



Minnesota Department of Natural Resources
Fisheries Management
STANDARD LAKE SURVEY REPORT



Lake Name: Loon
DOW Number: 81-0015-00

Survey Type: Population Assessment
Survey ID Date: 06/08/2009

Lake Identification

Alternate Lake Name: N/A	DNR Sounding Map Number: C2192
Primary Lake Class ID: 43	Alternate Lake Class ID: 43

Lake Location

Primary County: Waseca	Nearest Town: Waseca
------------------------	----------------------

Legal Descriptions

Lake Center: Township - 107N	Range - 22W	Section - 7
PLS Section Lake Center: 10702207		

All Legal Descriptions:

Waseca County: Township - 107N	Range - 22W	Sections - 7, 18
--------------------------------	-------------	------------------

Area Office

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

Lake Access

(Information based on Re-Survey dated 07/26/2004)

<u>Station ID</u>	<u>Ownership</u>	<u>Public Use</u>	<u>Type</u>	<u>Location / Comments</u>
-------------------	------------------	-------------------	-------------	----------------------------

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

Lake Characteristics

Lake Area (planimetered acres): 122.00	GIS Shoreline Length (miles): 2.19
GIS Lake Area (acres): 124.94	Maximum Fetch (miles): 0.80
DOW Lake Area (acres): 119.00	Fetch Orientation (degrees): 292
Littoral Area (acres): 122.00	USGS Quad Map Number: V15d
Area in MN (acres): 124.94	USGS Quad 24K GIS Index: 4330
Maximum Depth (feet): 9.0	
Mean Depth (feet): N/A	

Watershed Characteristics

Major Watershed

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

Minor Watershed

Name: Crane Cr
Watershed Number: 34
Watershed size (acres): 3,258

Surveys And Investigations

Initial Survey: 08/01/1983.
Re-Survey: 07/26/2004, 07/21/1993, 07/28/1986.

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 06/08/2009 FOR DOW NUMBER 81-0015-00

Surveys And Investigations (Continued)

Population Assessment: 06/08/2009, 08/03/1995, 07/13/1992, 08/19/1991, 08/15/1990, 07/25/1988, 07/11/1955.

Special Assessment: 06/01/2005, 05/26/2004, 08/27/2003, 08/19/2002, 09/17/2001, 09/12/2000, 09/07/1999, 09/10/1998, 08/25/1997, 08/17/1994.

Dissolved Oxygen Check: 01/11/2010.

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	06/08/2009	N/A	Surface	59.7	9.9
			2.0	59.9	9.2
			4.0	59.9	9.2
			6.0	59.9	8.9
			8.0	59.9	9.0

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	06/08/2009	Surface	N/A	N/A	N/A	N/A	N/A

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 06/08/2009 FOR DOW NUMBER 81-0015-00

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 3
 First Set Date: 06/08/2009
 Last Lift Date: 06/10/2009
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BLB	Black Bullhead	239	79.67	30.34	75.58	150.62
BLC	Black Crappie	134	44.67	1.41	3.71	13.75
BLG	Bluegill	158	52.67	N/A	N/A	N/A
NOP	Northern Pike	13	4.33	1.08	3.00	8.00
WAE	Walleye	1	0.33	2.28	6.83	18.06
YEP	Yellow Perch	5	1.67	2.65	8.00	25.00
Total Fish/Set:			183.33	* 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	43.85	14.62	0.18	0.17	0.26	0.39
BLC	Black Crappie	19.25	6.42	0.14	0.16	0.25	0.35
BLG	Bluegill	16.53	5.51	0.10	N/A	N/A	N/A
NOP	Northern Pike	53.84	17.95	4.14	1.82	2.50	3.35
WAE	Walleye	3.75	1.25	3.75	1.01	1.53	2.30
YEP	Yellow Perch	0.40	0.13	0.08	0.13	0.21	0.31
Total Pounds Fish/Set:			45.87	* Quartiles for Mean Weight			

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 06/08/2009 FOR DOW NUMBER 81-0015-00

