

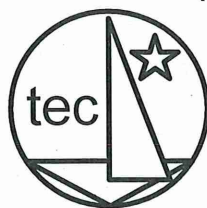
# ***MN DNR'S PROJECT TO PREPARE AND EXECUTE A STUDY OF TWIN CITIES METRO AREA BOATING DURING THE SUMMER OF 2009***

## ***FINAL REPORT***



December 15, 2009

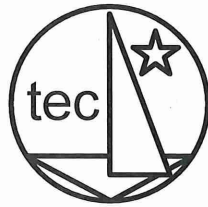
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Tuesday, December 15, 2009

Tim Kelly  
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Saint Paul, MN 55155-4010  
Tel: 651 296-4892  
Email: [tim.kelly@dnr.state.mn.us](mailto:tim.kelly@dnr.state.mn.us)

Dear Tim Kelly,

Please find attached the proposed 2009 Twin Cities Metro Area Boating Study Final Report. The final report has been prepared to meet the requirements of Deliverables #7 and #8.

If you have any questions or require additional information, please contact me at 651 260-0116 or by email at [greg@statisticsinc.com](mailto:greg@statisticsinc.com).

Thank you.

Sincerely,

Gregory E. Thompson



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Attachment B: Boat Count Worksheet

Attachment C: Trailer Count Worksheet

Attachment D: Cover letters and follow-up cover letters

Attachment E: Questionnaires (under separate cover)

Attachment F: Metro Lakes boat & trailer count by type of boat and flight date

Attachment G: Lake Minnetonka boat & trailer count by type of boat & flight date

Attachment H: Results of the lakeshore surveys

Attachment I: Results of the public access surveys

## I. UNDERSTANDING

**A. Introduction.** The Minnesota Department of Natural Resources (DNR) conducted a study of the Twin Cities Metro Area and Lake Minnetonka boating during the summer (mid May through Labor Day) of 2009. The Twin Cities Metro Area boating study results provide information to several DNR or other state agency programs. Table 1 lists two of these. The boating study is a substantial data gathering and analysis effort which included aerial boat counts and boater interviews. Table 2 lists the goals for the project.

	Study will provide information to:
1.	DNR's water access programs
2.	DNR's boating safety programs

**Table 1: Programs That May Use Boating Data**

	Goal
1.	measure the quantity and source of boating use on Twin Cities Metro Area lakes
2.	measure boater characteristics and attitudes concerning their experience on the water

**Table 2: Project Goals**

**B. Objectives.** The two objectives related to the project goals are listed below.

Objective 1: Measure total use by source of boater.

Objective 2: Measure Boater experiences, perceptions, and characteristics by source of boater.

**C. Purpose.** The DNR sought to determine the level & type of boating activity on Twin Cities Metro Area lakes. This final report provides the detailed procedures for completing this project. Descriptions of the data gathering methods & analysis are also included. Where convenient & to add clarity, information has been consolidated into attachments included at the end of the final report document. Attachment A lists the water bodies selected as the sample lakes for this study. Attachment B includes the aerial boat count worksheet. Attachment C includes the trailer & car topper/pick-up count worksheet. Attachment D includes the cover letters & follow-up cover letters. Attachment E contains the two questionnaires, the printed copies were provided under separate cover. Attachment F provides the metro lakes boat & trailer count by type of boat & flight date. Attachment G provides Lake Minnetonka boat & trailer count by type of boat & by flight date. Attachment H contains the results of the lakeshore surveys. Attachment I contains the results of the public access surveys.

