



Minnesota Department of Natural Resources  
 Fisheries Management  
**LAKE SURVEY REPORT**



**DRAFT VERSION - PRELIMINARY DATA (AS OF 07/16/2015)**

Lake Name: Imogene

Survey Type: Standard Survey

DOW Number: 46-0012-00

Survey ID Date: 07/13/2015

**Lake Identification**

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

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

**Lake Location**

Primary County: Martin

Nearest Town: Imogene

**Legal Descriptions**

Lake Center: Township - 102N Range - 29W Section - 18  
 PLS Section Lake Center: 10202918

**All Legal Descriptions:**

Martin County: Township - 102N Range - 29W Sections - 7, 18  
 Township - 102N Range - 30W Sections - 12, 13

**Area Office**

Area Name: Windom  
 Region Name: Southern

ORG Code: F418  
 Region Number: 4

**Lake Access**

(Information based on Special Assessment dated 08/12/1959)

Station ID	Ownership	Public Use	Type	Location / Comments
------------	-----------	------------	------	---------------------

(Data excludes records where public use is not designated or is designated "No Public Use")

**Lake Characteristics**

Lake Area (planimetered acres):	185.00	GIS Shoreline Length (miles):	2.36
GIS Lake Area (acres):	185.63	Maximum Fetch (miles):	N/A
DOW Lake Area (acres):	185.00	Fetch Orientation (degrees):	360
Littoral Area (acres):	185.63	USGS Quad Map Number:	X12a
Area in MN (acres):	185.63	USGS Quad 24K GIS Index:	4624
Maximum Depth (feet):	6.0		
Mean Depth (feet):	N/A		

**Watershed Characteristics**

**Major Watershed**

Name: Blue Earth River  
 Watershed Number: 30  
 Watershed size (acres): 777,240

**Minor Watershed**

Name: unknown DNR Minor Wshd  
 Watershed Number: 58  
 Watershed size (acres): 4,067

**Surveys and Investigations**

Initial Survey: 08/04/2003.  
 Population Assessment: 06/15/2009.  
 Special Assessment: 08/12/1959.  
 Dissolved Oxygen Check: 02/13/2014, 12/28/2012, 02/16/2012, 03/11/2011.  
 Standard Survey: 07/13/2015.

**Water Level History - Readings**

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	06/17/2009	High	-3.00	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	-3.00	06/17/2009	-3.00	06/17/2009	0.00	-3.00	Above or below Benchmark (1)

**Dissolved Oxygen and Temperature Profile of Lake Water**

Station ID	Sampling Date	Bottom Depth (Feet)	Sample Depth (Feet)	Water Temperature (°F)	Dissolved Oxygen (ppm)
WQ - 1	07/15/2015	N/A	Surface	81.9	12.6
			2.0	81.7	12.4
			4.0	81.7	12.0
			6.0	81.7	11.7
			7.0	81.3	8.6

**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	07/15/2015	Surface	1.0	9.40	153	Brown Grn	Algae

**Net Catch Summary by Numbers for GN**

Standard gill net sets

Number of Sets: 2  
 First Set Date: 07/13/2015  
 Last Lift Date: 07/15/2015  
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BLB	Black Bullhead	60	30.00	30.34	75.58	150.62
CAP	Common Carp	31	15.50	1.00	3.33	13.75
NOP	Northern Pike	15	7.50	1.08	3.00	8.00
WAE	Walleye	1	0.50	2.28	6.83	18.06
YEP	Yellow Perch	34	17.00	2.65	8.00	25.00
Total Fish/Set:			70.50	* 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%
BLB	Black Bullhead	30.19	15.09	0.50	0.17	0.26	0.39
CAP	Common Carp	39.99	20.00	1.29	0.81	1.98	3.70
NOP	Northern Pike	33.45	16.72	2.23	1.82	2.50	3.35
WAE	Walleye	0.18	0.09	0.18	1.01	1.53	2.30
YEP	Yellow Perch	14.59	7.29	0.43	0.13	0.21	0.31
Total Pounds Fish/Set:			59.20	* 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: 07/13/2015  
 Last Lift Date: 07/15/2015  
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BIB	Bigmouth Buffalo	1	0.13	0.17	0.38	1.04
BLB	Black Bullhead	58	7.25	11.50	42.00	132.61
CAP	Common Carp	289	36.13	1.00	2.44	5.51
GSF	Green Sunfish	1	0.13	0.15	0.25	1.94
NOP	Northern Pike	2	0.25	N/A	N/A	N/A
OSS	Orangespotted Sunfish	39	4.88	N/A	N/A	N/A
TPM	Tadpole Madtom	3	0.38	N/A	N/A	N/A
YEB	Yellow Bullhead	1	0.13	0.50	1.13	2.50
YEP	Yellow Perch	1	0.13	0.33	1.37	3.76
Total Fish/Set:			49.38	* 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%
BIB	Bigmouth Buffalo	9.79	1.22	9.79	2.56	3.75	5.83
BLB	Black Bullhead	13.52	1.69	0.23	0.18	0.28	0.40
CAP	Common Carp	47.13	5.89	0.16	1.42	2.92	4.58
GSF	Green Sunfish	0.07	0.01	0.07	0.09	0.11	0.24
NOP	Northern Pike	3.44	0.43	1.72	N/A	N/A	N/A
OSS	Orangespotted Sunfish	1.01	0.13	0.03	N/A	N/A	N/A
TPM	Tadpole Madtom	0.09	0.01	0.03	N/A	N/A	N/A
YEB	Yellow Bullhead	0.84	0.10	0.84	0.31	0.48	0.67
YEP	Yellow Perch	0.49	0.06	0.49	0.11	0.18	0.30
Total Pounds Fish/Set:			9.55	* Quartiles for Mean Weight			

