



Minnesota Department of Natural Resources
 Fisheries Management
 STANDARD LAKE SURVEY REPORT



Lake Name: Clear

Survey Type: Population Assessment

DOW Number: 81-0014-01

Survey ID Date: 08/04/2010

POPULATION ASSESSMENT
Beach Seine (1/8 inch 15 foot)
Backpack Electrofishing

Lake Identification

Alternate Lake Name: N/A
 Primary Lake Class ID: 24

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

Lake Location

Primary County: Waseca

Nearest Town: Waseca

Legal Descriptions

Lake Center: Township - 107N Range - 22W Section - 9
 PLS Section Lake Center: 10702209

All Legal Descriptions:

Waseca County: Township - 107N Range - 22W Sections - 4, 5, 8, 9, 16, 17

Area Office

Area Name: Waterville
 Region Name: Southern

ORG Code: F417
 Region Number: 4

Lake Access

(Information based on Population Assessment dated 07/29/1996)

Station ID	Ownership	Public Use	Type	Location / Comments
AC - 2	City	Open to Public use	Concrete	Southeast shore.

Lake Characteristics

Lake Area (planimetered acres): 652.00	GIS Shoreline Length (miles): 4.39
GIS Lake Area (acres): 648.76	Maximum Fetch (miles): 1.36
DOW Lake Area (acres): 0.00	Fetch Orientation (degrees): N/A
Littoral Area (acres): 448.00	USGS Quad Map Number: V16c
Area in MN (acres): 648.76	USGS Quad 24K GIS Index: 4331
Maximum Depth (feet): 34.0	
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: Crane Cr
 Watershed Number: 34
 Watershed size (acres): 3,258

Surveys And Investigations

Re-Survey: 07/12/2005, 07/28/1993, 08/04/1988, 08/27/1986, 09/06/1984, 08/02/1983.
Population Assessment: 08/04/2010, 08/04/2003, 09/14/1999, 06/02/1998, 08/21/1997, 07/29/1996, 07/31/1995,
 08/15/1994, 08/19/1992, 08/27/1990, 09/03/1985, 08/24/1983, 09/08/1982, 07/11/1955.
Special Assessment: 11/08/2006, 10/12/2004, 06/03/2004, 10/01/2003, 05/29/2003, 10/24/2002, 09/27/2001,
 09/25/2000, 10/11/1999, 10/13/1998, 05/28/1998, 09/25/1996, 08/14/1991, 08/02/1983.

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	08/02/2010	N/A	Surface	79.9	7.0
			3.0	79.9	6.8
			6.0	79.9	6.7
			9.0	79.9	6.4
			12.0	79.9	6.2
			15.0	79.9	6.4
			16.0	79.9	6.3
			17.0	79.9	6.3
			17.5	79.3	6.2
			18.0	79.3	2.6
			18.5	78.8	0.3
			21.0	77.5	0.1

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	08/02/2010	Surface	N/A	N/A	N/A	N/A	N/A

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Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 7
 First Set Date: 08/02/2010
 Last Lift Date: 08/06/2010
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 24*		
				25%	50%	75%
BLB	Black Bullhead	14	2.00	2.50	10.46	44.95
BLC	Black Crappie	402	57.43	2.50	6.91	16.50
BLG	Bluegill	704	100.57	N/A	N/A	N/A
GOS	Golden Shiner	5	0.71	0.25	0.50	1.54
LMB	Largemouth Bass	6	0.86	0.25	0.50	0.83
NOP	Northern Pike	29	4.14	1.50	3.75	7.29
PMK	Pumpkinseed	1	0.14	N/A	N/A	N/A
WAE	Walleye	14	2.00	1.17	2.82	6.33
YEB	Yellow Bullhead	115	16.43	0.50	2.00	7.51
YEP	Yellow Perch	6	0.86	2.00	10.50	27.94
Total Fish/Set:			185.14	* 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%
BLB	Black Bullhead	17.86	2.55	1.28	0.29	0.44	0.66
BLC	Black Crappie	66.03	9.43	0.16	0.15	0.20	0.26
BLG	Bluegill	116.03	16.58	0.16	N/A	N/A	N/A
GOS	Golden Shiner	0.96	0.14	0.19	0.10	0.10	0.13
LMB	Largemouth Bass	15.40	2.20	2.57	0.40	0.60	1.00
NOP	Northern Pike	81.47	11.64	2.81	2.02	2.68	3.50
PMK	Pumpkinseed	0.28	0.04	0.28	N/A	N/A	N/A
WAE	Walleye	53.63	7.66	3.83	1.20	1.81	2.69
YEB	Yellow Bullhead	130.55	18.65	1.14	0.46	0.61	0.82
YEP	Yellow Perch	0.55	0.08	0.09	0.10	0.13	0.18
Total Pounds Fish/Set:			68.97	* Quartiles for Mean Weight			