Net Catch Summary by Numbers for TN

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

Number of Sets: 9
 First Set Date: 06/08/2009
 Last Lift Date: 06/10/2009
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BLB	Black Bullhead	2,485	276.11	11.50	42.00	132.61
BLC	Black Crappie	630	70.00	1.17	4.88	20.50
BLG	Bluegill	1,111	123.44	1.17	3.89	20.00
HSF	Hybrid Sunfish	2	0.22	N/A	N/A	N/A
LMB	Largemouth Bass	2	0.22	0.23	0.38	0.67
NOP	Northern Pike	3	0.33	N/A	N/A	N/A
PMK	Pumpkinseed	2	0.22	0.26	1.35	4.92
WAE	Walleye	2	0.22	0.50	1.33	2.95
WHC	White Crappie	4	0.44	0.25	1.83	5.96
YEP	Yellow Perch	7	0.78	0.33	1.37	3.76
Total Fish/Set:			472.00	* 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 43*		
					25%	50%	75%
BLB	Black Bullhead	454.49	50.50	0.18	0.18	0.28	0.40
BLC	Black Crappie	94.52	10.50	0.15	0.22	0.34	0.50
BLG	Bluegill	111.17	12.35	0.10	0.13	0.24	0.39
HSF	Hybrid Sunfish	0.25	0.03	0.13	N/A	N/A	N/A
LMB	Largemouth Bass	6.73	0.75	3.36	0.30	0.85	1.53
NOP	Northern Pike	11.08	1.23	3.69	N/A	N/A	N/A
PMK	Pumpkinseed	0.33	0.04	0.16	0.08	0.12	0.20
WAE	Walleye	6.78	0.75	3.39	0.82	1.44	2.28
WHC	White Crappie	1.32	0.15	0.33	0.27	0.40	0.63
YEP	Yellow Perch	0.75	0.08	0.11	0.11	0.18	0.30
Total Pounds Fish/Set:			76.38	* Quartiles for Mean Weight			

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 06/08/2009 FOR DOW NUMBER 81-0015-00

Length Frequency Distribution For GN

Standard gill net sets

(Field work conducted between 06/08/2009 and 06/10/2009)

	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-
4.00 - 4.49	-	-	-	-	-	-
4.50 - 4.99	-	-	18	-	-	-
5.00 - 5.49	-	-	108	-	-	-
5.50 - 5.99	-	3	32	-	-	1
6.00 - 6.49	17	59	-	-	-	4
6.50 - 6.99	119	68	-	-	-	-
7.00 - 7.49	90	4	-	-	-	-
7.50 - 7.99	12	-	-	-	-	-
8.00 - 8.49	1	-	-	-	-	-
8.50 - 8.99	-	-	-	-	-	-
9.00 - 9.49	-	-	-	-	-	-
9.50 - 9.99	-	-	-	-	-	-
10.00 - 10.49	-	-	-	-	-	-
10.50 - 10.99	-	-	-	-	-	-
11.00 - 11.49	-	-	-	-	-	-
11.50 - 11.99	-	-	-	-	-	-
12.00 - 12.99	1	-	-	-	-	-
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	-	-	-	1	-	-
21.00 - 21.99	-	-	-	-	1	-
22.00 - 22.99	-	-	-	1	-	-
23.00 - 23.99	-	-	-	1	-	-
24.00 - 24.99	-	-	-	2	-	-
25.00 - 25.99	-	-	-	-	-	-
26.00 - 26.99	-	-	-	4	-	-
27.00 - 27.99	-	-	-	2	-	-
28.00 - 28.99	-	-	-	1	-	-
29.00 - 29.99	-	-	-	-	-	-
30.00 - 30.99	-	-	-	-	-	-
31.00 - 31.99	-	-	-	-	-	-
32.00 - 32.99	-	-	-	1	-	-
33.00 - 33.99	-	-	-	-	-	-
34.00 - 34.99	-	-	-	-	-	-
35.00 - 35.99	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-

	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>NOP</u>	<u>WAE</u>	<u>YEP</u>
Total	240	134	158	13	1	5
Min. Length	6.06	5.79	4.76	20.98	21.14	5.91
Max. Length	12.91	7.24	5.83	32.76	21.14	6.34
Mean Length	6.98	6.50	5.28	26.11	21.14	6.17
# Measured	159	118	82	13	1	5
No Lengths for	80	16	76	0	0	0

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 06/08/2009 FOR DOW NUMBER 81-0015-00

Length Frequency Distribution For TN

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

(Field work conducted between 06/08/2009 and 06/10/2009)

	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>HSF</u>	<u>LMB</u>	<u>NOP</u>	<u>PMK</u>	<u>WAE</u>	<u>WHC</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	19	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-	-	-
4.00 - 4.49	-	-	-	-	-	-	-	-	-	-
4.50 - 4.99	-	-	217	-	-	-	-	-	-	-
5.00 - 5.49	-	-	711	1	-	-	-	-	-	1
5.50 - 5.99	12	18	183	1	-	-	2	-	-	1
6.00 - 6.49	65	214	-	-	-	-	-	-	-	3
6.50 - 6.99	1051	371	-	-	-	-	-	-	-	1
7.00 - 7.49	1217	16	-	-	-	-	-	-	1	-
7.50 - 7.99	121	-	-	-	-	-	-	-	-	1
8.00 - 8.49	-	9	-	-	-	-	-	-	1	-
8.50 - 8.99	-	-	-	-	-	-	-	-	1	-
9.00 - 9.49	-	1	-	-	-	-	-	-	1	-
9.50 - 9.99	-	-	-	-	-	-	-	-	-	-
10.00 - 10.49	-	-	-	-	-	-	-	-	-	-
10.50 - 10.99	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	2	-	-	-	-	-
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	-	-	-	-	-	1	-	1	-	-
23.00 - 23.99	-	-	-	-	-	1	-	-	-	-
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>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>HSF</u>	<u>LMB</u>	<u>NOP</u>	<u>PMK</u>	<u>WAE</u>	<u>WHC</u>	<u>YEP</u>
Total	2485	629	1111	2	2	3	2	2	4	7
Min. Length	3.31	5.79	4.53	5.04	16.42	22.68	5.55	19.29	7.44	5.39
Max. Length	7.87	9.21	5.87	5.71	16.81	25.94	5.75	22.24	9.06	7.64
Mean Length	7.02	6.60	5.20	5.37	16.61	23.94	5.65	20.77	8.37	6.24
# Measured	225	216	216	2	2	3	2	2	4	7
No Lengths for	2260	414	895	0	0	0	0	0	0	0

