



Minnesota Department of Natural Resources  
Fisheries Management



STANDARD LAKE SURVEY REPORT

**DRAFT VERSION - PRELIMINARY DATA (AS OF 06/17/2014)**

Lake Name: West Graham

Survey Type: Population Assessment

DOW Number: 53-0021-00

Survey ID Date: 06/09/2014

**Lake Identification**

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

DNR Sounding Map Number: C2744  
Alternate Lake Class ID: N/A

**Lake Location**

Primary County: Nobles

Nearest Town: Kinbrae

**Legal Descriptions**

Lake Center: Township - 104N Range - 39W Section - 21  
PLS Section Lake Center: 10403921

**All Legal Descriptions:**

Nobles County: Township - 104N Range - 39W Sections - 15, 16, 21, 22

**Area Office**

Area Name: Windom  
Region Name: Southern

ORG Code: F418  
Region Number: 4

**Lake Access**

(Information based on Re-Survey dated 06/26/1995)

Station ID	Ownership	Public Use	Type	Location / Comments
AC - 2	County	Open to Public use	Concrete	COUNTY OWNED ACCESS ON NORTHEAST SIDE OF LAKE.

**Lake Characteristics**

Lake Area (planimetered acres): 515.00	GIS Shoreline Length (miles): 3.65
GIS Lake Area (acres): 519.29	Maximum Fetch (miles): 1.30
DOW Lake Area (acres): 526.00	Fetch Orientation (degrees): 45
Littoral Area (acres): 519.29	USGS Quad Map Number: W07d
Area in MN (acres): 519.29	USGS Quad 24K GIS Index: 4514
Maximum Depth (feet): 8.0	
Mean Depth (feet): N/A	

**Watershed Characteristics**

**Major Watershed**

Name: Des Moines-Headwaters  
Watershed Number: 51  
Watershed size (acres): 798,595

**Minor Watershed**

Name: From Jack L  
Watershed Number: 39  
Watershed size (acres): 5,366

**Surveys And Investigations**

Initial Survey: 11/30/1981.  
 Re-Survey: 06/03/2002, 06/26/1995, 06/29/1992, 06/29/1987.  
 Population Assessment: 06/09/2014, 06/14/2010, 06/12/2006, 06/28/1999.  
 Special Assessment: 05/01/2001, 10/30/2000.  
 Winter Kill Assessment: 04/24/2014.  
 Dissolved Oxygen Check: 12/30/2013, 02/07/2013, 01/07/2013, 02/17/2012, 01/26/2012, 12/28/2010, 01/11/2010.

**Current Water Level**

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	06/11/2014	Normal	-6.75	Above or below Benchmark

**Benchmark and Gauge Descriptions / Locations**

Station ID	Location Description
BM - 1	Spike in double trunk ash 10 feet south of the access.

**Water Level History - Readings**

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	06/11/2014	Normal	-6.75	Above or below Benchmark
	06/17/2010	High	7.55	Direct Gauge Reading
	06/12/2006	Normal	-7.10	Above or below Benchmark
GA - 1	06/12/2006	Normal	7.05	Direct Gauge Reading

**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	-7.10	06/12/2006	-6.75	06/11/2014	0.35	-6.93	Above or below Benchmark (2)
BM - 1	7.55	06/17/2010	7.55	06/17/2010	0.00	7.55	Direct Gauge Reading (1)
GA - 1	7.05	06/12/2006	7.05	06/12/2006	0.00	7.05	Direct Gauge Reading (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	06/10/2014	10.1	Surface	70.0	7.2
			2.0	67.8	7.1
			4.0	67.3	7.0
			6.0	67.1	6.9
			8.0	66.7	6.7
			9.0	66.7	6.5