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POPULATION ASSESSMENT DATED 08/04/2010 FOR DOW NUMBER 81-0014-01

Net Catch Summary by Numbers for TN

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

Number of Sets: 12
 First Set Date: 08/02/2010
 Last Lift Date: 08/06/2010
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 24*		
				25%	50%	75%
BLB	Black Bullhead	2	0.17	0.71	3.75	25.65
BLC	Black Crappie	937	78.08	1.83	6.50	21.16
BLG	Bluegill	1,011	84.25	7.54	23.13	62.50
CAP	Common Carp	5	0.42	0.38	0.74	2.00
GOS	Golden Shiner	2	0.17	0.17	0.30	0.83
LMB	Largemouth Bass	17	1.42	0.20	0.33	0.67
NOP	Northern Pike	22	1.83	N/A	N/A	N/A
PMK	Pumpkinseed	30	2.50	0.74	2.00	4.24
WAE	Walleye	9	0.75	0.27	0.60	1.24
WTS	White Sucker	1	0.08	0.20	0.44	1.00
YEB	Yellow Bullhead	15	1.25	0.88	2.15	5.68
YEP	Yellow Perch	8	0.67	0.25	0.60	1.67
Total Fish/Set:			171.58	* 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%
BLB	Black Bullhead	2.33	0.19	1.17	0.28	0.43	0.62
BLC	Black Crappie	204.00	17.00	0.22	0.18	0.24	0.33
BLG	Bluegill	191.62	15.97	0.19	0.13	0.18	0.25
CAP	Common Carp	33.00	2.75	6.60	2.58	4.07	6.02
GOS	Golden Shiner	0.43	0.04	0.21	0.07	0.10	0.13
LMB	Largemouth Bass	40.38	3.37	2.38	0.15	0.31	0.91
NOP	Northern Pike	76.80	6.40	3.49	N/A	N/A	N/A
PMK	Pumpkinseed	7.59	0.63	0.25	0.10	0.13	0.18
WAE	Walleye	20.74	1.73	2.30	0.80	1.50	2.78
WTS	White Sucker	2.86	0.24	2.86	1.61	2.16	2.84
YEB	Yellow Bullhead	21.49	1.79	1.43	0.50	0.67	0.84
YEP	Yellow Perch	0.85	0.07	0.11	0.10	0.13	0.20
Total Pounds Fish/Set:			50.18	* Quartiles for Mean Weight			

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Electrofishing Catch Summary for EFB

Electrofishing, Backpack

Total run-time for all stations: 3333333:19:48
Total on-time for all stations: 01:00:30
First Sampling Date: 08/18/2010
Last Sampling Date: 08/30/2010
Daylight Sampling: Yes
Target Species: N/A

Abbr	Species	Summary By Numbers			Summary By Weight (pounds)			
		Total Number	Number per Hour		Total Weight	Lbs per Hour		Mean Weight
			Run-Time	On-Time		Run-Time	On-Time	
BLB	Black Bullhead	10	0.00	9.92	0.00	0.00	0.00	0.00
BLG	Bluegill	92	0.00	91.24	0.00	0.00	0.00	0.00
LMB	Largemouth Bass	20	0.00	19.83	0.00	0.00	0.00	0.00
PMK	Pumpkinseed	2	0.00	1.98	0.00	0.00	0.00	0.00
YEB	Yellow Bullhead	9	0.00	8.93	0.00	0.00	0.00	0.00
YEP	Yellow Perch	33	0.00	32.73	0.00	0.00	0.00	0.00

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Natural Reproduction Catch Summary for S18

Seining, 15 foot 1/8 in Beach Seine for IBI

Number of Hauls: 12
First Haul Date: 08/02/2010
Last Haul Date: 08/03/2010
Target Species: N/A