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 06/08/2009 FOR DOW NUMBER 81-0015-00

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	7	5	4.13 - 5.62 - 6.69	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.

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 06/08/2009 FOR DOW NUMBER 81-0015-00

Discussion

BLG, BLC, BLB, and LMB were found around the shoreline, likely victims of a late spring *Columnaris* spp. outbreak

The Waseca County Newspaper and journalist Drew Amo wrote an article about the population assessment.

The winter of 2009-2010 was hard on Loon Lake and a winterkill assessment is scheduled for spring 2010. Aeration is a big issue at Loon Lake; the city cannot financially afford new equipment but it has become apparent that the current equipment is not satisfactory. Low dissolved oxygen persisted through much of 2009-2010 and the aeration pump was in disrepair and down for one week during the winter. Options are being explored with local partners (Waseca Lakes Association, Minnesota Darkhouse and Angling Association) to raise money for new aeration equipment and/or a chemical reclamation.

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 06/08/2009 FOR DOW NUMBER 81-0015-00

Status Of The Fishery

Loon Lake in Waseca County is a 122 acre lake located in the city of Waseca. A public access is located on the north side of the lake, off U.S. Highway 14. No gasoline motors are allowed on Loon Lake. A fishing pier is located next to the public access. City parks on the north and south shores provide ample shore-fishing locations.

Shoreline restoration projects in the parks have established diverse native plant communities and reduced goose usage of these parks. The lake is aerated in the winter; use caution when traveling on Loon Lake and obey signs marking thin ice areas.

Loon Lake was surveyed the week of June 8th, 2009 to monitor the fish community. Black bullhead dominated trap and gill net catches. Black bullhead abundance was 276 fish per trap net lift and 80 fish per gill net lift. Nearly all bullheads ranged between 6 and 8 inches. Black bullheads in Loon Lake show characteristics of a stunted population.

Bluegill were the next most abundant species, overwhelming trap nets at 111 fish per net and gill nets at 53 fish per net. Bluegill size ranged between 4.5 and 6 inches. Bluegills show characteristics of a stunted population.

Black crappies were the third most abundant fish species. Black crappies totaled 45 fish per gill net and 70 fish per trap net. Size ranged between 5.5 and 7.5 inches; 1% of fish exceeded 8 inches and no fish exceeded 10 inches.

Black crappies show characteristics of a stunted population.

Northern pike averaged 4.3 fish per gill net lift. Pike ranged between 21 and 33 inches and were in good condition in the midst of overabundant forage. Largemouth bass are present at low levels and provide another angling option; two bass were caught in survey nets (bass are best sampled using electrofishing).

Three walleye were caught in the 2009 population assessment. These fish were transported and released by citizens; the DNR has not stocked walleye into Loon Lake. Other fish sampled in the survey at trace levels include yellow perch, white crappie, hybrid sunfish, and pumpkinseed sunfish.

Anglers can help maintain or improve the quality of fishing by practicing selective harvest. Selective harvest allows for the harvest of smaller fish for table fare, but encourages release of medium- to large-sized fish. Releasing these fish can help maintain balance in the fish community in Loon Lake and provide anglers the opportunity to catch more and larger fish in the future.

Shoreline areas on the land and into the shallow water provide essential habitat for fish and wildlife that live in or near Minnesota s lakes. Overdeveloped shorelines cannot support the fish, wildlife, and clean water that are associated with natural undeveloped lakes. Shoreline habitat consists of aquatic plants, woody plants, and natural lake bottom soils. Plants in the water and at the water's edge provide habitat, prevent erosion, and absorb excess nutrients. Shrubs, trees, and woody debris such as fallen trees or limbs provide good habitat both above and below the water and should be left in place. By leaving a buffer strip of natural vegetation along the shoreline, property owners can reduce erosion, help maintain water quality, and provide habitat and travel corridors for wildlife.

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 06/08/2009 FOR DOW NUMBER 81-0015-00

Approval Dates And Notices

Date Approved By Waterville Area Fisheries Supervisor: 04/12/2010

Date Approved By Southern Region Fisheries Manager: _____



©Copyright 2010, 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.

Standard Lake Survey Report revision: 01/21/2010-RJE. Data dated 04/12/2010 at 1:01:38PM