Minnesota Department of Natural Resources

Fisheries Management

STANDARD LAKE SURVEY REPORT

Lake Name: Cannon **Survey Type: Re-Survey**

DOW Number: 66-0008-00 **Survey ID Date: 08/10/2009**

Lake Identification

Alternate Lake Name: N/A
Primary Lake Class ID: 41
DNR Sounding Map Number: C0504
Alternate Lake Class ID: 41

Lake Location

Primary County: Rice
Nearest Town: Faribault

Legal Descriptions

Lake Center: Township - 109N Range - 21W Section - 9
PLS Section Lake Center: 10902109

All Legal Descriptions:

Rice County: Township - 109N Range - 21W Sections - 3, 4, 5, 7, 8, 9, 10, 17, 18
Township - 109N Range - 22W Section - 13

Area Office

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

Lake Access

Station ID	Ownership	Public Use	Type	Location / Comments
AC - 1	County	Open to Public use	Asphalt	Shager Memorial Park.

Lake Characteristics

Lake Area (planimetered acres): 1591.00
GIS Lake Area (acres): 1593.22
DOW Lake Area (acres): 1476.00
Littoral Area (acres): 1591.00
Area in MN (acres): 1593.22
Maximum Depth (feet): 15.0
Mean Depth (feet): N/A
GIS Shoreline Length (miles): 11.98
Maximum Fetch (miles): 4.00
Fetch Orientation (degrees): N/A
USGS Quad Map Number: U16d
USGS Quad 24K GIS Index: 4132

Watershed Characteristics

Major Watershed

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

Minor Watershed

Name: Cannon L
Watershed Number: 89
Watershed size (acres): 9,184

Surveys And Investigations

Initial Survey: 06/16/1958.

Surveys And Investigations (Continued)

Re-Survey: 08/10/2009, 08/12/2004, 08/19/1999, 08/08/1994, 08/28/1989, 08/20/1984, 07/10/1972.
Population Assessment: 07/08/1981.
Special Assessment: 10/10/2006, 10/03/2005, 10/05/2004, 05/27/2004, 10/15/2003, 10/17/2002, 11/05/2001, 11/14/2000, 09/22/1999, 10/20/1998, 10/01/1997, 09/18/1996, 08/25/1969, 07/11/1955.
Natural Reproduction Check: 10/22/2007.

Lake Inlets

(Field work conducted on 08/10/2009)

Station ID	Name	Kittle Number	Origin and Cover Type (Primary and Secondary)	Surface Temp (°F)
IN - 1	Cannon River	M-48	Lake Crops (P) and Hardwoods (S)	N/A
IN - 2	McKenzie Creek	N/A	Ditch Crops (P) and Grassland (S)	N/A
IN - 3	Northwest Tile Inlet	N/A	Marsh Marshland (P) and Crops (S)	N/A
IN - 4	Southwest Tile Inlet	N/A	Tile Crops (P) and Hardwoods (S)	N/A

Additional Inlet Information

Station ID	Mean Width (feet)	Mean Depth (feet)	Discharge (CFS)	Mean Velocity (FPS)	Barriers to Fish Movement	Known Fish Spawning Runs
IN - 1	120.00	1.50	150.0	0.00	No	N/A
IN - 2	1.00	15.00	1.0	0.00	No	N/A
IN - 3	20.00	0.50	0.0	0.00	No	N/A
IN - 4	8.00	0.25	0.0	0.00	No	N/A

Lake Outlets

(Field work conducted on 08/10/2009)

Station ID	Name	Kittle Number	Tributary To
OUT - 1	Cannon River	M-48	Wells Lake

Additional Outlet Information

Station ID	Mean Width (feet)	Mean Depth (feet)	Flow (CFS)	Mean Velocity (FPS)	Barriers to Fish Movement	Water Control Structure
OUT - 1	80.00	4.00	1.00	0.0	No; Bridge	Roadway

Surrounding Watershed Characteristics

Use / Coverage	% Use	Relief	Location / Comments
Agricultural	67	Flat	N/A
Grassland	14	Rolling	N/A
Forested	10	Rolling	N/A
Marsh	5	Flat	N/A
Municipal	4	Flat	N/A