Abbr	Species	Age	Total Number	Number Measured	Mean Length (inches)	Length Range (inches)	
						Minimum	Maximum
BLC	Black Crappie	YOY	56	0	N/A	N/A	N/A
BLC	Black Crappie	≥ 1	5	0	N/A	N/A	N/A
BLG	Bluegill	YOY	870	0	N/A	N/A	N/A
BLG	Bluegill	≥ 1	59	0	N/A	N/A	N/A
GOS	Golden Shiner	YOY	21	0	N/A	N/A	N/A
LMB	Largemouth Bass	YOY	102	0	N/A	N/A	N/A
LMB	Largemouth Bass	≥ 1	1	0	N/A	N/A	N/A
PMK	Pumpkinseed	All	9	0	N/A	N/A	N/A
YEP	Yellow Perch	YOY	17	0	N/A	N/A	N/A
YEP	Yellow Perch	≥ 1	2	0	N/A	N/A	N/A

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Length Frequency Distribution For GN

Standard gill net sets

(Field work conducted between 08/02/2010 and 08/06/2010)

	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>GOS</u>	<u>LMB</u>	<u>NOP</u>	<u>PMK</u>	<u>WAE</u>	<u>YEB</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	1	-	-	-	-	-	-	-
4.00 - 4.49	-	-	1	-	-	-	-	-	-	-
4.50 - 4.99	-	-	3	-	-	-	-	-	-	-
5.00 - 5.49	-	1	57	-	-	-	-	-	-	-
5.50 - 5.99	-	6	270	-	-	-	-	-	1	3
6.00 - 6.49	-	88	253	-	-	-	-	-	-	-
6.50 - 6.99	-	197	96	-	-	-	1	-	-	3
7.00 - 7.49	-	95	14	-	-	-	-	-	-	-
7.50 - 7.99	-	12	9	3	-	-	-	-	-	-
8.00 - 8.49	-	-	-	2	-	-	-	-	1	-
8.50 - 8.99	-	4	-	-	-	-	-	-	1	-
9.00 - 9.49	-	-	-	-	-	-	-	-	1	-
9.50 - 9.99	-	-	-	-	-	-	-	-	-	-
10.00 - 10.49	-	-	-	-	-	-	-	-	1	-
10.50 - 10.99	-	-	-	-	-	-	-	-	8	-
11.00 - 11.49	-	-	-	-	-	-	-	-	8	-
11.50 - 11.99	1	-	-	-	-	-	-	-	8	-
12.00 - 12.99	6	-	-	-	-	-	2	47	-	-
13.00 - 13.99	6	-	-	-	1	-	-	29	-	-
14.00 - 14.99	1	-	-	-	1	-	-	7	-	-
15.00 - 15.99	-	-	-	-	-	1	-	2	-	-
16.00 - 16.99	-	-	-	-	-	1	-	1	-	-
17.00 - 17.99	-	-	-	-	3	-	1	-	-	-
18.00 - 18.99	-	-	-	-	-	3	-	-	-	-
19.00 - 19.99	-	-	-	-	1	1	-	-	-	-
20.00 - 20.99	-	-	-	-	-	2	-	-	-	-
21.00 - 21.99	-	-	-	-	-	1	-	-	-	-
22.00 - 22.99	-	-	-	-	-	6	-	3	-	-
23.00 - 23.99	-	-	-	-	-	1	-	2	-	-
24.00 - 24.99	-	-	-	-	-	3	-	3	-	-
25.00 - 25.99	-	-	-	-	-	3	-	2	-	-
26.00 - 26.99	-	-	-	-	-	1	-	1	-	-
27.00 - 27.99	-	-	-	-	-	3	-	-	-	-
28.00 - 28.99	-	-	-	-	-	1	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	-	-	-	-
30.00 - 30.99	-	-	-	-	-	1	-	-	-	-
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>GOS</u>	<u>LMB</u>	<u>NOP</u>	<u>PMK</u>	<u>WAE</u>	<u>YEB</u>	<u>YEP</u>
Total	14	403	704	5	6	29	1	14	115	6
Min. Length	11.81	5.12	3.74	7.72	13.43	15.71	6.81	12.44	5.59	5.71
Max. Length	14.02	8.82	7.87	8.27	19.09	32.24	6.81	26.46	16.14	6.54
Mean Length	13.03	6.74	6.04	7.98	16.48	23.39	6.81	22.01	12.55	6.12
# Measured	14	333	449	5	6	29	1	14	115	2
No Lengths for	0	69	255	0	0	0	0	0	0	4

