



Minnesota Department of Natural Resources
 Fisheries Management
 STANDARD LAKE SURVEY REPORT



Lake Name: Circle
 DOW Number: 66-0027-00

Survey Type: Population Assessment
 Survey ID Date: 06/25/2007

Lake Identification

Alternate Lake Name: N/A
 Primary Lake Class ID: 43
 DNR Sounding Map Number: B0448
 Alternate Lake Class ID: 43

Lake Location

Primary County: Rice
 Nearest Town: Lonsdale

Legal Descriptions

Lake Center: Township - 111N Range - 21W Section - 16
 PLS Section Lake Center: 4046

All Legal Descriptions:

Rice County: Township - 111N Range - 21W Sections - 15, 16, 17, 21, 22

Area Office

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

Lake Access

(Information based on Re-Survey dated 06/21/1993)

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): 624.00	GIS Shoreline Length (miles): 9.52
GIS Lake Area (acres): 837.56	Maximum Fetch (miles): 1.90
DOW Lake Area (acres): 976.00	Fetch Orientation (degrees): 292
Littoral Area (acres): 624.00	USGS Quad Map Number: U16a
Area in MN (acres): 837.56	USGS Quad 24K GIS Index: 4032
Maximum Depth (feet): 14.0	
Mean Depth (feet): N/A	

Watershed Characteristics

Major Watershed

Name: Cannon River
 Watershed Number: 39
 Watershed size (acres): 941,122

Minor Watershed

Name: Wolf Cr
 Watershed Number: 76
 Watershed size (acres): 8,544

Surveys And Investigations

Initial Survey: 08/03/1983.
 Re-Survey: 06/18/2001, 06/21/1993.

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Surveys And Investigations (Continued)

Population Assessment: 06/25/2007, 07/20/2004, 06/16/1999, 07/27/1988, 07/30/1986.

Special Assessment: 11/17/1998.

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POPULATION ASSESSMENT DATED 06/25/2007 FOR DOW NUMBER 66-0027-00

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 3
 First Set Date: 06/25/2007
 Last Lift Date: 06/28/2007
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BLB	Black Bullhead	32	10.67	30.34	75.58	150.62
BLC	Black Crappie	5	1.67	1.41	3.71	13.75
BLG	Bluegill	6	2.00	N/A	N/A	N/A
CAP	Common Carp	143	47.67	1.00	3.33	13.75
FRD	Freshwater Drum	3	1.00	0.50	2.56	8.33
LMB	Largemouth Bass	3	1.00	0.20	0.50	1.50
NOP	Northern Pike	18	6.00	1.08	3.00	8.00
WAE	Walleye	65	21.67	2.28	6.83	18.06
WTS	White Sucker	1	0.33	0.81	2.33	6.50
YEP	Yellow Perch	20	6.67	2.65	8.00	25.00
Total Fish/Set:			98.67	* 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 43*		
					25%	50%	75%
BLB	Black Bullhead	10.81	3.60	0.34	0.17	0.26	0.39
BLC	Black Crappie	1.52	0.51	0.30	0.16	0.25	0.35
BLG	Bluegill	1.40	0.47	0.23	N/A	N/A	N/A
CAP	Common Carp	153.22	51.07	1.07	0.81	1.98	3.70
FRD	Freshwater Drum	1.31	0.44	0.44	0.40	0.82	1.67
LMB	Largemouth Bass	1.98	0.66	0.66	0.60	1.18	1.37
NOP	Northern Pike	32.17	10.72	1.79	1.82	2.50	3.35
WAE	Walleye	51.97	17.32	0.80	1.01	1.53	2.30
WTS	White Sucker	2.90	0.97	2.90	0.93	1.58	2.02
YEP	Yellow Perch	5.05	1.68	0.25	0.13	0.21	0.31
Total Pounds Fish/Set:			87.45	* Quartiles for Mean Weight			