Shoreline Characteristics

Use / Coverage	% Use	Relief	Location / Comments
Grassland	28	Flat	N/A
Agricultural	19	Flat	N/A
Forested	18	Gradual	N/A
Marsh	16	Flat	N/A
Residential	13	Flat	N/A
Municipal	6	Flat	N/A

Riparian Landscape Observations

Soil Types (Primary and Secondary): Glacial Till (P), Loam (S)
Soil Comments: N/A
Number of Homes/Cabins: 178
Comments About Shoreline Development: N/A

Fish Spawning Conditions

Station ID	Species Name	Rating	Location / Comments
SP - 1	black crappie	Poor	Little vegetation available, no protected bays, windswept.
	bluegill	Fair	Some vegetation on the west end of the lake, gravel and sand bottoms available.
	largemouth bass	Poor	Little if any coarse woody cover, little vegetation.
	northern pike	Poor	Few connected wetland or marsh areas outside of the Cannon River.
	walleye	Poor	Silty bottom. While Cannon is windswept, it has too poor of water quality with too much silt for WAE reproduction.
	white sucker	Good	Makes spawning runs up the Cannon River in the spring.
	yellow perch	Fair	Little vegetation available except west end and Cannon River inlet.

Fish Diseases And Parasites

	Number of Fish Examined			Examination Results	
Species Examined	Internally	Externally	In Lab	Condition Observed	Number of Fish
bluegill	-	-	-	Fish Lice	1
northern pike	-	-	-	Neascus (Black Spot)	4
walleye	-	-	-	Lymphocystis	1

Aquatic Vegetation And Shoalwater Substrates

Abundance Of Aquatic Plants (In Transects)

Aquatic Vegetation And Shoalwater Substrates (Continued)

Abundance Of Aquatic Plants (In Transects) (Continued)

Common Name	Type	Frequency of Occurrence (%)	Abundance Rating	Mean Abundance (%)
Blue-green algae	-	3	Rare	2.1
Canada Waterweed	Submergent	8	Rare	3.8
Cattail Group	Emergent	3	Rare	1.3
Coontail / Common hornwort	Submergent	30	Rare	22.5
Filamentous algae	-	5	Rare	0.8
Floating-leaf Pondweed	Floating-leaf	5	Rare	2.5
Lesser Duckweed	Free-Floating	33	Rare	24.6
Narrow-leaf Pondweed Group	Submergent	13	Rare	3.8
Water (wild) Celery	Submergent	3	Rare	1.3
Water Lotus	Floating-leaf	3	Rare	2.1
Water Star-grass	Submergent	5	Rare	2.5

(Floating-Leaf and wetland species may be tallied with emergent species)

Shoalwater Substrates (In Transects)

Common Name	Frequency of Occurrence (%)	Abundance Rating	Mean Abundance (%)
Gravel	35	Rare	28.3
Muck	28	Rare	22.9
Sand	68	Common	56.3
Silt	40	Rare	30.8

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	08/10/2009	N/A	Surface	75.9	10.0
			3.0	75.7	9.0
			6.0	75.2	6.5
			9.0	74.7	1.6
			10.0	74.5	0.6

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	08/10/2009	Surface	N/A	N\A	N/A	N/A	N/A