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

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Length Frequency Distribution For TN

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

(Field work conducted between 08/02/2010 and 08/06/2010)

	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>GOS</u>	<u>LMB</u>	<u>NOP</u>	<u>PMK</u>	<u>WAE</u>	<u>WTS</u>	<u>YEB</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	4	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	2	-	-	-	-	-	-	-	-	-
4.00 - 4.49	-	-	1	-	-	-	-	2	-	-	-	-
4.50 - 4.99	-	-	5	-	-	-	-	2	-	-	-	-
5.00 - 5.49	-	-	9	-	-	-	-	-	-	-	-	1
5.50 - 5.99	-	3	199	-	-	-	-	2	-	-	-	4
6.00 - 6.49	-	17	402	-	-	-	-	2	-	-	-	2
6.50 - 6.99	-	166	357	-	-	-	-	14	-	-	-	-
7.00 - 7.49	-	421	22	-	-	-	-	8	-	-	-	1
7.50 - 7.99	-	247	8	-	-	-	-	-	-	-	-	-
8.00 - 8.49	-	50	2	-	2	-	-	-	-	-	-	-
8.50 - 8.99	-	17	-	-	-	-	-	-	-	-	-	-
9.00 - 9.49	-	12	-	-	-	-	-	-	-	-	-	-
9.50 - 9.99	-	5	-	-	-	-	-	-	-	-	-	-
10.00 - 10.49	-	-	-	-	-	-	-	-	-	-	-	-
10.50 - 10.99	-	-	-	-	-	-	-	-	-	-	-	-
11.00 - 11.49	-	-	-	-	-	2	-	-	-	-	-	-
11.50 - 11.99	1	-	-	-	-	-	-	-	-	-	1	-
12.00 - 12.99	-	-	-	-	-	-	-	-	3	-	2	-
13.00 - 13.99	1	-	-	-	-	1	-	-	1	-	7	-
14.00 - 14.99	-	-	-	-	-	2	-	-	-	-	4	-
15.00 - 15.99	-	-	-	-	-	3	-	-	-	-	1	-
16.00 - 16.99	-	-	-	-	-	2	3	-	-	-	-	-
17.00 - 17.99	-	-	-	-	-	2	2	-	-	-	-	-
18.00 - 18.99	-	-	-	-	-	3	1	-	1	1	-	-
19.00 - 19.99	-	-	-	1	-	2	-	-	-	-	-	-
20.00 - 20.99	-	-	-	1	-	-	-	-	-	-	-	-
21.00 - 21.99	-	-	-	-	-	-	-	-	1	-	-	-
22.00 - 22.99	-	-	-	-	-	-	1	-	1	-	-	-
23.00 - 23.99	-	-	-	-	-	-	2	-	1	-	-	-
24.00 - 24.99	-	-	-	1	-	-	1	-	-	-	-	-
25.00 - 25.99	-	-	-	-	-	-	2	-	1	-	-	-
26.00 - 26.99	-	-	-	1	-	-	2	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	1	-	-	-	-	-
28.00 - 28.99	-	-	-	1	-	-	1	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	2	-	-	-	-	-
30.00 - 30.99	-	-	-	-	-	-	1	-	-	-	-	-
31.00 - 31.99	-	-	-	-	-	-	2	-	-	-	-	-
32.00 - 32.99	-	-	-	-	-	-	-	-	-	-	-	-
33.00 - 33.99	-	-	-	-	-	-	1	-	-	-	-	-
34.00 - 34.99	-	-	-	-	-	-	-	-	-	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-	-	-	-

	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>GOS</u>	<u>LMB</u>	<u>NOP</u>	<u>PMK</u>	<u>WAE</u>	<u>WTS</u>	<u>YEB</u>	<u>YEP</u>
Total	2	938	1011	5	2	17	22	30	9	1	15	8
Min. Length	11.97	5.79	3.39	19.69	8.07	11.18	16.18	4.13	12.17	18.94	11.81	5.24
Max. Length	13.35	9.80	8.07	28.62	8.43	19.69	33.35	7.40	25.43	18.94	15.28	7.09
Mean Length	12.66	7.40	6.29	23.81	8.25	16.06	24.64	6.47	18.15	18.94	13.64	6.05
# Measured	2	301	295	5	2	17	22	30	9	1	15	8
No Lengths for	0	636	716	0	0	0	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