**Length Frequency Distribution for GN**

**Standard gill net sets**

(Field work conducted between 07/13/2015 and 07/15/2015)

	<u>BLB</u>	<u>CAP</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	2	2	-	-	-
5.00 - 5.49	3	-	-	-	-
5.50 - 5.99	-	1	-	-	-
6.00 - 6.49	1	3	-	-	-
6.50 - 6.99	-	1	-	-	-
7.00 - 7.49	1	1	-	-	-
7.50 - 7.99	1	8	-	-	2
8.00 - 8.49	3	3	-	-	2
8.50 - 8.99	5	1	-	1	5
9.00 - 9.49	2	2	-	-	4
9.50 - 9.99	6	1	-	-	15
10.00 - 10.49	30	-	-	-	5
10.50 - 10.99	3	-	-	-	1
11.00 - 11.49	2	-	-	-	-
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	-	-	1	-	-
18.00 - 18.99	-	1	1	-	-
19.00 - 19.99	-	-	7	-	-
20.00 - 20.99	-	1	3	-	-
21.00 - 21.99	-	3	1	-	-
22.00 - 22.99	-	-	1	-	-
23.00 - 23.99	-	-	-	-	-
24.00 - 24.99	-	1	1	-	-
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>BLB</u>	<u>CAP</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
Total	60	29	15	1	34
Min. Length	4.49	4.76	17.99	8.58	7.56
Max. Length	11.06	24.02	24.88	8.58	10.71
Mean Length	9.29	10.73	20.13	8.58	9.45
# Measured	60	27	15	1	33
No Lengths for	0	4	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 TN**

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

(Field work conducted between 07/13/2015 and 07/15/2015)

	<u>BIB</u>	<u>BLB</u>	<u>CAP</u>	<u>GSF</u>	<u>NOP</u>	<u>OSS</u>	<u>TPM</u>	<u>YEB</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	23	1	-	-
3.00 - 3.49	-	-	-	-	-	15	-	-	-
3.50 - 3.99	-	-	4	-	-	1	1	-	-
4.00 - 4.49	-	5	19	1	-	-	1	-	-
4.50 - 4.99	-	10	74	-	-	-	-	-	-
5.00 - 5.49	-	14	69	-	-	-	-	-	-
5.50 - 5.99	-	2	35	-	-	-	-	-	-
6.00 - 6.49	-	4	21	-	-	-	-	-	-
6.50 - 6.99	-	-	17	-	-	-	-	-	-
7.00 - 7.49	-	1	18	-	-	-	-	-	-
7.50 - 7.99	-	-	7	-	-	-	-	-	-
8.00 - 8.49	-	2	9	-	-	-	-	-	-
8.50 - 8.99	-	4	1	-	-	-	-	-	-
9.00 - 9.49	-	-	4	-	-	-	-	-	-
9.50 - 9.99	-	7	6	-	-	-	-	-	1
10.00 - 10.49	-	5	3	-	-	-	-	-	-
10.50 - 10.99	-	4	-	-	-	-	-	1	-
11.00 - 11.49	-	-	-	-	-	-	-	-	-
11.50 - 11.99	-	-	1	-	-	-	-	-	-
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	-	-	-	-	2	-	-	-	-
20.00 - 20.99	-	-	-	-	-	-	-	-	-
21.00 - 21.99	-	-	-	-	-	-	-	-	-
22.00 - 22.99	-	-	2	-	-	-	-	-	-
23.00 - 23.99	-	-	-	-	-	-	-	-	-
24.00 - 24.99	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-
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>CAP</u>	<u>GSF</u>	<u>NOP</u>	<u>OSS</u>	<u>TPM</u>	<u>YEB</u>	<u>YEP</u>
Total	1	58	290	1	2	39	3	1	1
Min. Length	25.59	4.37	3.70	4.13	19.33	2.52	2.95	10.75	9.88
Max. Length	25.59	10.98	22.72	4.13	19.88	3.94	4.06	10.75	9.88
Mean Length	25.59	6.92	5.88	4.13	19.61	3.01	3.61	10.75	9.88
# Measured	1	58	188	1	2	39	3	1	1
No Lengths for	0	0	101	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

**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	14	0	N/A	0	N/A
	Snapping Turtle	6	6	10.24 - 12.80 - 15.55	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 07/16/2015), 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: 20150625-RJE. Data Date: 07/16/2015 at 10:51 am .



## REPORT OVERVIEW - FOR OFFICE USE ONLY

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

**Lake Name: Imogene**  
**DOW Number: 46-0012-00**

**Survey Type: Standard Survey**  
**Survey ID Date: 07/13/2015**

**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 History<sup>1</sup>
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 Observations<sup>2</sup>
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)

<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 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 07/16/2015 may not be reflected in the Distribution tables until after 12:30 pm on 07/16/2015.**

**FOR OFFICE USE ONLY:** As of revision 20150622, this page is automatically suppressed on signed versions of this report (area supervisor, region manager, research biologist, research supervisor, program staff, or program manager signed).