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POPULATION ASSESSMENT DATED 06/25/2007 FOR DOW NUMBER 66-0027-00

Net Catch Summary by Numbers for TN

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

Number of Sets: 9
 First Set Date: 06/25/2007
 Last Lift Date: 06/28/2007
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BIB	Bigmouth Buffalo	2	0.22	0.17	0.38	1.04
BLB	Black Bullhead	194	21.56	11.50	42.00	132.61
BLC	Black Crappie	8	0.89	1.17	4.88	20.50
BLG	Bluegill	90	10.00	1.17	3.89	20.00
BOF	Bowfin (Dogfish)	2	0.22	0.33	0.50	0.92
CAP	Common Carp	466	51.78	1.00	2.44	5.51
FRD	Freshwater Drum	2	0.22	0.23	0.92	3.25
GOS	Golden Shiner	1	0.11	0.22	0.50	1.10
GSF	Green Sunfish	1	0.11	0.15	0.25	1.94
LMB	Largemouth Bass	2	0.22	0.23	0.38	0.67
NOP	Northern Pike	12	1.33	N/A	N/A	N/A
WAE	Walleye	4	0.44	0.50	1.33	2.95
WTS	White Sucker	3	0.33	0.34	0.88	2.58
YEB	Yellow Bullhead	3	0.33	0.50	1.13	2.50
Total Fish/Set:			87.78	* 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	13.59	1.51	6.80	2.56	3.75	5.83
BLB	Black Bullhead	62.81	6.98	0.32	0.18	0.28	0.40
BLC	Black Crappie	4.43	0.49	0.55	0.22	0.34	0.50
BLG	Bluegill	33.86	3.76	0.38	0.13	0.24	0.39
BOF	Bowfin (Dogfish)	8.41	0.93	4.20	2.71	3.31	3.78
CAP	Common Carp	813.07	90.34	1.74	1.42	2.92	4.58
FRD	Freshwater Drum	1.49	0.17	0.74	0.28	0.60	0.95
GOS	Golden Shiner	0.06	0.01	0.06	0.06	0.10	0.10
GSF	Green Sunfish	0.00	0.00	0.00	0.09	0.11	0.24
LMB	Largemouth Bass	3.21	0.36	1.61	0.30	0.85	1.53
NOP	Northern Pike	25.23	2.80	2.10	N/A	N/A	N/A
WAE	Walleye	9.42	1.05	2.35	0.82	1.44	2.28
WTS	White Sucker	5.49	0.61	1.83	1.05	1.47	2.04
YEB	Yellow Bullhead	1.35	0.15	0.45	0.31	0.48	0.67
Total Pounds Fish/Set:			109.16	* Quartiles for Mean Weight			

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POPULATION ASSESSMENT DATED 06/25/2007 FOR DOW NUMBER 66-0027-00

Length Frequency Distribution For GN

Standard gill net sets

(Field work conducted between 06/25/2007 and 06/28/2007)

	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>FRD</u>	<u>LMB</u>	<u>NOP</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-	-
3.50 - 3.99	1	-	-	-	-	-	-	-	-	-
4.00 - 4.49	-	-	-	-	-	-	-	-	-	-
4.50 - 4.99	1	-	-	-	-	-	-	-	-	-
5.00 - 5.49	-	1	-	-	-	-	-	-	-	1
5.50 - 5.99	-	1	-	-	-	-	-	-	-	2
6.00 - 6.49	-	1	4	-	-	-	-	-	-	4
6.50 - 6.99	-	-	2	-	-	-	-	-	-	2
7.00 - 7.49	4	-	-	-	-	-	-	-	-	-
7.50 - 7.99	7	1	-	-	-	-	-	-	-	-
8.00 - 8.49	10	-	-	-	-	-	-	-	-	3
8.50 - 8.99	3	-	-	-	1	-	-	-	-	3
9.00 - 9.49	-	-	-	-	-	-	-	3	-	3
9.50 - 9.99	2	-	-	-	-	-	-	3	-	-
10.00 - 10.49	1	-	-	-	1	1	-	2	-	1
10.50 - 10.99	1	-	-	-	-	1	-	-	-	1
11.00 - 11.49	2	-	-	3	1	1	-	-	-	-
11.50 - 11.99	-	1	-	1	-	-	-	3	-	-
12.00 - 12.99	-	-	-	23	-	-	-	27	-	-
13.00 - 13.99	-	-	-	50	-	-	1	10	-	-
14.00 - 14.99	-	-	-	31	-	-	-	9	-	-
15.00 - 15.99	-	-	-	13	-	-	-	5	-	-
16.00 - 16.99	-	-	-	-	-	-	3	2	-	-
17.00 - 17.99	-	-	-	-	-	-	1	-	-	-
18.00 - 18.99	-	-	-	-	-	-	3	1	-	-
19.00 - 19.99	-	-	-	-	-	-	2	-	1	-
20.00 - 20.99	-	-	-	-	-	-	2	-	-	-
21.00 - 21.99	-	-	-	-	-	-	2	-	-	-
22.00 - 22.99	-	-	-	-	-	-	3	-	-	-
23.00 - 23.99	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-
Total	32	5	6	121	3	3	18	65	1	20
Min. Length	3.74	5.12	6.02	11.02	8.86	10.43	13.98	9.17	19.02	5.39
Max. Length	11.18	11.54	6.97	15.94	11.42	11.02	25.98	18.11	19.02	10.94
Mean Length	8.28	7.31	6.38	13.71	10.17	10.67	19.72	12.99	19.02	7.75
# Measured	32	5	6	110	3	3	18	65	1	20
No Lengths for	0	0	0	33	0	0	0	0	0	0