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 10
First Set Date: 08/10/2009
Last Lift Date: 08/14/2009
Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 41* 25%	50%	75%
BIB	Bigmouth Buffalo	13	1.30	0.33	1.00	6.11
BLB	Black Bullhead	32	3.20	4.56	23.42	83.00
BLC	Black Crappie	3	0.30	0.83	2.63	11.10
BLG	Bluegill	6	0.60	N/A	N/A	N/A
BOF	Bowfin (Dogfish)	1	0.10	0.10	0.17	1.00
CCF	Channel Catfish	14	1.40	N/A	N/A	N/A
CAP	Common Carp	31	3.10	0.52	1.80	9.13
FRD	Freshwater Drum	8	0.80	3.64	10.25	24.24
NOP	Northern Pike	15	1.50	1.20	3.50	7.79
QBS	Quillback	1	0.10	N/A	N/A	N/A
WAE	Walleye	73	7.30	3.22	7.67	15.33
WHB	White Bass	154	15.40	0.75	1.67	7.15
WTS	White Sucker	209	20.90	0.75	2.00	5.88
YEB	Yellow Bullhead	4	0.40	0.33	1.17	3.58
YEP	Yellow Perch	301	30.10	3.00	8.94	22.50
	Total Fish/Set:		86.50	* 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 41* 25%	50%	75%
BIB	Bigmouth Buffalo	15.99	1.60	1.23	N/A	N/A	N/A
BLB	Black Bullhead	16.93	1.69	0.53	0.21	0.38	0.60
BLC	Black Crappie	1.00	0.10	0.33	0.17	0.25	0.37
BLG	Bluegill	1.10	0.11	0.18	N/A	N/A	N/A
BOF	Bowfin (Dogfish)	3.32	0.33	3.32	3.33	4.35	5.50
CCF	Channel Catfish	69.25	6.93	4.95	N/A	N/A	N/A
CAP	Common Carp	92.74	9.27	2.99	1.00	2.39	4.88
FRD	Freshwater Drum	3.89	0.39	0.49	0.25	0.45	1.00
NOP	Northern Pike	59.62	5.96	3.97	1.53	2.12	2.95
QBS	Quillback	1.72	0.17	1.72	N/A	N/A	N/A
WAE	Walleye	171.06	17.11	2.34	0.88	1.37	1.90
WHB	White Bass	234.32	23.43	1.52	N/A	N/A	N/A
WTS	White Sucker	332.81	33.28	1.59	1.44	1.87	2.20
YEB	Yellow Bullhead	5.46	0.55	1.37	0.45	0.70	0.93
YEP	Yellow Perch	57.01	5.70	0.19	0.14	0.24	0.36
	Total Pounds Fish/Set:		106.62		* Quartiles for Mean Weight		

Net Catch Summary by Numbers for TN

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

Number of Sets: 12
First Set Date: 08/10/2009
Last Lift Date: 08/14/2009
Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 41* 25%	50%	75%
BIB	Bigmouth Buffalo	2	0.17	0.22	0.48	1.45
BLB	Black Bullhead	131	10.92	1.33	14.73	78.13
BLC	Black Crappie	17	1.42	0.98	2.96	12.33
BLG	Bluegill	59	4.92	1.05	3.00	14.93
BOF	Bowfin (Dogfish)	32	2.67	0.13	0.30	0.68
CCF	Channel Catfish	8	0.67	N/A	N/A	N/A
CAP	Common Carp	124	10.33	0.70	1.80	5.11
FRD	Freshwater Drum	115	9.58	0.36	0.95	4.00
GSF	Green Sunfish	1	0.08	0.13	0.33	0.66
HSF	Hybrid Sunfish	1	0.08	N/A	N/A	N/A
LMB	Largemouth Bass	19	1.58	0.13	0.40	0.75
NOP	Northern Pike	4	0.33	N/A	N/A	N/A
SMB	Smallmouth Bass	1	0.08	N/A	0.24	N/A
WAE	Walleye	15	1.25	0.31	0.73	1.69
WHB	White Bass	1	0.08	0.38	1.09	1.91
WTS	White Sucker	13	1.08	0.25	0.50	1.29
YEB	Yellow Bullhead	48	4.00	0.50	1.60	4.05
YEP	Yellow Perch	114	9.50	0.25	0.81	2.62
		Total Fish/Set:	58.75	* 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 41* 25%	50%	75%
BIB	Bigmouth Buffalo	0.06	0.00	0.03	1.25	3.18	5.07
BLB	Black Bullhead	30.74	2.56	0.23	0.21	0.36	0.59
BLC	Black Crappie	6.75	0.56	0.40	0.23	0.34	0.49
BLG	Bluegill	6.12	0.51	0.10	0.16	0.25	0.38
BOF	Bowfin (Dogfish)	163.77	13.65	5.12	3.65	4.57	5.08
CCF	Channel Catfish	0.99	0.08	0.12	N/A	N/A	N/A
CAP	Common Carp	296.20	24.68	2.39	2.33	4.10	5.64
FRD	Freshwater Drum	20.07	1.67	0.17	0.49	0.85	1.74
GSF	Green Sunfish	0.13	0.01	0.13	0.06	0.10	0.17
HSF	Hybrid Sunfish	0.23	0.02	0.23	N/A	N/A	N/A
LMB	Largemouth Bass	10.76	0.90	0.57	0.41	1.00	1.54
NOP	Northern Pike	16.76	1.40	4.19	N/A	N/A	N/A
SMB	Smallmouth Bass	0.73	0.06	0.73	N/A	2.51	N/A
WAE	Walleye	25.36	2.11	1.69	0.85	1.63	2.41
WHB	White Bass	0.02	0.00	0.02	0.18	0.63	0.79
WTS	White Sucker	17.63	1.47	1.36	1.35	1.97	2.62
YEB	Yellow Bullhead	39.46	3.29	0.82	0.40	0.60	0.84
YEP	Yellow Perch	19.00	1.58	0.17	0.13	0.20	0.31
	Total Pounds Fish/Set:		54.56		* Quartiles for Mean Weight		

