



Minnesota Department of Natural Resources
 Fisheries Management
 STANDARD LAKE SURVEY REPORT



Lake Name: Volney
 DOW Number: 40-0033-00

Survey Type: Special Assessment
 Survey ID Date: 08/25/2009

SPECIAL ASSESSMENT SURVEY
 Gill Netting
 Trap Netting
 Water Quality Measurement

Lake Identification

Alternate Lake Name: N/A
 Primary Lake Class ID: 24
 DNR Sounding Map Number: C1914
 Alternate Lake Class ID: 24

Lake Location

Primary County: Le Sueur
 Nearest Town: Le Center

Legal Descriptions

Lake Center: Township - 110N Range - 23W Section - 6
 PLS Section Lake Center: 11002306

All Legal Descriptions:

Le Sueur County: Township - 110N Range - 23W Section - 6
 Township - 110N Range - 24W Section - 1
 Township - 111N Range - 23W Section - 31
 Township - 111N Range - 24W Section - 36

Area Office

Area Name: Waterville
 Region Name: Southern
 ORG Code: F417
 Region Number: 4

Lake Access

(Information based on Re-Survey dated 06/08/2004)

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): 283.00	GIS Shoreline Length (miles): 2.49
GIS Lake Area (acres): 268.86	Maximum Fetch (miles): 1.00
DOW Lake Area (acres): 268.00	Fetch Orientation (degrees): 270
Littoral Area (acres): 130.00	USGS Quad Map Number: U15c
Area in MN (acres): 268.86	USGS Quad 24K GIS Index: 4129
Maximum Depth (feet): 67.0	
Mean Depth (feet): N/A	

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Watershed Characteristics

Major Watershed

Name: Cannon River
 Watershed Number: 39
 Watershed size (acres): 940,540

Minor Watershed

Name: Cannon R
 Watershed Number: 103
 Watershed size (acres): 22,872

Surveys And Investigations

Initial Survey: 07/17/1950.

Re-Survey: 06/08/2004, 06/07/1999, 06/22/1989, 06/27/1984, 07/14/1975, 08/19/1968.

Population Assessment: 06/10/2008, 06/21/1994, 06/03/1993, 06/24/1991, 06/25/1987, 05/22/1981.

Special Assessment: 08/25/2009, 06/13/2006, 10/11/2004, 05/04/2004, 10/31/2003, 10/30/2000,
 10/19/1999, 10/19/1998, 09/24/1997, 06/21/1992.

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	08/25/2009	30.4	Surface	72.0	8.2
			3.0	72.1	7.4
			6.0	72.1	7.2
			9.0	72.1	7.8
			12.0	72.1	7.8
			15.0	72.0	7.4
			18.0	71.8	6.9
			21.0	71.4	5.4
			24.0	69.6	0.7

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	08/25/2009	24.0	10.0	N/A	N/A	Lt Green	Algae

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Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 6
First Set Date: 08/25/2009
Last Lift Date: 08/28/2009
Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 24*		
				25%	50%	75%
BLC	Black Crappie	105	17.50	2.50	6.91	16.50
BLG	Bluegill	15	2.50	N/A	N/A	N/A
FRD	Freshwater Drum	235	39.17	4.00	11.75	32.25
LMB	Largemouth Bass	1	0.17	0.25	0.50	0.83
NOP	Northern Pike	2	0.33	1.50	3.75	7.29
WAE	Walleye	5	0.83	1.17	2.82	6.33
YEP	Yellow Perch	163	27.17	2.00	10.50	27.94
Total Fish/Set:			87.67	* 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 24*		
					25%	50%	75%
BLC	Black Crappie	24.63	4.11	0.23	0.15	0.20	0.26
BLG	Bluegill	3.13	0.52	0.21	N/A	N/A	N/A
FRD	Freshwater Drum	96.24	16.04	0.41	0.25	0.50	1.13
LMB	Largemouth Bass	4.36	0.73	4.36	0.40	0.60	1.00
NOP	Northern Pike	3.81	0.64	1.91	2.02	2.68	3.50
WAE	Walleye	15.16	2.53	3.03	1.20	1.81	2.69
YEP	Yellow Perch	35.36	5.89	0.22	0.10	0.13	0.18
Total Pounds Fish/Set:			30.45	* Quartiles for Mean Weight			

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Net Catch Summary by Numbers for TN

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

Number of Sets: 9
 First Set Date: 08/25/2009
 Last Lift Date: 08/28/2009
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 24*		
				25%	50%	75%
BLC	Black Crappie	60	6.67	1.83	6.50	21.16
BLG	Bluegill	75	8.33	7.54	23.13	62.50
BOF	Bowfin (Dogfish)	1	0.11	0.38	0.75	1.29
LMB	Largemouth Bass	1	0.11	0.20	0.33	0.67
NOP	Northern Pike	2	0.22	N/A	N/A	N/A
Total Fish/Set:			15.44	* 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 24*		
					25%	50%	75%
BLC	Black Crappie	15.10	1.68	0.25	0.18	0.24	0.33
BLG	Bluegill	9.12	1.01	0.12	0.13	0.18	0.25
BOF	Bowfin (Dogfish)	4.63	0.51	4.63	2.28	3.33	4.10
LMB	Largemouth Bass	0.03	0.00	0.03	0.15	0.31	0.91
NOP	Northern Pike	0.44	0.05	0.22	N/A	N/A	N/A
Total Pounds Fish/Set:			3.26	* Quartiles for Mean Weight			