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POPULATION ASSESSMENT DATED 06/25/2007 FOR DOW NUMBER 66-0027-00

Length Frequency Distribution For TN

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

(Field work conducted between 06/25/2007 and 06/28/2007)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>BOF</u>	<u>CAP</u>	<u>FRD</u>	<u>GOS</u>	<u>LMB</u>	<u>NOP</u>	<u>WAE</u>	<u>WTS</u>	<u>YEB</u>
< 3.00	-	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-	-	-	-	-	-
4.00 - 4.49	-	1	-	1	-	-	-	-	-	-	-	-	-
4.50 - 4.99	-	2	-	-	-	-	-	-	-	-	-	-	-
5.00 - 5.49	-	2	-	-	-	-	-	1	-	-	-	-	-
5.50 - 5.99	-	-	-	11	-	-	-	-	-	-	-	-	-
6.00 - 6.49	-	2	-	9	-	-	-	-	-	-	-	-	-
6.50 - 6.99	-	1	-	6	-	-	-	-	-	-	-	-	-
7.00 - 7.49	-	13	-	5	-	-	-	-	-	-	-	-	-
7.50 - 7.99	-	54	1	17	-	-	-	-	-	-	-	-	1
8.00 - 8.49	-	57	1	38	-	3	-	-	-	-	-	-	-
8.50 - 8.99	-	30	1	2	-	-	-	-	-	-	-	-	1
9.00 - 9.49	-	10	-	-	-	-	-	-	-	-	-	-	-
9.50 - 9.99	-	3	1	-	-	3	-	-	-	-	-	-	-
10.00 - 10.49	-	9	1	-	-	3	-	-	-	-	-	-	-
10.50 - 10.99	-	7	1	-	-	3	-	-	-	-	-	-	-
11.00 - 11.49	-	1	2	-	-	-	-	-	-	-	-	-	1
11.50 - 11.99	-	1	-	-	-	12	1	-	1	-	-	-	-
12.00 - 12.99	-	-	-	-	-	10	1	-	-	-	-	-	-
13.00 - 13.99	-	-	-	-	-	84	-	-	-	-	1	-	-
14.00 - 14.99	-	-	-	-	-	138	-	-	-	-	-	-	-
15.00 - 15.99	-	-	-	-	-	104	-	-	-	-	-	1	-
16.00 - 16.99	-	-	-	-	-	72	-	-	1	-	2	1	-
17.00 - 17.99	-	-	-	-	-	28	-	-	-	-	-	1	-
18.00 - 18.99	-	-	-	-	-	3	-	-	-	-	-	-	-
19.00 - 19.99	-	-	-	-	-	-	-	-	-	2	-	-	-
20.00 - 20.99	1	-	-	-	-	-	-	-	-	4	-	-	-
21.00 - 21.99	-	-	-	-	1	-	-	-	-	3	-	-	-
22.00 - 22.99	-	-	-	-	-	-	-	-	-	1	-	-	-
23.00 - 23.99	-	-	-	-	-	-	-	-	-	-	-	-	-
24.00 - 24.99	1	-	-	-	1	-	-	-	-	1	1	-	-
25.00 - 25.99	-	-	-	-	-	-	-	-	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	-	-	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	6	-	-	-	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	-	-	-	-	-	-	-	-	-	-	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-	-	-	-	-
	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>BOF</u>	<u>CAP</u>	<u>FRD</u>	<u>GOS</u>	<u>LMB</u>	<u>NOP</u>	<u>WAE</u>	<u>WTS</u>	<u>YEB</u>
Total	2	193	8	89	2	469	2	1	2	12	4	3	3
Min. Length	20.00	4.33	7.64	4.49	21.10	8.11	11.65	5.47	11.61	19.45	13.74	15.04	7.80
Max. Length	24.80	11.81	11.46	8.66	24.84	27.72	12.60	5.47	16.57	27.17	24.88	17.40	11.10
Mean Length	22.40	8.20	9.69	7.21	22.97	14.92	12.13	5.47	14.09	21.67	17.90	16.31	9.23
# Measured	2	122	8	56	2	94	2	1	2	12	4	3	3
No Lengths for	0	72	0	34	0	372	0	0	0	0	0	0	0

