.50 - 5.99	-	-	-	-	-	-	-	-	1
6.00 - 6.49	-	-	-	-	-	-	-	-	1
6.50 - 6.99	-	2	-	-	-	-	-	-	11
7.00 - 7.49	-	3	-	-	-	-	-	-	13
7.50 - 7.99	-	3	-	-	-	-	-	-	5
8.00 - 8.49	-	2	-	-	-	-	-	-	-
8.50 - 8.99	2	-	-	-	-	-	-	-	-
9.00 - 9.49	3	-	-	-	-	-	-	-	-
9.50 - 9.99	2	-	-	-	-	-	-	-	-
10.00 - 10.49	-	-	-	-	-	-	-	-	-
10.50 - 10.99	-	-	-	-	-	-	-	-	-
11.00 - 11.49	-	-	-	-	-	-	-	1	-
11.50 - 11.99	-	-	-	-	-	-	-	-	-
12.00 - 12.99	-	-	-	-	-	-	4	-	-
13.00 - 13.99	-	-	-	-	-	-	7	-	-
14.00 - 14.99	-	-	-	-	-	-	1	-	-
15.00 - 15.99	-	-	-	-	-	-	1	-	-
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	-	-	-	1	-	-	-	-	-
23.00 - 23.99	-	-	-	-	-	-	-	-	-
24.00 - 24.99	-	-	1	-	-	-	-	-	-
25.00 - 25.99	-	-	-	-	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	-	-	-
28.00 - 28.99	-	-	-	1	-	-	-	-	-
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>BLC</u>	<u>CAP</u>	<u>NOP</u>	<u>OSS</u>	<u>WHC</u>	<u>WTS</u>	<u>YEB</u>	<u>YEP</u>
Total	7	42	1	3	5	1	13	1	31
Min. Length	8.70	4.37	24.84	22.28	3.94	5.24	12.05	11.06	5.94
Max. Length	9.61	8.31	24.84	29.37	5.16	5.24	15.39	11.06	7.76
Mean Length	9.15	5.63	24.84	26.75	4.47	5.24	13.40	11.06	7.04
# Measured	7	33	1	3	5	1	12	1	31
No Lengths for	0	9	0	0	0	0	2	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

**STANDARD LAKE SURVEY REPORT**  
**POPULATION ASSESSMENT DATED 08/27/2012 FOR DOW NUMBER 64-0150-00**

**DRAFT**

**Length Frequency Distribution For TN**

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

(Field work conducted between 08/27/2012 and 08/29/2012)

	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>HSF</u>	<u>LMB</u>	<u>OSS</u>	<u>PMK</u>	<u>WHC</u>	<u>WTS</u>	<u>YEB</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	3	-	-	-	2	1	-	-	-	-
4.00 - 4.49	-	1	20	-	-	-	-	1	-	-	-	-
4.50 - 4.99	-	41	3	-	3	-	-	-	-	-	-	-
5.00 - 5.49	-	26	-	-	3	-	-	2	3	-	-	1
5.50 - 5.99	-	-	-	-	4	-	-	1	4	-	-	-
6.00 - 6.49	-	2	7	-	1	-	-	2	-	-	-	-
6.50 - 6.99	-	11	-	-	2	-	-	1	-	-	-	1
7.00 - 7.49	-	16	2	-	-	-	-	-	-	-	-	7
7.50 - 7.99	-	30	-	-	1	-	-	-	1	-	1	3
8.00 - 8.49	-	8	-	-	-	-	-	-	1	-	1	-
8.50 - 8.99	-	-	-	-	-	-	-	-	-	-	1	-
9.00 - 9.49	3	-	-	-	-	-	-	-	-	-	-	-
9.50 - 9.99	3	-	-	-	-	-	-	-	-	-	-	-
10.00 - 10.49	-	-	-	-	-	-	-	-	-	-	-	-
10.50 - 10.99	-	-	-	-	-	-	-	-	-	-	-	-
11.00 - 11.49	-	-	-	-	-	-	-	-	-	-	-	-
11.50 - 11.99	-	-	-	-	-	-	-	-	-	-	-	-
12.00 - 12.99	-	-	-	-	-	-	-	-	-	2	-	-
13.00 - 13.99	-	-	-	-	-	1	-	-	-	1	-	-
14.00 - 14.99	-	-	-	-	-	-	-	-	-	4	-	-
15.00 - 15.99	-	-	-	-	-	-	-	-	-	-	-	-
16.00 - 16.99	-	-	-	-	-	-	-	-	-	-	-	-
17.00 - 17.99	-	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>6</b>	<b>135</b>	<b>35</b>	<b>1</b>	<b>14</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>9</b>	<b>7</b>	<b>3</b>	<b>12</b>
Min. Length	9.41	4.45	3.82	19.69	4.76	13.54	3.62	3.50	5.28	12.13	7.76	5.28
Max. Length	9.96	8.23	7.44	19.69	7.60	13.54	3.78	6.73	8.23	14.80	8.58	7.64
Mean Length	9.59	6.16	4.92	19.69	5.75	13.54	3.70	5.50	6.11	13.96	8.23	7.16
# Measured	6	63	25	1	14	1	2	8	9	7	3	11
No Lengths for	0	71	10	0	0	0	0	0	0	0	0	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 EF**

**Standard electrofishing**

(Field work conducted on 05/16/2012)

	<u>LMB</u>
< 3.00	-
3.00 - 3.49	-
3.50 - 3.99	-
4.00 - 4.49	2
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	-
9.50 - 9.99	1
10.00 - 10.49	-
10.50 - 10.99	1
11.00 - 11.49	4
11.50 - 11.99	6
12.00 - 12.99	3
13.00 - 13.99	2
14.00 - 14.99	-
15.00 - 15.99	-
16.00 - 16.99	1
17.00 - 17.99	3
18.00 - 18.99	2
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	26
Min. Length	4.21
Max. Length	19.21
Mean Length	12.89
# Measured	26
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	12	0	N/A	0	N/A
	Snapping Turtle	2	2	9.69 - 11.46 - 13.23	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 08/30/2012), 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 )

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**Lake Name: Laura**

**Survey Type: Population Assessment**

**DOW Number: 64-0150-00**

**Survey ID Date: 08/27/2012**

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**Survey Status:** Field Work Complete

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 08/30/2012 may not be reflected in the Distribution tables until 08/31/2012.**

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

1. TN - 2
2. TN - 6