



Minnesota Department of Natural Resources  
 Fisheries Management  
 STANDARD LAKE SURVEY REPORT



Lake Name: Upper Sakatah  
 DOW Number: 40-0002-00

Survey Type: Special Assessment  
 Survey ID Date: 10/19/2006

**Lake Identification**

Alternate Lake Name: N/A  
 Primary Lake Class ID: 41

DNR Sounding Map Number: C0434  
 Alternate Lake Class ID: 41

**Lake Location**

Primary County: Le Sueur

Nearest Town: Waterville

All Counties: Le Sueur, Rice.

**Legal Descriptions**

Lake Center: Township - 109N Range - 23W Section - 24  
 PLS Section Lake Center: 2658

**All Legal Descriptions:**

Le Sueur County: Township - 109N Range - 23W Sections - 23, 24, 25, 26, 27  
 Rice County: Township - 109N Range - 22W Sections - 19, 30

**Area Office**

Area Name: Waterville  
 Region Name: Southern

ORG Code: F417  
 Region Number: 4

**Lake Access**

(Information based on Re-Survey dated 08/14/1989)

Station ID	Ownership	Public Use	Type	Location / Comments
AC - 1	DNR		Concrete	STATE ACCESS IN SAKATAH STATE PARK ON SO. SHORE. STATE ACCESS IN SAKATAH STATE PARK ON SO. SHORE.
AC - 2	City		Concrete	ON CANNON RIVER IN WATERVILLE. ON CANNON RIVER IN WATERVILLE.

**Lake Characteristics**

Lake Area (planimetered acres): 881.00	GIS Shoreline Length (miles): 8.01
GIS Lake Area (acres): 891.99	Maximum Fetch (miles): 2.00
DOW Lake Area (acres): 881.00	Fetch Orientation (degrees): N/A
Littoral Area (acres): 881.00	USGS Quad Map Number: V15a
Area in MN (acres): 891.99	USGS Quad 24K GIS Index: 4230
Maximum Depth (feet): 12.0	
Mean Depth (feet): N/A	

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**Watershed Characteristics**

**Major Watershed**

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

**Minor Watershed**

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Name: Lower Sakatah L  
Watershed Number: 94  
Watershed size (acres): 5,133

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**Surveys And Investigations**

**Initial Survey:** 07/23/1950.

**Re-Survey:** 08/02/2004, 08/09/1999, 08/01/1994, 08/14/1989, 06/16/1986, 06/12/1981,  
06/09/1958.

**Special Assessment:** 10/19/2006, 10/10/2005, 09/29/2004, 05/26/2004, 10/13/2003, 10/25/2002,  
10/18/2001, 10/11/2000, 09/28/1999, 10/15/1998, 10/15/1997, 03/29/1997,  
10/09/1996, 10/11/1995, 10/26/1994, 10/06/1993, 10/23/1992, 10/01/1991,  
10/18/1990, 10/19/1989, 10/06/1988.

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**Electrofishing Catch Summary for EF**

Standard electrofishing

Total run-time for all stations: 01:00:00  
 Total on-time for all stations: 01:00:00  
 First Sampling Date: 10/19/2006  
 Last Sampling Date: 10/19/2006  
 Daylight Flag: No  
 Target Species: Young of the year walleye

Abbr	Species	Summary By Numbers			Summary By Weight (Pounds)			
		Total Number	Number per Hour Run-Time	On-Time	Total Weight	Lbs per Hour Run-Time	On-Time	Mean Weight
WAE	Walleye	20	20.00	20.00	4.83	4.83	4.83	0.24

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**Length Frequency Distribution For EF**

**Standard electrofishing**

(Field work conducted on 10/19/2006)

	<u>WAE</u>	<u>YWAE</u>
< 3.00	-	-
3.00 - 3.49	-	-
3.50 - 3.99	-	-
4.00 - 4.49	-	-
4.50 - 4.99	-	-
5.00 - 5.49	-	-
5.50 - 5.99	-	3
6.00 - 6.49	-	3
6.50 - 6.99	-	3
7.00 - 7.49	-	5
7.50 - 7.99	-	-
8.00 - 8.49	-	-
8.50 - 8.99	-	-
9.00 - 9.49	-	-
9.50 - 9.99	-	-
10.00 - 10.49	-	-
10.50 - 10.99	-	-
11.00 - 11.49	1	-
11.50 - 11.99	3	-
12.00 - 12.99	1	-
13.00 - 13.99	-	-
14.00 - 14.99	1	-
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	-	-
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>WAE</u>	<u>YWAE</u>
Total	6	14
Min. Length	11.26	5.87
Max. Length	14.72	7.48
Mean Length	12.24	6.68
# Measured	6	14
No Lengths for	0	0

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**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	'06 0	'05 1	'04 2	'03 3	'02 4	'01 5	'00 6	'99 7	'98 8	'97 9	'96 10	'95 11	'94 12	'93 13	'92 14	<'92 15+
Walleye EF	20	0	0	14	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0

**(1) Key to sampling gear abbreviations:**

EF = Standard electrofishing

**(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.

### Survey Crew Notes

Fall walleye electrofishing survey by Dave Weitzel and Dan Wilfond. Analysis and write up by Dave Weitzel.