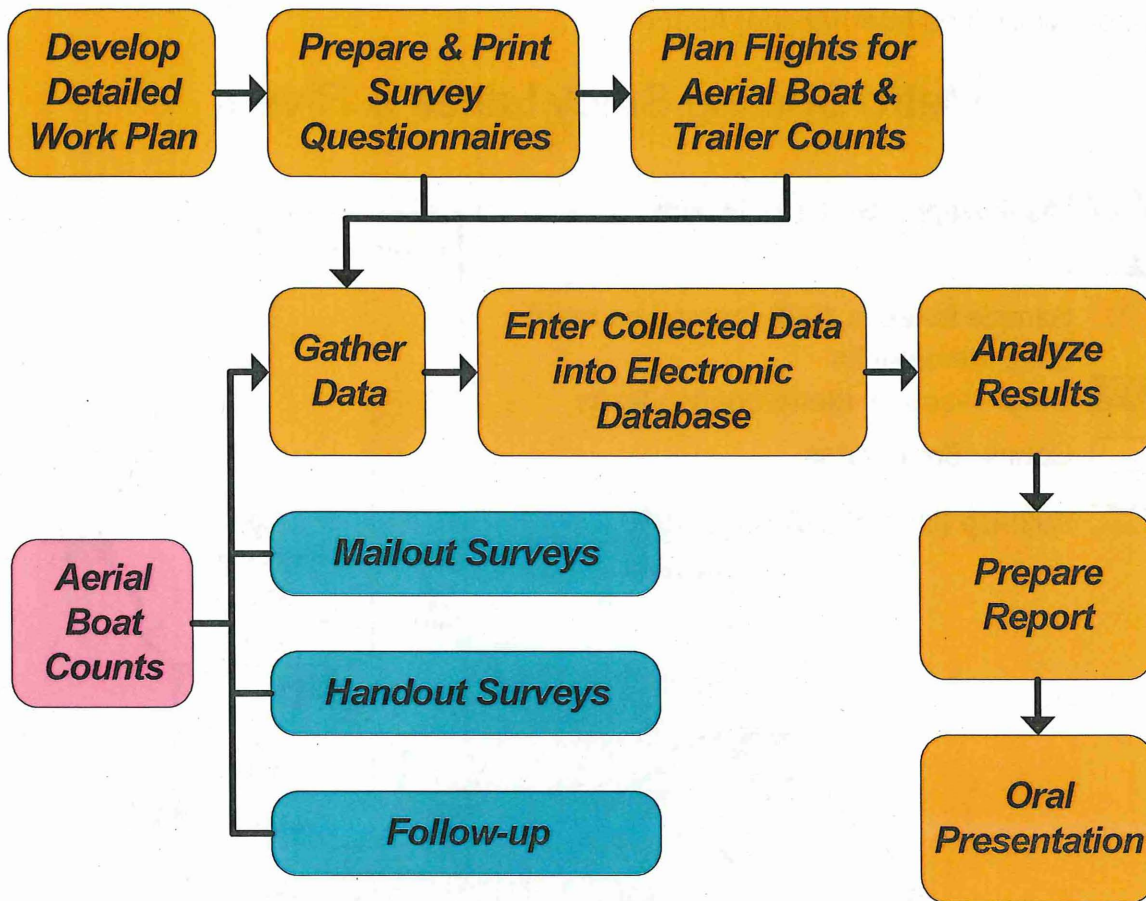


Figure 1: Task Flow Chart

## II. DESCRIPTION

**A. Approach.** Data gathering was conducted to meet both project objectives as described below. The source of boater information was collected via aerial boat counts to determine the contributions to boating from two sources: riparian residents and boaters using public accesses. Private access contributions will be calculated from previous boating use studies and were not gathered during this study. Boater experiences were sampled by way of mail-out surveys to lake residents and hand-out surveys to public access boaters. A sample of approximately thirty water bodies was drawn from the lakes shown on the following page in Figure 2. Attachment A provides the complete list of lakes that were used in this study. Lake Minnetonka boating use was determined using aerial counts on eight separate weekends. Figure 3 provides the Lake Minnetonka management areas. The worksheets in Attachments B and C were utilized. The remaining lakes boating use were determined using aerial counts on eight weekends and four weekdays using the worksheets in Attachments B and C. Lake Nokomis and Lake Calhoun were counted from the ground during



the flight dates and times in order to avoid disruption of the flight path into and out of Twin Cities International Airport.