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Length Frequency Distribution For GN

Standard gill net sets

(Field work conducted between 08/25/2009 and 08/28/2009)

	<u>BLC</u>	<u>BLG</u>	<u>FRD</u>	<u>LMB</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	11	-	-	-	-	-	-
5.00 - 5.49	10	-	-	-	-	-	-
5.50 - 5.99	16	1	-	-	-	-	8
6.00 - 6.49	1	4	4	-	-	-	15
6.50 - 6.99	-	6	16	-	-	-	35
7.00 - 7.49	3	2	28	-	-	-	38
7.50 - 7.99	18	-	7	-	-	-	14
8.00 - 8.49	11	-	1	-	-	-	11
8.50 - 8.99	23	-	13	-	-	-	14
9.00 - 9.49	10	-	19	-	-	-	18
9.50 - 9.99	1	-	6	-	-	-	8
10.00 - 10.49	-	-	26	-	-	-	3
10.50 - 10.99	-	-	56	-	-	-	-
11.00 - 11.49	-	-	27	-	-	-	-
11.50 - 11.99	-	-	26	-	-	-	-
12.00 - 12.99	-	-	5	-	-	-	-
13.00 - 13.99	-	-	1	-	-	-	-
14.00 - 14.99	-	-	-	-	-	-	-
15.00 - 15.99	-	-	-	-	-	-	-
16.00 - 16.99	-	-	-	-	-	1	-
17.00 - 17.99	-	-	-	-	-	1	-
18.00 - 18.99	-	-	-	-	-	-	-
19.00 - 19.99	-	-	-	1	-	-	-
20.00 - 20.99	-	-	-	-	1	1	-
21.00 - 21.99	-	-	-	-	1	-	-
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	-	-	-	-	-	-	-
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>BLC</u>	<u>BLG</u>	<u>FRD</u>	<u>LMB</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
Total	104	14	235	1	2	5	164
Min. Length	4.61	4.09	6.14	19.84	20.39	16.65	5.63
Max. Length	9.72	7.13	13.46	19.84	21.42	24.41	10.47
Mean Length	7.30	6.35	9.78	19.84	20.91	20.24	7.64
# Measured	103	12	235	1	2	5	153
No Lengths for	2	3	0	0	0	0	10

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Length Frequency Distribution For TN

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

(Field work conducted between 08/25/2009 and 08/28/2009)

	<u>BLC</u>	<u>BLG</u>	<u>BOF</u>	<u>LMB</u>	<u>NOP</u>
< 3.00	-	1	-	-	-
3.00 - 3.49	-	2	-	-	-
3.50 - 3.99	-	17	-	-	-
4.00 - 4.49	2	17	-	1	-
4.50 - 4.99	2	6	-	-	-
5.00 - 5.49	14	-	-	-	-
5.50 - 5.99	9	7	-	-	-
6.00 - 6.49	1	7	-	-	-
6.50 - 6.99	-	10	-	-	-
7.00 - 7.49	1	5	-	-	-
7.50 - 7.99	3	2	-	-	-
8.00 - 8.49	4	1	-	-	-
8.50 - 8.99	10	-	-	-	-
9.00 - 9.49	9	-	-	-	-
9.50 - 9.99	2	-	-	-	-
10.00 - 10.49	2	-	-	-	1
10.50 - 10.99	1	-	-	-	1
11.00 - 11.49	-	-	-	-	-
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	-	-	-	-	-
18.00 - 18.99	-	-	-	-	-
19.00 - 19.99	-	-	-	-	-
20.00 - 20.99	-	-	-	-	-
21.00 - 21.99	-	-	-	-	-
22.00 - 22.99	-	-	-	-	-
23.00 - 23.99	-	-	1	-	-
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>BLC</u>	<u>BLG</u>	<u>BOF</u>	<u>LMB</u>	<u>NOP</u>
Total	60	75	1	1	2
Min. Length	4.33	0.28	23.90	4.06	10.16
Max. Length	10.94	8.39	23.90	4.06	10.51
Mean Length	7.28	5.10	23.90	4.06	10.33
# Measured	60	75	1	1	2
No Lengths for	0	0	0	0	0

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Discussion

Volney Lake was specially assessed the week of August 25th, 2009 to contrast net returns from the previous year and to assist in freshwater drum collection for conservation partnering entity Blue Water Science and Aquatic Scientist Steve McComas. McComas' specimen collection is in relation to his study of freshwater drum diet and examination of drums' potential role as ecological influence on Volney Lake water quality and phosphorus load. Black crappie, yellow perch, and freshwater drum abundance was similar to the June 2008 Population Assessment. Locals have bemoaned a lack of northern pike and walleye; these two species showed low abundance in 2008 and 2009. With continued growth, yellow perch appear poised to provide a strong fishery for quality-sized individuals.

Approval Dates And Notices

Date Approved By Waterville Area Fisheries Supervisor: 04/28/2010

Date Approved By Southern Region Fisheries Manager: _____



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