Area Signed by user 'daweitze' on 07/16/2007 as approved by Hugh Valiant.

Region Signed by user 'jalauer1' on 07/20/2007

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### Field Notes - General Field

Upper Sakatah Lake was sampled using standard nighttime boat electrofishing on October 19, 2006 to evaluate the status of the walleye population and determine the presence of young of the year (YOY) walleye. This evaluation is part of an annual assessment of walleye on the Cannon River chain of lakes. Three sites were sampled for 20 minutes each.

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### Discussion

Twenty walleye were sampled in one hour of electrofishing, 14 of which were age-0 fish as determined from scale samples. Catch per effort (CPE) of YOY walleye in 2006 was below the 20-year mean for Upper Sakatah Lake and decreased from 2005 when 41 YOY walleye were sampled. Since Upper Sakatah Lake was first evaluated in 1987, CPE of YOY walleye has varied greatly among years (SE=8.97) with a mean of 30 YOY/hr. Natural reproduction appears to be very limited. Upper Sakatah Lake has frequently been stocked with walleye fry and is currently stocked 3 out of 4 years. Fry stocking appears to contribute greatly to the presence of YOY walleye. With the exception on 2001, when an exceptionally strong natural year-class apparently occurred, years with stocking have consistently produced much higher CPE than have years without stocking. With the exception of Cannon Lake, Upper Sakatah Lake typically produces higher CPE of YOY walleye when compared to other lakes in the Cannon River chain.

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### **Status Of The Fishery**

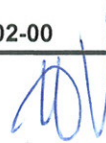
Fry stocking appears to contribute greatly to the presence of YOY walleye as reproduction is limited. Sampling in 2006 resulted in below average abundance of YOY walleye and may represents poor fry survival to fingerling size. CPE of YOY walleye has been good in 2 of the last 3 years, however, and a poor 2006 year-class is unlikely to have a significant effect on the quality of the walleye fishery in Upper Sakatah Lake.

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Approval Dates And Notices



Date Approved By Waterville Area Fisheries Supervisor: 07/16/2007

Date Approved By Southern Region Fisheries Manager: 07/20/2007



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(Standard Lake Survey Report revision: 07/09/2007-RJE. Printed on 07/24/2007 at 3:09:47PM )