## Metro Boating Study Lakes & Rivers

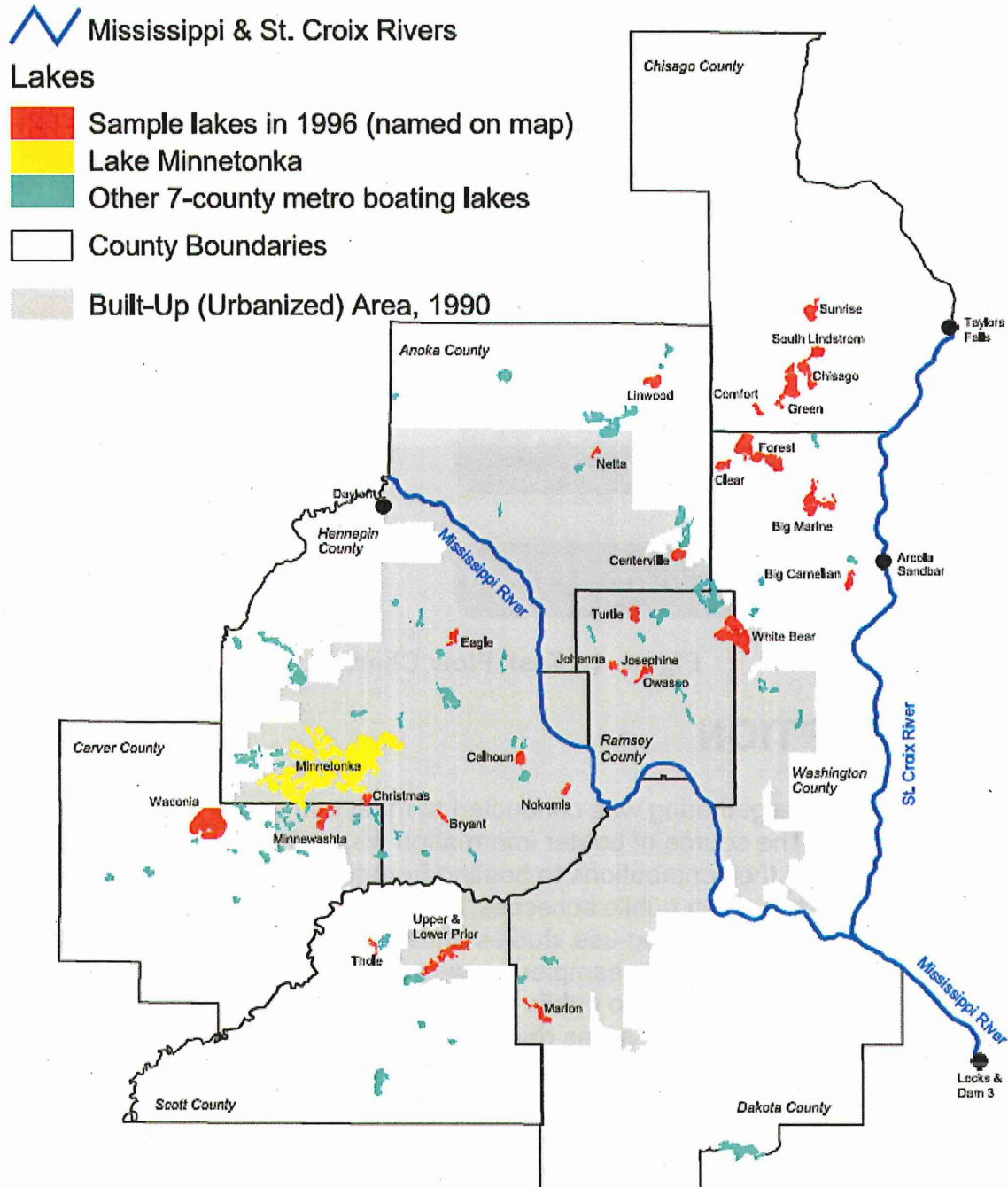
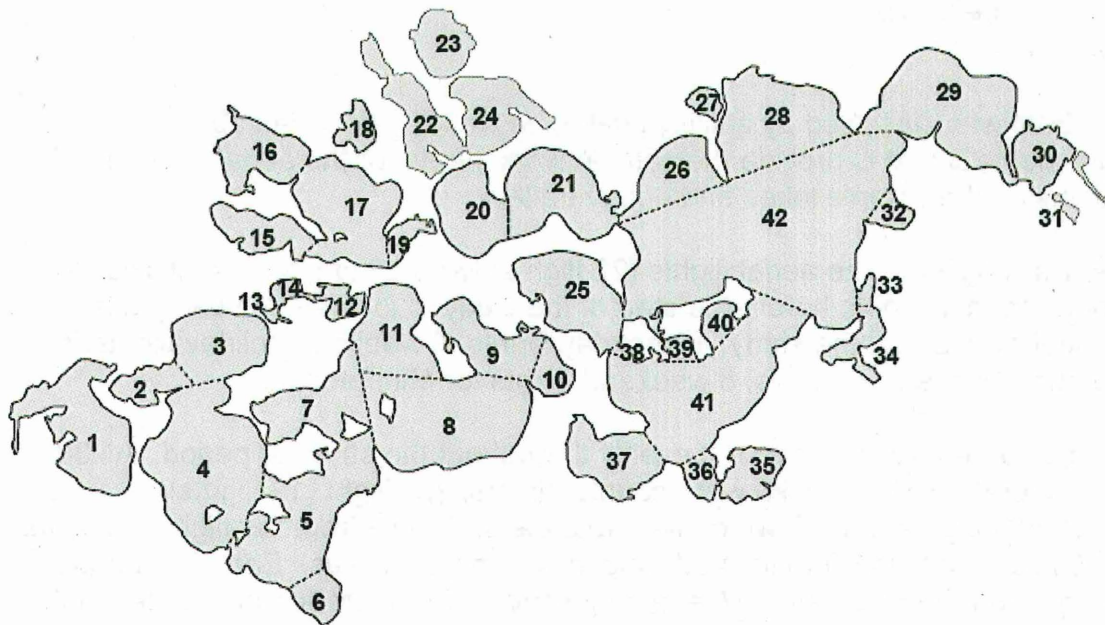