**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	06/10/2014	Surface	1.5	8.12	220	Brown Grn	Algae

**Net Catch Summary by Numbers for GN**

Standard gill net sets

Number of Sets: 3  
 First Set Date: 06/09/2014  
 Last Lift Date: 06/12/2014  
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BIB	Bigmouth Buffalo	3	1.00	0.75	2.58	6.96
BLB	Black Bullhead	96	32.00	30.34	75.58	150.62
BLC	Black Crappie	1	0.33	1.41	3.71	13.75
CCF	Channel Catfish	13	4.33	N/A	N/A	N/A
CAP	Common Carp	13	4.33	1.00	3.33	13.75
NOP	Northern Pike	3	1.00	1.08	3.00	8.00
WAE	Walleye	25	8.33	2.28	6.83	18.06
WTS	White Sucker	12	4.00	0.81	2.33	6.50
YEP	Yellow Perch	8	2.67	2.65	8.00	25.00
Total Fish/Set:			58.00	* 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 43*		
					25%	50%	75%
BIB	Bigmouth Buffalo	22.82	7.61	7.61	N/A	N/A	N/A
BLB	Black Bullhead	42.92	14.31	0.45	0.17	0.26	0.39
BLC	Black Crappie	0.04	0.01	0.04	0.16	0.25	0.35
CCF	Channel Catfish	26.91	8.97	2.07	N/A	N/A	N/A
CAP	Common Carp	66.78	22.26	5.14	0.81	1.98	3.70
NOP	Northern Pike	13.61	4.54	4.54	1.82	2.50	3.35
WAE	Walleye	43.20	14.40	1.73	1.01	1.53	2.30
WTS	White Sucker	26.93	8.98	2.24	0.93	1.58	2.02
YEP	Yellow Perch	3.54	1.18	0.44	0.13	0.21	0.31
Total Pounds Fish/Set:			82.25	* 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:** 06/09/2014  
**Last Lift Date:** 06/12/2014  
**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	588	73.50	11.50	42.00	132.61
BLC	Black Crappie	2	0.25	1.17	4.88	20.50
CCF	Channel Catfish	5	0.63	N/A	N/A	N/A
CAP	Common Carp	26	3.25	1.00	2.44	5.51
OSS	Orangespotted Sunfish	1	0.13	N/A	N/A	N/A
WAE	Walleye	8	1.00	0.50	1.33	2.95
WTS	White Sucker	13	1.63	0.34	0.88	2.58
YEP	Yellow Perch	1	0.13	0.33	1.37	3.76
Total Fish/Set:			80.63	* 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	4.85	0.61	4.85	2.56	3.75	5.83
BLB	Black Bullhead	354.35	44.29	0.60	0.18	0.28	0.40
BLC	Black Crappie	1.01	0.13	0.50	0.22	0.34	0.50
CCF	Channel Catfish	16.58	2.07	3.32	N/A	N/A	N/A
CAP	Common Carp	145.47	18.18	5.60	1.42	2.92	4.58
OSS	Orangespotted Sunfish	0.00	0.00	0.00	N/A	N/A	N/A
WAE	Walleye	10.75	1.34	1.34	0.82	1.44	2.28
WTS	White Sucker	29.14	3.64	2.24	1.05	1.47	2.04
YEP	Yellow Perch	0.11	0.01	0.11	0.11	0.18	0.30
Total Pounds Fish/Set:			70.28	* Quartiles for Mean Weight			

**Length Frequency Distribution For GN**

**Standard gill net sets**

(Field work conducted between 06/09/2014 and 06/12/2014)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>CCF</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	-	-	1	-	-	-	-	-	-
4.50 - 4.99	-	-	-	-	-	-	-	-	-
5.00 - 5.49	-	-	-	-	-	-	-	-	-
5.50 - 5.99	-	-	-	-	-	-	-	-	-
6.00 - 6.49	-	-	-	-	-	-	-	-	-
6.50 - 6.99	-	-	-	-	-	-	-	-	4
7.00 - 7.49	-	1	-	-	-	-	-	-	-
7.50 - 7.99	-	5	-	-	-	-	-	-	-
8.00 - 8.49	-	36	-	-	-	-	-	-	-
8.50 - 8.99	-	22	-	-	-	-	-	-	-
9.00 - 9.49	-	3	-	-	-	-	-	-	1
9.50 - 9.99	-	6	-	-	-	-	-	-	-
10.00 - 10.49	-	9	-	-	-	-	-	-	-
10.50 - 10.99	-	6	-	-	-	-	-	-	-
11.00 - 11.49	-	5	-	-	-	-	-	-	1
11.50 - 11.99	-	3	-	-	-	-	-	-	2
12.00 - 12.99	-	-	-	-	-	-	2	-	-
13.00 - 13.99	-	-	-	-	-	-	5	-	-
14.00 - 14.99	-	-	-	-	2	-	7	1	-
15.00 - 15.99	-	-	-	-	1	-	4	2	-
16.00 - 16.99	-	-	-	-	3	-	1	3	-
17.00 - 17.99	-	-	-	-	-	1	1	5	-
18.00 - 18.99	-	-	-	-	2	-	-	1	-
19.00 - 19.99	-	-	-	2	1	-	-	-	-
20.00 - 20.99	2	-	-	4	3	-	1	-	-
21.00 - 21.99	-	-	-	2	1	-	-	-	-
22.00 - 22.99	-	-	-	1	-	-	-	-	-
23.00 - 23.99	-	-	-	2	-	-	2	-	-
24.00 - 24.99	-	-	-	1	-	-	-	-	-
25.00 - 25.99	-	-	-	1	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	1	1	-	-
27.00 - 27.99	1	-	-	-	-	-	-	-	-
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	-	-	-	-	-	1	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-
	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>CCF</u>	<u>NOP</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
Total	3	96	1	13	13	3	24	12	8
Min. Length	20.16	7.32	4.49	19.09	14.65	17.20	12.32	14.33	6.50
Max. Length	27.60	11.89	4.49	25.98	21.54	34.37	26.57	18.90	11.50
Mean Length	22.66	9.08	4.49	21.89	17.95	25.92	16.00	16.75	9.47
# Measured	3	96	1	13	13	3	24	12	6
No Lengths for	0	0	0	0	0	0	1	0	2