Length Frequency Distribution For GN

Standard gill net sets

(Field work conducted between 08/10/2009 and 08/14/2009)

	BIB	YBIB	BLB	YBLB	BLC	BLG	BOF	CAP	CCF	FRD	YFRD	NOP	QBS	WAE	WHB
< 3.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-
4.00 - 4.49	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
4.50 - 4.99	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
5.00 - 5.49	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-
5.50 - 5.99	-	-	-	1	-	3	-	-	-	-	-	-	-	-	-
6.00 - 6.49	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-
6.50 - 6.99	-	-	2	-	-	1	-	-	-	-	-	-	-	1	-
7.00 - 7.49	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
7.50 - 7.99	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
8.00 - 8.49	-	-	3	-	1	1	-	-	-	-	-	-	-	-	-
8.50 - 8.99	-	-	1	-	-	-	-	-	-	-	-	-	-	-	5
9.00 - 9.49	-	-	2	-	-	-	-	1	-	1	-	-	-	1	13
9.50 - 9.99	-	-	2	-	1	-	-	-	-	1	-	-	-	1	11
10.00 - 10.49	-	-	4	-	-	-	-	-	-	-	-	-	-	1	8
10.50 - 10.99	1	-	-	-	-	-	-	-	-	1	-	-	-	3	2
11.00 - 11.49	2	-	-	-	-	-	-	2	-	-	-	-	-	3	-
11.50 - 11.99	2	-	2	-	-	-	-	2	1	-	-	-	-	1	-
12.00 - 12.99	1	-	3	-	-	-	-	10	1	-	-	-	-	6	-
13.00 - 13.99	-	-	3	-	-	-	-	3	-	-	-	-	-	-	6
14.00 - 14.99	-	-	-	-	-	-	-	2	-	-	-	-	-	-	13
15.00 - 15.99	-	-	-	-	-	-	-	-	-	-	-	-	1	1	33
16.00 - 16.99	-	-	-	-	-	-	-	-	-	-	-	-	-	6	49
17.00 - 17.99	-	-	-	-	-	-	-	-	-	-	-	-	-	11	14
18.00 - 18.99	-	-	-	-	-	-	-	-	1	1	-	-	-	6	-
19.00 - 19.99	-	-	-	-	-	-	-	1	1	-	-	-	-	7	-
20.00 - 20.99	-	-	-	-	-	-	-	-	-	-	-	1	-	10	-
21.00 - 21.99	-	-	-	-	-	-	1	-	1	-	-	1	-	8	-
22.00 - 22.99	-	-	-	-	-	-	-	1	3	-	-	1	-	-	-
23.00 - 23.99	-	-	-	-	-	-	-	2	-	-	-	3	-	4	-
24.00 - 24.99	-	-	-	-	-	-	-	2	1	-	-	4	-	1	-
25.00 - 25.99	1	-	-	-	-	-	-	2	1	-	-	1	-	2	-
26.00 - 26.99	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	-	2	2	-	-	1	-	-	-
28.00 - 28.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
30.00 - 30.99	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
31.00 - 31.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32.00 - 32.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33.00 - 33.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34.00 - 34.99	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	BIB	YBIB	BLB	YBLB	BLC	BLG	BOF	CAP	CCF	FRD	YFRD	NOP	QBS	WAE	WHB
Total	7	6	31	1	3	6	1	30	14	4	4	15	1	73	154
Min. Length	10.79	4.45	5.08	5.63	6.02	5.39	21.34	9.45	11.69	9.25	3.78	20.39	15.55	6.54	8.62
Max. Length	25.98	4.57	13.90	5.63	9.76	8.07	21.34	27.80	27.87	18.11	3.86	34.61	15.55	25.71	17.68
Mean Length	13.59	4.50	9.40	5.63	8.07	6.18	21.34	16.48	22.07	11.90	3.82	25.41	15.55	17.67	14.32
# Measured	7	6	31	1	3	6	1	30	14	4	4	15	1	73	154
No Lengths for	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Length Frequency Distribution For GN (Continued)