Figure 2: Twin Cities Lakes other than Minnetonka

## Lake Minnetonka Management Areas



Area number	Area Name	Acres	Region	Area number	Area Name	Acres	Region
1	Haleside Bay	545	1 - SW	22	North Arm	319	2 - NW
2	Priests Bay	144	1 - SW	23	Stubbs Bay	195	2 - NW
3	Cooke Bay	343	1 - SW	24	Maxwell Bay	300	2 - NW
4	West Upper Lake	673	1 - SW	25	Lafayette Bay	454	3 - East
5	South Upper Lake	722	1 - SW	26	Smiths Bay	266	3 - East
6	Smith Town Bay	110	1 - SW	27	Tanager Lake	51	3 - East
7	Pnepe Bay	345	1 - SW	28	Browns Bay	696	3 - East
8	East Upper Lake	614	1 - SW	29	Wayzata Bay	776	3 - East
9	Carmen's Bay	294	1 - SW	30	Gray's Bay	180	3 - East
10	Old Channel Bay	106	1 - SW	31	Libb's Lake	17	3 - East
11	Spring Park Bay	378	1 - SW	32	Robinson Bay	92	3 - East
12	Black Lake	76	1 - SW	33	St. Louis Bay	20	3 - East
13	Emerald Lake	13	1 - SW	34	Carson's Bay	116	3 - East
14	Seton Lake	44	2 - NW	35	St. Albans Bay	161	3 - East
15	Harrison's Bay	215	2 - NW	36	Excelstor Bay	50	3 - East
16	Jennings Bay	290	2 - NW	37	Gideons Bay	330	3 - East
17	West Arm	514	2 - NW	38	Echo Bay	15	3 - East
18	Forest Lake	62	2 - NW	39	Big Island Pass	35	3 - East
19	Coffee Cove	57	2 - NW	40	Veteran's Bay	62	3 - East
20	West Crystal Bay	325	2 - NW	41	Lower Lake South	976	3 - East
21	East Crystal Bay	457	2 - NW	42	Lower Lake North	2,090	3 - East

Figure 3: Lake Minnetonka Mgmt Areas

### B. Measure total use by source of boater.

1. **General.** The study determined directly – from aerial counts – boat density at peak times on fair weather weekdays and weekends/holidays. Counted boats were classified into one of 8 craft types listed below.

- Cruiser - has cabin or superstructure
- Runabout - has windshield
- Fishing/utility - no windshield

- Sailboat/sailboard
- Pontoon
- Personal watercraft/jetski
- Canoe/kayak
- Other

Each boat was classified by activity (wake, no wake). As stated above, Attachments B and C provide the sample worksheets for the aerial counting of boats using the sample lakes and empty trailers

**2. Aerial Flights.** The aerial flights (22 flights) were conducted as follows: 2 reconnaissance flights before the start of the study to locate each sample lake and public access in the study, 4 weekday flights, 8 weekend/holiday flights for other than Minnetonka lakes, 8 weekend flights for Minnetonka.