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Length At Capture With Last Incremental Length

(Body-Scale constant, all lengths, and all length increments in inches)

Species: Black Crappie
Body-Scale Constant: 0.79
Total Sample Size: 32

Length at Capture in 2010 for Each Age Class, with Incremental Lengths for 2010

Year Class	Age	Sample Size	Length At Capture			Standard Error	Length Increments	
			Average Length	Maximum Length	Minimum Length		Increment	Standard Error
2007	3	12	7.73	8.82	6.81	0.184	1.00	0.067
2006	4	14	8.02	9.17	6.93	0.196	0.75	0.095
2005	5	6	8.43	9.80	6.93	0.414	0.59	0.078

Species: Bluegill
Body-Scale Constant: 0.79
Total Sample Size: 24

Length at Capture in 2010 for Each Age Class, with Incremental Lengths for 2010

Year Class	Age	Sample Size	Length At Capture			Standard Error	Length Increments	
			Average Length	Maximum Length	Minimum Length		Increment	Standard Error
2008	2	4	4.49	6.06	3.74	0.544	0.99	0.028
2007	3	6	5.28	5.59	5.04	0.094	0.59	0.099
2006	4	11	5.53	6.10	4.92	0.134	0.73	0.120
2005	5	3	6.15	6.38	5.91	0.137	0.55	0.075

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Back-Calculated Lengths for Each Age Class and Average Annual Increments of Back-Calculated Lengths

Species: Black Crappie

Gear Type: Combined Gear Types (GN and TN)

Class	Age	N	1	2	3	4	5
2007	3	12	3.37	5.48	6.73	-	-
			3.37	2.11	1.26	-	-
2006	4	14	3.27	5.22	6.37	7.27	-
			3.27	1.95	1.16	0.89	-
2005	5	6	3.54	5.84	6.73	7.32	7.83
			3.54	2.30	0.90	0.59	0.52
Mean Length			3.36	5.43	6.57	7.28	7.83
Mean Increment			3.36	2.07	1.14	0.80	0.52
Total N			32	32	32	20	6

Species: Bluegill

Gear Type: Combined Gear Types (GN and TN)

Class	Age	N	1	2	3	4	5
2008	2	4	2.40	3.50	-	-	-
			2.40	1.10	-	-	-
2007	3	6	2.31	3.72	4.69	-	-
			2.31	1.41	0.97	-	-
2006	4	11	2.06	3.21	4.05	4.80	-
			2.06	1.15	0.84	0.75	-
2005	5	3	2.17	3.39	4.23	4.97	5.60
			2.17	1.22	0.84	0.73	0.63
Mean Length			2.19	3.41	4.27	4.83	5.60
Mean Increment			2.19	1.22	0.88	0.74	0.63
Total N			24	24	20	14	3

STANDARD LAKE SURVEY REPORT
POPULATION ASSESSMENT DATED 08/04/2010 FOR DOW NUMBER 81-0014-01

Age Class Frequency Distribution

Species and Gear (1)	Number of Fish (2)			Number of Fish in Year Class ('yy) and Age Class															
	Aged	Keyed	Unaged	'10 0	'09 1	'08 2	'07 3	'06 4	'05 5	'04 6	'03 7	'02 8	'01 9	'00 10	'99 11	'98 12	'97 13	'96 14	<'96 15+
Black Crappie																			
GN	7	289	106	0	0	0	115	115	66	0	0	0	0	0	0	0	0	0	0
TN	25	727	185	0	0	0	351	334	67	0	0	0	0	0	0	0	0	0	0
Totals:	32	1016	291	0	0	0	466	449	133	0	0	0	0	0	0	0	0	0	0
Bluegill																			
GN	22	563	119	0	0	66	74	280	165	0	0	0	0	0	0	0	0	0	0
TN	2	9	1000	0	0	2	0	9	0	0	0	0	0	0	0	0	0	0	0
Totals:	24	572	1119	0	0	68	74	289	165	0	0	0	0	0	0	0	0	0	0

(1) Key to sampling gear abbreviations:

- GN = Standard gill net sets
- TN = Standard 3/4-in mesh, double frame trap net sets

(2) Notes:

- Number of Fish Aged: Fish that were aged from bony parts.
 - Number of Fish Keyed: Fish assigned an age with an age-length key or by expansion of mesh or station age distributions.
 - Number of Fish Unaged: Fish that were not aged and were not assigned an age.
-