Standard gill net sets

(Field work conducted between 08/10/2009 and 08/14/2009)

	WTS	YEB	YEP
< 3.00	1	-	-
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
6.00 - 6.49	-	-	18
6.50 - 6.99	-	-	44
7.00 - 7.49	-	-	103
7.50 - 7.99	-	-	91
8.00 - 8.49	1	-	27
8.50 - 8.99	5	-	3
9.00 - 9.49	5	-	4
9.50 - 9.99	10	-	3
10.00 - 10.49	5	-	1
10.50 - 10.99	16	-	-
11.00 - 11.49	16	-	-
11.50 - 11.99	6	-	-
12.00 - 12.99	20	2	-
13.00 - 13.99	9	1	-
14.00 - 14.99	10	1	-
15.00 - 15.99	13	-	-
16.00 - 16.99	7	-	-
17.00 - 17.99	24	-	-
18.00 - 18.99	40	-	-
19.00 - 19.99	15	-	-
20.00 - 20.99	7	-	-
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	-	-	-

	WTS	YEB	YEP
Total	210	4	300
Min. Length	1.18	12.60	5.75
Max. Length	20.67	14.37	10.28
Mean Length	14.50	13.45	7.41
# Measured	189	4	260
No Lengths for	20	0	41

Length Frequency Distribution For TN

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

(Field work conducted between 08/10/2009 and 08/14/2009)

	YBIB	BLB	BLC	BLG	BOF	CAP	YCAP	CCF	FRD	YFRD	GSF	HSF	LMB	YLMB	NOP
< 3.00	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-
3.00 - 3.49	-	-	-	1	-	-	5	-	-	1	-	-	-	-	-
3.50 - 3.99	2	-	-	4	-	-	25	-	-	31	-	-	-	-	-
4.00 - 4.49	-	6	-	10	-	-	16	-	-	53	-	-	4	2	-
4.50 - 4.99	-	1	-	13	-	-	1	-	-	12	-	-	6	2	-
5.00 - 5.49	-	6	-	20	-	-	-	-	-	-	-	-	-	-	-
5.50 - 5.99	-	23	3	7	-	-	-	1	-	-	1	-	-	-	-
6.00 - 6.49	-	13	4	1	-	-	-	1	-	-	-	-	-	-	-
6.50 - 6.99	-	20	2	-	-	-	-	3	-	-	-	1	-	-	-
7.00 - 7.49	-	18	1	1	-	-	-	1	-	-	-	-	-	-	-
7.50 - 7.99	-	19	-	1	-	-	-	1	1	-	-	-	-	-	-
8.00 - 8.49	-	12	-	1	-	-	-	-	-	-	-	-	1	-	-
8.50 - 8.99	-	1	1	-	-	-	-	-	2	-	-	-	-	-	-
9.00 - 9.49	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-
9.50 - 9.99	-	1	1	-	-	-	-	-	2	-	-	-	-	-	-
10.00 - 10.49	-	1	1	-	-	-	-	-	5	-	-	-	-	-	-
10.50 - 10.99	-	-	-	-	-	1	-	-	3	-	-	-	-	-	-
11.00 - 11.49	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-
11.50 - 11.99	-	5	-	-	-	3	-	1	-	-	-	-	-	-	-
12.00 - 12.99	-	2	2	-	-	16	-	-	-	-	-	-	1	-	-
13.00 - 13.99	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
14.00 - 14.99	-	-	-	-	-	3	-	-	4	-	-	-	-	-	-
15.00 - 15.99	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
16.00 - 16.99	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
17.00 - 17.99	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
18.00 - 18.99	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
19.00 - 19.99	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
20.00 - 20.99	-	-	-	-	1	4	-	-	-	-	-	-	-	-	-
21.00 - 21.99	-	-	-	-	2	3	-	-	-	-	-	-	-	-	1
22.00 - 22.99	-	-	-	-	8	9	-	-	-	-	-	-	-	-	-
23.00 - 23.99	-	-	-	-	4	6	-	-	-	-	-	-	-	-	-
24.00 - 24.99	-	-	-	-	3	5	-	-	-	-	-	-	-	-	1
25.00 - 25.99	-	-	-	-	5	9	-	-	-	-	-	-	-	-	-
26.00 - 26.99	-	-	-	-	6	1	-	-	-	-	-	-	-	-	-
27.00 - 27.99	-	-	-	-	2	1	-	-	-	-	-	-	-	-	1
28.00 - 28.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
30.00 - 30.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.00 - 31.99	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
32.00 - 32.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33.00 - 33.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34.00 - 34.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	YBIB	BLB	BLC	BLG	BOF	CAP	YCAP	CCF	FRD	YFRD	GSF	HSF	LMB	YLMB	NOP
Total	2	132	17	59	32	76	48	8	18	97	1	1	14	5	4
Min. Length	3.54	4.33	5.55	3.39	20.87	10.63	2.56	5.91	7.87	3.35	5.63	6.50	4.06	2.80	21.50
Max. Length	3.70	12.80	12.87	8.15	31.02	29.17	4.57	11.57	18.11	4.80	5.63	6.50	19.49	4.92	31.02
Mean Length	3.62	7.26	7.97	5.05	24.51	18.72	3.86	7.37	11.41	4.13	5.63	6.50	7.23	4.20	26.26
# Measured	2	96	17	59	32	76	47	8	18	61	1	1	14	4	4
No Lengths for	0	35	0	0	0	0	1	0	0	36	0	0	0	1	0