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POPULATION ASSESSMENT DATED 06/25/2007 FOR DOW NUMBER 66-0027-00

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	'07 0	'06 1	'05 2	'04 3	'03 4	'02 5	'01 6	'00 7	'99 8	'98 9	'97 10	'96 11	'95 12	'94 13	'93 14	<'93 15+
Black Crappie																			
GN	5	0	0	0	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0
TN	8	0	0	0	0	2	3	0	3	0	0	0	0	0	0	0	0	0	0
Totals:	13	0	0	0	2	3	4	0	4	0	0	0	0	0	0	0	0	0	0
Bluegill																			
GN	5	1	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0
TN	32	58	0	0	1	14	32	38	5	0	0	0	0	0	0	0	0	0	0
Totals:	37	59	0	0	1	18	34	38	5	0	0	0	0	0	0	0	0	0	0
Largemouth Bass																			
GN	3	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0
TN	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Totals:	4	0	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0
Northern Pike																			
GN	16	2	0	0	4	9	4	1	0	0	0	0	0	0	0	0	0	0	0
TN	11	1	0	0	0	5	7	0	0	0	0	0	0	0	0	0	0	0	0
Totals:	27	3	0	0	4	14	11	1	0	0	0	0	0	0	0	0	0	0	0
Walleye																			
GN	45	20	0	0	8	11	46	0	0	0	0	0	0	0	0	0	0	0	0
TN	3	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Totals:	48	20	1	0	8	11	49	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Perch																			
GN	20	0	0	0	5	6	4	5	0	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
POPULATION ASSESSMENT DATED 06/25/2007 FOR DOW NUMBER 66-0027-00

Survey Crew Notes

Surveyed by Dave Weitzel and Jason Rhoten. Report by Dave Weitzel and Marc Bacigalupi.

Area Signed by user 'huvalian' on 04/01/2008

Discussion

A population assessment was carried out in Circle Lake in June, 2007 to monitor the fish community following a 2004 winterkill event. Walleyes were abundant at over 21/gill net; the modal size was 12 - 13 inches. Northern pike were caught at 6/gill net; most of the fish sampled were 16 to 23 inches long. Yellow perch were caught in moderate abundance at 6.7/gill net, close to the median for this lake class, although more than half of the fish observed were 8 inches long or greater. Bluegills were caught at 10/trap net, well above the median for this lake class and close to half of the fish sampled were greater than 8 inches long. Carp were very abundant at 47.7/gill net and 51.8/trap net. The length distribution of carp was unimodal with over 80% of the sample consisting of fish between 13 and 17 inches long.

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Status Of The Fishery

Circle lake was surveyed in late June of 2007 to assess the status of the fish community. The lake continues to provide a variety of good fishing opportunities. Walleye remain abundant following fry stocking after the 2003-04 winterkill event. Gill net catches were high at 21.6/net and the mean size was 13 inches, although fish up to 18 inches were common. Northern pike were also common in the gill net at 6/net. Mean size was relatively small, however, at 19.7 inches. Yellow perch were sampled in modest numbers but the size distribution was good and included individuals up to 10.9 inches. Bluegill were the dominant panfish in the trap net and occurred at relatively low density (10/trapnet). Size was excellent however with many individuals exceeding 8 inches. Black crappie were sampled in low densities but size was good with fish up to 11.5 inches occurring. Common carp were extremely abundant in both the gill net and trap net catches and may have a negative effect on fish community structure in the future.

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POPULATION ASSESSMENT DATED 06/25/2007 FOR DOW NUMBER 66-0027-00

Approval Dates And Notices

H. Valiant

Date Approved By Waterville Area Fisheries Supervisor: 04/15/2008

Date Approved By Southern Region Fisheries Manager: *je*

4/30/2008

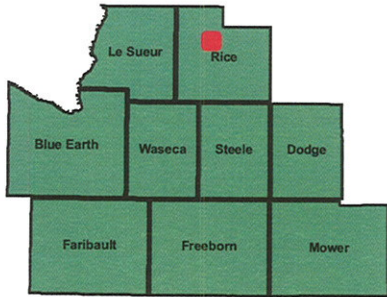


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(Standard Lake Survey Report revision: 04/09/2008-RJE. Printed on 04/15/2008 at 8:41:03AM)