STANDARD LAKE SURVEY REPORT
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Discussion

Clear Lake in Waseca County is a 652 acre lake located in the city of Waseca. DNR-owned public accesses are located on the southeast and northwest corners of the lake, both off Clear Lake Drive. Eurasian watermilfoil was found in the lake in 2005. Boaters should be sure to remove all aquatic vegetation from boats, trailers, and equipment and drain all water when leaving Clear Lake to prevent the spread of Eurasian watermilfoil to other lakes. Clear Lake was surveyed the week of August 4, 2010 to monitor the fish community.

Bluegills have been notoriously small on Clear Lake in recent years and the 2010 assessment reflected this fact. Bluegills were netted at a rate of 101 fish per gill net and 84 fish per trap net lift. Average bluegill size amongst all gears was 6.2 inches, and 92 percent of all bluegill sampled were tightly grouped between 5.5 and 7 inches.

Black crappies run small in Clear Lake but are abundant. Crappies averaged 78 fish per trap net and 57 fish per gill net lift. Average black crappie size amongst all gears was 7.2 inches. The largest crappie was 9.8 inches.

Northern pike have been aggressively managed during the past decade. Northern pike have been stocked annually in various life stages from fry to adults. Local anglers and darkhouse spearers target pike on Clear Lake throughout the year. Pike were netted at a rate of 4.1 fish per gill net and 1.8 fish per trap net lift.

Walleye maintain a low level of abundance in Clear Lake. Walleye were gill netted at a rate of two fish per gill net lift. 483 adult walleye weighing 1,038 pounds were stocked in the fall of 2008. The 2008 stocked adult walleye averaged over two pounds, and anecdotal angler reports the following winter suggested good walleye fishing. Current walleye stocking plans call for 600 pounds of fingerlings to be stocked in even years.

Yellow bullhead made a strong showing in the 2010 assessment. Yellow bullheads increased from 5.6 fish per gill net lift in 2005 to 16.4 fish in 2010. Yellow bullheads were large, averaging 12.5 inches.

A special regulation is in place for largemouth bass. All largemouth bass caught must be immediately released to the water. The regulation is intended to increase average size and improve size structure of bass. The catch and release only regulation also applies to smallmouth bass, although there are none in the lake. 23 largemouth bass were caught in the 2010 assessment with nets. The preferred method of surveying bass is with the use of electrofishing equipment, but it was not available at the time of the 2010 assessment. 2010 sampled largemouth bass ranged from 11 to 20 inches.

Also observed in the survey were black bullhead, common carp, golden shiner, pumpkinseed, white sucker, and yellow perch.

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 Clear 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 08/04/2010 FOR DOW NUMBER 81-0014-01

Status Of The Fishery

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POPULATION ASSESSMENT DATED 08/04/2010 FOR DOW NUMBER 81-0014-01

Approval Dates And Notices

Date Approved By Waterville Area Fisheries Supervisor: 04/04/2011

Date Approved By Southern Region Fisheries Manager: _____



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Standard Lake Survey Report revision: 04/05/2011-RJE. Data Date: 04/07/2011 at 3:52 pm .

REPORT OVERVIEW - FOR OFFICE USE ONLY

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

Lake Name: Clear

Survey Type: Population Assessment

DOW Number: 81-0014-01

Survey ID Date: 08/04/2010

Beach Seine (1/8 inch 15 foot), Backpack Electrofishing

Survey Status: Area Signed

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

1. Current Water Level
2. Benchmark And Gauge Descriptions / Locations
3. Water Level History*
4. Water Level History - Readings*
5. Water Level History - Station Summary*
6. Lake Inlets
7. Additional Inlet Information
8. Lake Outlets
9. Additional Outlet Information
10. Water Control Structure (Dam)
11. Surrounding Watershed Characteristics, Shoreline Characteristics, and Riparian Landscape Observations
12. Resorts And Campgrounds
13. Fish Spawning Conditions
14. Erosion And Pollution
15. Fish Diseases And Parasites
16. Aquatic Vegetation And Shoalwater Substrates
17. Laboratory Analysis Of Water Chemistry
18. Other Species (added to revision 03/24/2009)
19. 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.

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 04/07/2011 may not be reflected in the Distribution tables until 04/08/2011.