Length Frequency Distribution For TN (Continued)

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

(Field work conducted between 08/10/2009 and 08/14/2009)

	SMB	WAE	YWHB	WTS	YEB	YEP
< 3.00	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-
3.50 - 3.99	-	-	1	-	-	-
4.00 - 4.49	-	-	-	-	-	-
4.50 - 4.99	-	-	-	-	-	-
5.00 - 5.49	-	-	-	-	-	-
5.50 - 5.99	-	1	-	-	-	12
6.00 - 6.49	-	-	-	-	2	10
6.50 - 6.99	-	-	-	-	7	26
7.00 - 7.49	-	-	-	-	3	27
7.50 - 7.99	-	-	-	-	4	25
8.00 - 8.49	-	-	-	-	1	13
8.50 - 8.99	-	-	-	2	2	-
9.00 - 9.49	-	1	-	-	2	-
9.50 - 9.99	-	2	-	-	3	-
10.00 - 10.49	-	-	-	-	1	-
10.50 - 10.99	-	-	-	-	1	-
11.00 - 11.49	1	2	-	1	-	-
11.50 - 11.99	-	-	-	-	1	-
12.00 - 12.99	-	1	-	2	6	-
13.00 - 13.99	-	1	-	-	4	-
14.00 - 14.99	-	-	-	3	8	-
15.00 - 15.99	-	-	-	-	3	-
16.00 - 16.99	-	2	-	2	-	-
17.00 - 17.99	-	1	-	1	-	-
18.00 - 18.99	-	-	-	2	-	-
19.00 - 19.99	-	-	-	-	-	-
20.00 - 20.99	-	1	-	-	-	-
21.00 - 21.99	-	-	-	-	-	-
22.00 - 22.99	-	2	-	-	-	-
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	-	-	-	-	-	-

	SMB	WAE	YWHB	WTS	YEB	YEP
Total	1	15	1	13	48	113
Min. Length	11.18	5.83	3.90	8.74	6.10	5.51
Max. Length	11.18	25.63	3.90	18.62	15.55	8.46
Mean Length	11.18	14.99	3.90	14.14	10.55	7.19
# Measured	1	15	1	13	48	77
No Lengths for	0	0	0	0	0	37

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	'09 0	'08 1	'07 2	'06 3	'05 4	'04 5	'03 6	'02 7	'01 8	'00 9	'99 10	'98 11	'97 12	'96 13	'95 14	<'95 15+
Channel Catfish																			
GN	14	0	0	0	0	1	2	6	0	1	1	0	3	0	0	0	0	0	0
TN	2	0	6	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals:	16	0	6	0	1	2	2	6	0	1	1	0	3	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.