The flight dates were spread out evenly throughout the summer period. All 30 lakes other than Minnetonka were counted in a single flight (12 flights). Minnetonka flights were flown on separate days, distinct from the flights flown for the 30 lakes, and split into its 42 distinct management areas. Each flight had a primary and a backup date. Weekend/holiday counting started and ended in the afternoon, thus the counts reflected the normal mid-afternoon peak. Weekday aerial counts were started later in the day to reflect the late afternoon/early evening peak. The starting lake and direction of travel were varied from count to count to ensure that the same lake was not always counted first, last, or in the middle. In addition to counting watercraft, the pilot kept a tally of the type of craft and its movement.

In total there were 22 aerial flights and included: 12 boat-counting flights with 8 on weekends/holidays and 4 on weekdays for other than Minnetonka lakes; 8 weekend/holiday flights for Minnetonka; and 2 practice flights for orientation and planning. The Minnetonka flights and the "Other Than" flights were executed on separate days. The flight date schedule is illustrated in table 3 below.

Scheduled flight dates for 2009 Boat Study were flown as follows:

Flight	Date	Type
1	May 21	Practice flight for Twin Cities Lakes
2	May 24	Holiday Memorial Day
3	June 13	Weekend
4	June 17	Weekday
5	June 27	Weekend
6	July 4	Holiday July 4 <sup>th</sup>
7	July 11	Weekend
8	July 15	Weekday
9	July 29	Weekday
10	August 1	Weekend



Flight	Date	Type
11	August 19	Weekday
12	August 22	Weekend
13	September 6	Holiday Labor Day

**Table 3: Scheduled Flight Dates for Twin Cities Lakes - 2009**

Flight	Date	Type
1	May 14	Practice flight for Minnetonka
2	May 23	Holiday Memorial Day
3	June 6	Weekend
4	June 20	Weekend
5	July 3	Holiday July 4 <sup>th</sup>
6	July 25	Weekend
7	August 8	Weekend
8	August 29	Weekend
9	September 5	Holiday Labor Day

**Table 4: Scheduled Flight Dates for Minnetonka - 2009**

**3. Public Access.** The number of boats launched through each public access was counted. From the air, all public accesses were counted (including the lowest use-ranked accesses) by determining the number of (1) vehicles with empty trailers and (2) trailer-less vehicles that are empty and capable of carrying a boat (e.g. an empty pickup truck without a trailer or vehicle with an empty car top carrier). The vehicles using the public access parking lots, adjoining access sites, and parking areas where vehicles are launching at the public access were counted.

**C. Measure Boater experiences, perceptions, and characteristics by source of boater.**

**1. General.** The questionnaires were provided by DNR for the public access and lakeshore resident surveys. Surveys were not done for Lake Minnetonka. Minnetonka survey results from 2004 will be combined with 2009 results from the other metro lakes.

**2. Method of Contact.** Survey respondents were contacted at the public accesses using hand-out surveys. Potential candidates were approached when they were beginning or just ending their boat outing and asked if they would like to participate in a DNR survey. For those responding positively, they were given a hand-out survey and provided their name and address so that in three weeks if they did not respond, another survey was sent to them. The DNR assisted in determining the likely volume at each of the sites.

A mail survey was conducted for the riparian residents. The DNR provided addresses used for each of the sample lakes and randomly selected residents to mail a survey. If the resident did not respond within three weeks, another survey

and reminder letter was sent. Envelopes were individually stamped. A total of 1100 surveys were handed out at public accesses and 1100 surveys were mailed to riparians.