**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 06/09/2014 and 06/12/2014)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>CCF</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-
4.00 - 4.49	-	1	1	-	-	-	-	-
4.50 - 4.99	-	10	-	-	-	-	-	-
5.00 - 5.49	-	-	-	-	-	-	-	-
5.50 - 5.99	-	-	-	-	-	-	-	-
6.00 - 6.49	-	1	-	-	-	-	-	1
6.50 - 6.99	-	-	-	-	-	-	-	-
7.00 - 7.49	-	1	-	-	-	-	-	-
7.50 - 7.99	-	14	-	-	-	-	-	-
8.00 - 8.49	-	111	-	-	-	-	-	-
8.50 - 8.99	-	73	-	-	-	-	-	-
9.00 - 9.49	-	32	-	-	-	-	-	-
9.50 - 9.99	-	22	-	-	-	-	-	-
10.00 - 10.49	-	39	-	-	-	-	-	-
10.50 - 10.99	-	74	-	-	-	-	-	-
11.00 - 11.49	-	120	-	-	-	-	-	-
11.50 - 11.99	-	60	1	-	-	-	-	-
12.00 - 12.99	-	30	-	-	-	1	-	-
13.00 - 13.99	-	-	-	-	-	2	-	-
14.00 - 14.99	-	-	-	-	1	-	1	-
15.00 - 15.99	-	1	-	-	-	-	3	-
16.00 - 16.99	-	-	-	-	-	3	2	-
17.00 - 17.99	-	-	-	-	-	2	2	-
18.00 - 18.99	-	-	-	1	-	-	3	-
19.00 - 19.99	-	-	-	-	-	-	2	-
20.00 - 20.99	1	-	-	3	2	-	-	-
21.00 - 21.99	-	-	-	5	1	-	-	-
22.00 - 22.99	-	-	-	4	1	-	-	-
23.00 - 23.99	-	-	-	6	-	-	-	-
24.00 - 24.99	-	-	-	5	-	-	-	-
25.00 - 25.99	-	-	-	-	-	-	-	-
26.00 - 26.99	-	-	-	1	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	-	-
28.00 - 28.99	-	-	-	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	-	-	-	-	-	-	-	-

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>CCF</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
Total	1	589	2	26	5	8	13	1
Min. Length	20.00	4.49	4.33	18.82	14.57	12.20	14.72	6.42
Max. Length	20.00	15.20	11.50	28.15	22.83	17.64	19.49	6.42
Mean Length	20.00	9.62	7.91	22.84	20.09	15.31	17.21	6.42
# Measured	1	177	2	26	5	8	13	1
No Lengths for	0	411	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

**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 06/17/2014), 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.

(This page is intentionally blank)

(This page is intentionally blank)



## REPORT OVERVIEW - FOR OFFICE USE ONLY

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

---

**Lake Name: West Graham**

**Survey Type: Population Assessment**

**DOW Number: 53-0021-00**

**Survey ID Date: 06/09/2014**

---

**Survey Status:** Field Work Complete

The following 19 (of 31) report components are not included in this report:

1. Water Level History<sup>1</sup>
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<sup>2</sup>
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. Other Species (added to revision 03/24/2009)
19. Water Quality (Winter Observations) (added to revision 01/21/2010)

<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 Standard 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 after noon on 06/17/2014 may not be reflected in the Distribution tables until 06/18/2014.**

The following survey component was flagged to be specifically excluded from this report: TN - 5