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	Northern Crayfish	1	0	N/A	0	N/A
	Painted Turtle	6	1	5.51	0	N/A
	Smooth Softshell Turtle	9	4	6.69 - 7.03 - 7.28	0	N/A
	Snapping Turtle	1	0	N/A	0	N/A
	Spiney Softshell Turtle	8	7	7.48 - 11.08 - 14.17	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.

Discussion

Catfish spines were sectioned and read, scales were pressed to acetate slides but were not read due to staff and timing shortages. Scales are pressed and available if needed.

Status Of The Fishery

Cannon Lake in Rice County is a 1,591 acre lake west of the city of Faribault. A DNR-owned public access is located on the southeast end of the lake at Shager County Park, located next to Minnesota State Highway 60. Cannon Lake is part of the Cannon River system that begins in Shields Lake, loops through Le Sueur and Rice counties, and finally runs to the east, draining into the Mississippi River.

Cannon Lake was surveyed the week of August 10th, 2009 to monitor the fish community and aquatic habitat. Walleye are the primary management species in Cannon Lake. Strong gill net catches on Cannon show an abundant walleye population. Walleyes average 7.3 fish per gill net. Walleye were older and larger, with a mean weight of 2.3 pounds and a mean length of 17.7 inches. Fishing reports have been poor and the lake has been little used by anglers, particularly in the winter.

A strong forage base of yellow perch may help sustain the abundant walleye population. Yellow perch averaged 30 fish per gill net, a value that exceeds the upper quartile for Cannon's lake class. Perch in gill nets ranged between 6 and 10 inches. Perch were prolific enough to be one of the more abundant species in the trap nets, a gear type that is usual ineffective for an open water pelagic species like perch. With more time, yellow perch average size will move into quality and preferred (8 and 10 inch, respectively) stock index values, translating into a higher use fishery. Some good perch fishing has been reported from shore anglers fishing off Rice county road 12 and 13.

Low level bluegill abundance was observed in trap net catches. Young fish made up most of the sample, with just seven percent of the sample being fish larger than six inches. Bluegills are better situated to habitat on the west end of the lake, where there is more aquatic vegetation available, rather than the windswept and more turbid main lake, where vegetation is sparse. Nearly missing from the survey were crappie. Three black crappies were caught in gill nets and seventeen in trap nets. Crappie ranged from 5 to 13 inches, a wide variety of size and age. With no protected bays and little vegetation, spawning habitat is poor.

Northern pike were gill netted at a rate of 1.5 fish per lift, trap netted at 0.3 fish per lift. Cannon Lake has poor spawning habitat outside of the Cannon river connection at the west end. A strong forage base is available if a strong year class of pike develops.

Common carp were the most abundant fish in trap nets and were modestly abundant in gillnets, at 10.3 and 3.1 fish per net, respectively. Carp have been the most abundant fish in trap nets for the past three surveys.

White bass made another strong showing at Cannon Lake. Gill net catches of white bass averaged 15 fish per lift, above the upper quartile for Cannon's lake class. White bass ranged between 9 and 18 inches.

The biggest change to Cannon Lake since the last survey has been the population growth of white sucker. Suckers have exploded to record high levels in the lake and presently constitute the largest percentage of biomass. 21 white suckers per gill net lift were recorded, weighing an average of 33 pounds per gill net set. Water levels in Cannon Lake and the Cannon River were very low in 2009, so its possible some of the fish may have been concentrated.

22 channel catfish were captured during the 2009 survey. Channel catfish have moved up and down the Cannon River and many lakes within the chain have received supplemental catfish fingerling stocking. The largest catfish captured in the survey was 28 inches; the smallest 12 inches.

Largemouth bass were not observed in 2009. There was not adequate staff time in the spring for largemouth bass electrofishing and bass are not well sampled by passive gears (gill nets and trap nets). One smallmouth bass was sampled in the gill nets. Smallmouth bass maintain a small population on Tetonka Lake within the Cannon Chain, and are more abundant further downstream below the King Mill Dam on the Cannon River. Other fish sampled in 2009 include bigmouth buffalo, black bullhead, bowfin (dogfish), freshwater drum, quillback sucker, and yellow bullhead.

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 Cannon 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.

Approval Dates And Notices

Date Approved By Waterville Area Fisheries Supervisor: 04/07/2010

Date Approved By Southern Region Fisheries Manager: _____