# Upper Sakatah Lake 2006 Fall Walleye Electrofishing



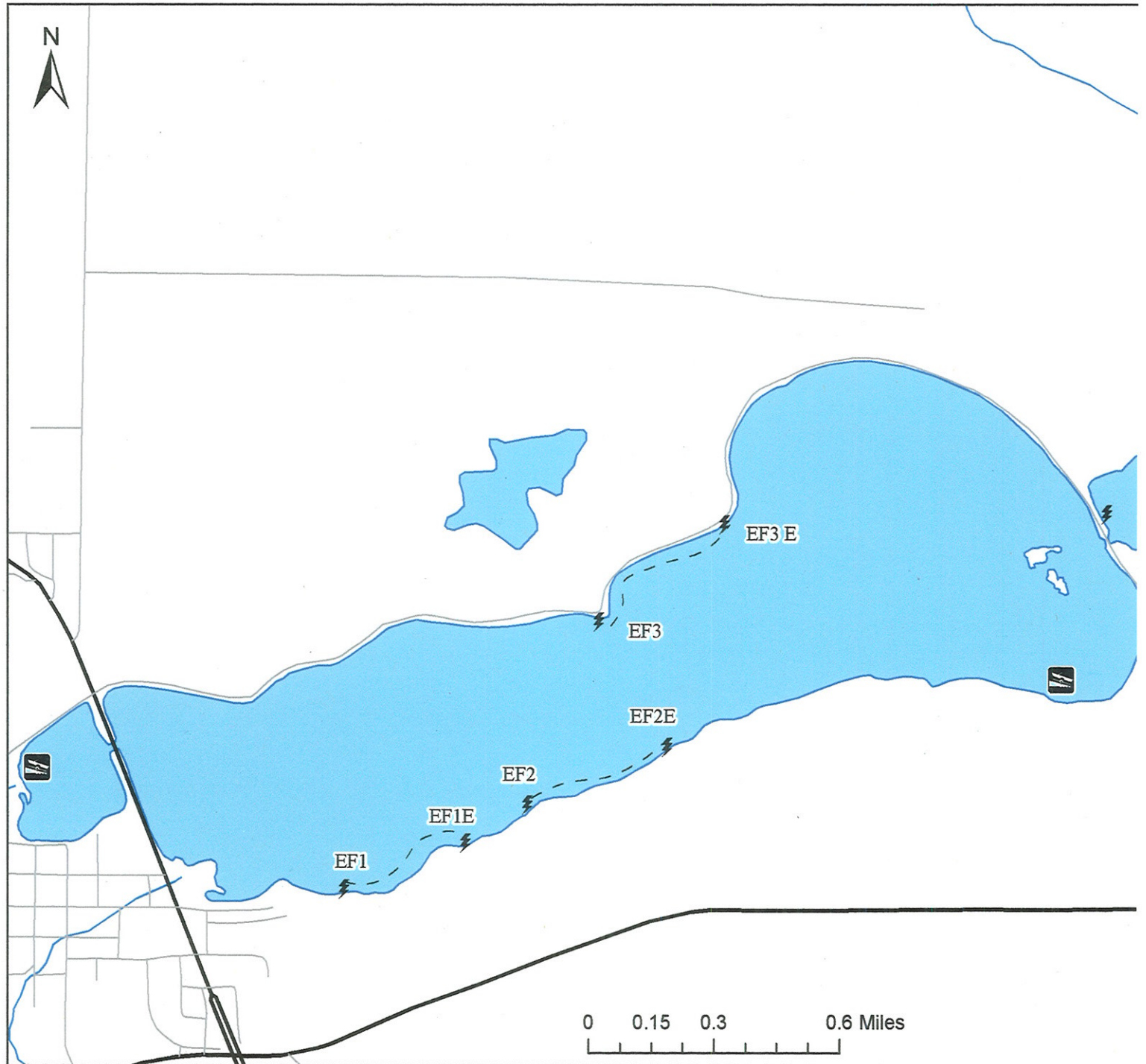
Waterville Fisheries Area

## Legend

-  Water Access Site
-  EF End points



Created by  
David Weitzel  
2006



YOY Walleye catch per hour by year (bold print indicates years with no stocking)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
CANNON				283	0	58	13	58	22	141	14	2	3	12	33	4
GORMAN	0	29	114	42	0	17	5	14	1	2	0	8	0	20	3	14
L. SAKATAH	0	13	0	4	0	6	31	67	2	2	4	68	0	20	11	0
SABRE	0	46	1	9	0	1	18	47	4	63	0	28	6	20	16	1
TETONKA	1	38	2	35	3	28	22	19	11	79	51	39	6	21	68	0
U. SAKATAH	0	30	1	6	0	26	56	41	16	61	12	56	0	7	173	1
<b>mean for year</b>	<b>0.2</b>	<b>31.2</b>	<b>23.6</b>	<b>63.2</b>	<b>0.5</b>	<b>22.7</b>	<b>24.2</b>	<b>41.0</b>	<b>9.3</b>	<b>58.0</b>	<b>13.5</b>	<b>33.5</b>	<b>2.5</b>	<b>16.6</b>	<b>50.7</b>	<b>3.3</b>
<b>SE</b>	<b>0.2</b>	<b>5.5</b>	<b>22.6</b>	<b>44.4</b>	<b>0.5</b>	<b>8.3</b>	<b>7.3</b>	<b>8.6</b>	<b>3.5</b>	<b>21.3</b>	<b>7.9</b>	<b>10.6</b>	<b>1.2</b>	<b>2.3</b>	<b>26.2</b>	<b>2.2</b>
<b>N</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>

	2003	2004	2005	2006
CANNON	1	185	24	101
GORMAN	0	8	10	0
L. SAKATAH	1	23	1	7
SABRE	0	35	1	
TETONKA	0	11	2	21
U. SAKATAH	0	50	41	14

	2003	2004	2005	2006
<b>mean for year</b>	<b>0.3</b>	<b>52.0</b>	<b>13.2</b>	<b>28.6</b>
<b>SE</b>	<b>0.2</b>	<b>27.3</b>	<b>6.6</b>	<b>18.4</b>
<b>N</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>5</b>