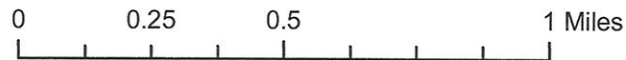
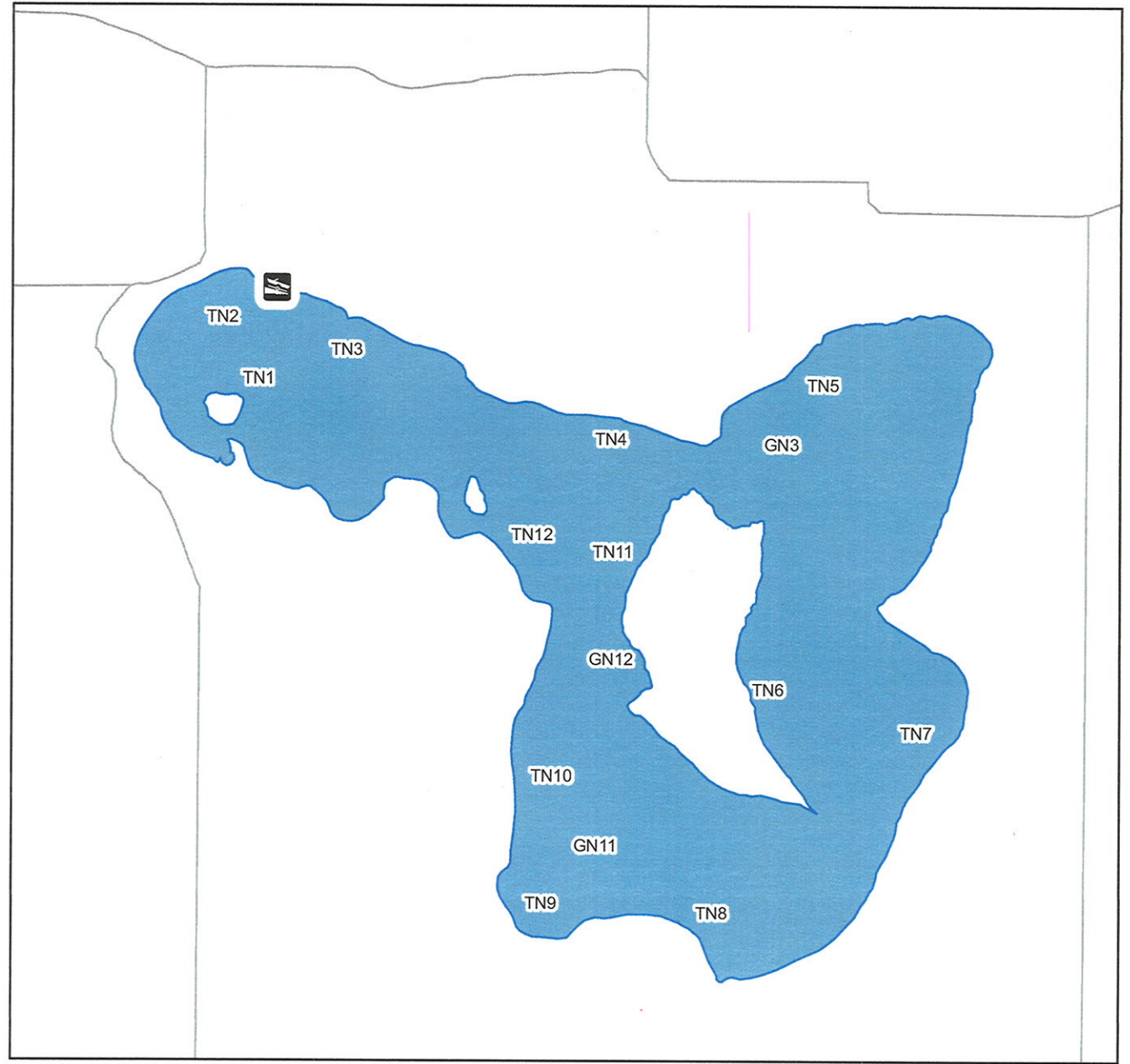
Circle Lake (660027) 2007 Sample Sites



Waterville Fisheries Area

Legend

-  GILLNET
-  TRAPNET
-  TRAP NET (NOT SET)
-  Water Access Site



Created by
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2007