



Minnesota Department of Natural Resources
Fisheries Management



STANDARD LAKE SURVEY REPORT

DRAFT VERSION - PRELIMINARY DATA (AS OF 08/22/2013)

Lake Name: St. James

Survey Type: Special Assessment

DOW Number: 83-0043-00

Survey ID Date: 08/05/2013

SPECIAL ASSESSMENT

Electrofishing targeting Largemouth Bass All Ages

Gill Netting

Trap Netting

Water Level Measurement

Water Quality Measurement

Lake Identification

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

DNR Sounding Map Number: C2883
Alternate Lake Class ID: N/A

Lake Location

Primary County: Watonwan

Nearest Town: Saint James

Legal Descriptions

Lake Center: Township - 106N Range - 32W Section - 23
PLS Section Lake Center: 10603223

All Legal Descriptions:

Watonwan County: Township - 106N Range - 32W Sections - 14, 23, 24, 26, 27

Area Office

Area Name: Windom
Region Name: Southern

ORG Code: F418
Region Number: 4

Lake Access

(Information based on Re-Survey dated 06/12/1995)

| 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): 252.00 | GIS Shoreline Length (miles): 3.74 |
| GIS Lake Area (acres): 202.76 | Maximum Fetch (miles): 1.50 |
| DOW Lake Area (acres): 252.00 | Fetch Orientation (degrees): 45 |
| Littoral Area (acres): 202.76 | USGS Quad Map Number: W11b |
| Area in MN (acres): 202.76 | USGS Quad 24K GIS Index: 4421 |
| Maximum Depth (feet): 15.4 | |
| Mean Depth (feet): N/A | |

Watershed Characteristics**Major Watershed**

Name: Watonwan River
 Watershed Number: 31
 Watershed size (acres): 558,963

Minor Watershed

Name: St James Cr
 Watershed Number: 20
 Watershed size (acres): 17,084

Surveys And Investigations

Initial Survey: 06/09/1986.

Re-Survey: 06/09/2003, 06/12/1995, 06/10/1991.

Population Assessment: 04/11/2011, 07/16/2007, 07/13/2005, 06/14/1999.

Special Assessment: 08/05/2013, 08/08/2011, 06/01/2011, 07/26/2010, 07/19/2010, 06/22/2010, 06/07/2010, 05/26/2010, 03/31/2010, 08/11/2009, 07/13/2009, 06/04/2009, 04/07/2009, 08/27/2008, 07/28/2008, 06/17/2008, 06/10/2008, 04/21/2008, 05/09/1994, 08/18/1948.

Dissolved Oxygen Check: 12/28/2012, 02/14/2012, 12/29/2010, 01/12/2010.

External Management Survey: 06/10/2009, 06/23/2008.

Current Water Level

| <u>Station ID</u> | <u>Date</u> | <u>Level</u> | <u>Reading (feet)</u> | <u>Reading Type</u> |
|-------------------|-------------|--------------|-----------------------|--------------------------|
| BM - 1 | 08/05/2013 | Normal | -5.40 | Above or below Benchmark |

Benchmark and Gauge Descriptions / Locations

| <u>Station ID</u> | <u>Location Description</u> |
|-------------------|--|
| BM - 1 | an X in the middle of top of east side of concrete culvert, old hwy 4. |

Water Level History - Readings

| <u>Station ID</u> | <u>Date</u> | <u>Level</u> | <u>Reading (feet)</u> | <u>Reading Type</u> |
|-------------------|-------------|--------------|-----------------------|--------------------------|
| BM - 1 | 08/05/2013 | Normal | -5.40 | Above or below Benchmark |
| | 08/09/2011 | Normal | 3.75 | Above or below Benchmark |
| | 07/31/2008 | N/A | 9.65 | Direct Gauge Reading |
| | 07/16/2007 | Low | -6.20 | Above or below Benchmark |

Water Level History - Station Summary

| <u>Station ID</u> | <u>Minimum Level</u> | | <u>Maximum Level</u> | | <u>Range (feet)</u> | <u>Average Level (feet)</u> | <u>Reading Type (and number of readings)</u> |
|-------------------|----------------------|-------------|----------------------|-------------|---------------------|-----------------------------|--|
| | <u>Feet</u> | <u>Date</u> | <u>Feet</u> | <u>Date</u> | | | |
| BM - 1 | -6.20 | 07/16/2007 | 3.75 | 08/09/2011 | 9.95 | -2.62 | Above or below Benchmark (3) |
| BM - 1 | 9.65 | 07/31/2008 | 9.65 | 07/31/2008 | 0.00 | 9.65 | Direct Gauge Reading (1) |

Dissolved Oxygen And Temperature Profile Of Lake Water

| <u>Station ID</u> | <u>Sampling Date</u> | <u>Bottom Depth (Feet)</u> | <u>Sample Depth (Feet)</u> | <u>Water Temperature (°F)</u> | <u>Dissolved Oxygen (ppm)</u> |
|-------------------|----------------------|----------------------------|----------------------------|-------------------------------|-------------------------------|
| WQ - 1 | 08/05/2013 | 16.0 | Surface | 73.6 | 10.4 |
| | | | 3.0 | 73.4 | 10.4 |
| | | | 6.0 | 73.4 | 10.4 |
| | | | 9.0 | 73.2 | 8.6 |
| | | | 10.0 | 72.7 | 5.0 |
| | | | 11.0 | 72.1 | 1.5 |
| | | | 12.0 | 71.6 | 0.1 |
| | | | 15.0 | 68.4 | 0.0 |

Field Measurements Of Water Quality

| <u>Station ID</u> | <u>Sampling Date</u> | <u>Sample Depth (Feet)</u> | <u>Secchi Depth (Feet)</u> | <u>Field pH</u> | <u>Alkalinity (ppm)</u> | <u>Water Color</u> | <u>Color Cause</u> |
|-------------------|----------------------|----------------------------|----------------------------|-----------------|-------------------------|--------------------|--------------------|
| WQ - 1 | 08/05/2013 | Surface | 3.4 | N/A | 125 | Brown Grn | Algae |

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 1
 First Set Date: 08/05/2013
 Last Lift Date: 08/06/2013
 Target Species: N/A

| Abbr | Species | Total Fish | Number Per Set | Quartiles for Lake Class 42* | | |
|-----------------|-----------------|------------|----------------|--------------------------------|-------|-------|
| | | | | 25% | 50% | 75% |
| BLB | Black Bullhead | 1 | 1.00 | 9.63 | 39.75 | 91.42 |
| LMB | Largemouth Bass | 1 | 1.00 | 0.48 | 0.54 | 1.00 |
| NOP | Northern Pike | 26 | 26.00 | 1.54 | 4.29 | 7.00 |
| WAE | Walleye | 4 | 4.00 | 1.00 | 2.50 | 7.33 |
| YEP | Yellow Perch | 7 | 7.00 | 3.00 | 8.00 | 26.50 |
| Total Fish/Set: | | | 39.00 | * 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 | 2.07 | 2.07 | 2.07 | 0.18 | 0.28 | 0.49 |
| LMB | Largemouth Bass | 2.76 | 2.76 | 2.76 | 0.20 | 0.63 | 1.50 |
| NOP | Northern Pike | 44.32 | 44.32 | 1.70 | 1.49 | 2.17 | 3.40 |
| WAE | Walleye | 9.45 | 9.45 | 2.36 | 0.95 | 1.58 | 2.80 |
| YEP | Yellow Perch | 6.07 | 6.07 | 0.87 | 0.14 | 0.20 | 0.28 |
| Total Pounds Fish/Set: | | | 64.67 | * 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: 08/05/2013
 Last Lift Date: 08/08/2013
 Target Species: N/A

| Abbr | Species | Total Fish | Number Per Set | Quartiles for Lake Class 42* | | |
|-----------------|----------------|------------|----------------|--------------------------------|-------|-------|
| | | | | 25% | 50% | 75% |
| BLB | Black Bullhead | 1 | 0.11 | 2.20 | 17.30 | 60.46 |
| BLC | Black Crappie | 1 | 0.11 | 2.36 | 5.60 | 15.10 |
| BLG | Bluegill | 12 | 1.33 | 1.88 | 10.80 | 29.50 |
| NOP | Northern Pike | 25 | 2.78 | N/A | N/A | N/A |
| YEP | Yellow Perch | 20 | 2.22 | 0.48 | 1.29 | 3.45 |
| Total Fish/Set: | | | 6.56 | * 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 | 0.94 | 0.10 | 0.94 | 0.19 | 0.30 | 0.50 |
| BLC | Black Crappie | 0.91 | 0.10 | 0.91 | 0.17 | 0.25 | 0.36 |
| BLG | Bluegill | 1.55 | 0.17 | 0.13 | 0.15 | 0.20 | 0.30 |
| NOP | Northern Pike | 28.91 | 3.21 | 1.16 | N/A | N/A | N/A |
| YEP | Yellow Perch | 1.29 | 0.14 | 0.06 | 0.10 | 0.17 | 0.27 |
| Total Pounds Fish/Set: | | | 3.73 | * Quartiles for Mean Weight | | | |

Electrofishing Catch Summary for EF

Standard electrofishing

Total run-time for all stations: 01:15:00
Total on-time for all stations: 01:01:47
First Sampling Date: 05/23/2013
Last Sampling Date: 05/23/2013
Daylight Sampling: Yes
Target Species: All ages largemouth bass

| Abbr | Species | Summary By Numbers | | | Summary By Weight (pounds) | | | |
|------|-----------------|--------------------|--------------------------|---------|----------------------------|-----------------------|---------|-------------|
| | | Total Number | Number per Hour Run-Time | On-Time | Total Weight | Lbs per Hour Run-Time | On-Time | Mean Weight |
| LMB | Largemouth Bass | 23 | 18.40 | 22.34 | 56.96 | 45.57 | 55.32 | 2.48 |

Length Frequency Distribution For EF

Standard electrofishing

(Field work conducted on 05/23/2013)

| | <u>LMB</u> |
|---------------|------------|
| < 3.00 | - |
| 3.00 - 3.49 | - |
| 3.50 - 3.99 | - |
| 4.00 - 4.49 | - |
| 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 | - |
| 10.00 - 10.49 | - |
| 10.50 - 10.99 | 1 |
| 11.00 - 11.49 | - |
| 11.50 - 11.99 | - |
| 12.00 - 12.99 | - |
| 13.00 - 13.99 | - |
| 14.00 - 14.99 | 1 |
| 15.00 - 15.99 | 4 |
| 16.00 - 16.99 | 10 |
| 17.00 - 17.99 | 6 |
| 18.00 - 18.99 | 1 |
| 19.00 - 19.99 | - |
| 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 | 23 |
| Min. Length | 10.91 |
| Max. Length | 18.46 |
| Mean Length | 16.37 |
| # Measured | 23 |
| 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 | 4 | 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 08/22/2013), 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.

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REPORT OVERVIEW - FOR OFFICE USE ONLY

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

Lake Name: St. James

Survey Type: Special Assessment

DOW Number: 83-0043-00

Survey ID Date: 08/05/2013

Electrofishing targeting Largemouth Bass All Ages, Gill Netting, Trap Netting, Water Level Measurement, Water Quality Measurement

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 before noon on 08/22/2013 may not be reflected in the Distribution tables until after 12:30 pm on 08/22/2013.