**D. Methodology & Survey Techniques.** The methodology and survey techniques are described below.

**1. Sample Lakes.** Table 5 provides the sample lakes by category and county.

Lake #	Lake Name	Class 2009*	Class in '96*	Class in '84*	Lake Acres
<b>Seven-County Twin Cities Area Lakes</b>					
270133	Minnetonka	Minnetonka	Minnetonka	Minnetonka	14,034
100009	Minnewashta	Cat 1	Cat 1	Cat 1	763
700026	Lower Prior	Cat 1	Cat 1	Cat 1	1,146
700072	Upper Prior				
820052	Big Marine	Cat 1	Cat 1	Cat 1	1,577
820167	White Bear	Cat 1	Cat 1	Cat 1	2,410
620057	Josephine	Cat 2-PA	Cat 2-PA	Cat 2-no PA	110
270137	Christmas	Cat 2-PA	Cat 2-PA	Cat 2-no PA	274
620061	Turtle	Cat 2-PA	Cat 2-PA	Cat 2-no PA	444
270031	Calhoun	Cat 2-PA	Cat 2-PA	Cat 2-PA	416
270019	Nokomis	Cat 2-PA	Cat 2-PA	Cat 2-PA	199
270067	Bryant	Cat 2-PA	Cat 2-PA	Cat 2-PA	199
270111	Eagle	Cat 2-PA	Cat 2-PA	Cat 2-PA	470
620078	Johanna	Cat 2-PA	Cat 2-PA	Cat 2-PA	211
620056	Owasso	Cat 2-PA	Cat 2-PA	Cat 2-PA	360
20052	Netta	Cat 3-no PA	Cat 3-no PA	Cat 3-no PA	162
820163	Clear	Cat 3-PA	Cat 3-PA	Cat 3-no PA	400
700120	Thole	Cat 3-PA	Cat 3-PA	Cat 3-no PA	131
820049	Big Carnelian	Cat 3-PA	Cat 3-PA	Cat 3-PA	444
20006	Centerville	Cat 3-PA	Cat 3-PA	Cat 3-PA	464
820159	Forest	Cat 3-PA	Cat 3-PA	Cat 3-PA	2,206
20026	Linwood	Cat 3-PA	Cat 3-PA	Cat 3-PA	567
190026	Marion	Cat 3-PA	Cat 3-PA	Cat 3-PA	489
100059	Waconia	Cat 3-PA	Cat 3-PA	Cat 3-PA	3,196
<b>Chisago County Lakes</b>					
130031	Sunrise	Cat 3-no PA	Cat 3-no PA	n/a	810
130012	Chisago	Cat 3-PA	Cat 3-PA	n/a	1,594
130028	S Lindstrom				
130041	Green	Cat 3-PA	Cat 3-PA	n/a	1,830
130053	Comfort	Cat 3-PA	Cat 3-PA	n/a	220

**Table 5: Listing of Sample Lakes by Category**



\* Class codes are as follows:

Minnetonka: Lake Minnetonka

Cat 1: Remaining large (high-use) boating lakes (all have public access)

Cat 2-PA: Built-up area lakes with public access

Cat 2-no PA: Built-up area lakes without public access

Cat 3-PA: Rural area lakes with public access

Cat 3-no PA: Rural area lakes without public access

The public accesses with low usage were not sampled. The sample lakes by category and the public accesses demonstrating high and medium usage are provided below in Table 6.

**2. Public Access.** The public accesses for the Twin Cities Metro Area Lakes used in the study are provided in Table 6. To ensure the efficient use of field time, surveys were only handed out at high (H) and medium (M) use accesses. In addition, survey distributors visited accesses only when boaters were present in order to maximize efficiency. See Table 7 for public access sampling rates.

Category	Lake Name	#	Site code*	Site name
<b>Seven-County Twin Cities Lakes</b>				
Cat 1	Minnewashta	1	C17	Minnewashta
Cat 1	L & U Prior	2	S14	(lower/Sand Point)
			S15	(upper/Dewitt)
Cat 1	Big Marine	2	W4	south side
			W5	north side
Cat 1	White Bear	2	R32	north side
			R33	northwest side
Cat 2-PA	Josephine	1	R10	Josephine
Cat 2-PA	Christmas	1	H8	Christmas
Cat 2-PA	Turtle	1	R29	Turtle
Cat 2-PA	Calhoun	1	H5	Calhoun
Cat 2-PA	Nokomis	1	H63	Nokomis
Cat 2-PA	Bryant	1	H2	Bryant
Cat 2-PA	Eagle	1	H15	Eagle
Cat 2-PA	Johanna	1	R9	Johanna
Cat 2-PA	Owasso	1	R21	Owasso
Cat 3-PA	Clear	1	W8	Clear
Cat 3-PA	Thole	1	S18	Thole
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian
Cat 3-PA	Centerville	1	A2	Centerville
Cat 3-PA	Forest	2	W12	north side
			W13	east side
Cat 3-PA	Linwood	1	A15	Linwood
Cat 3-PA	Marion	1	D19	Marion
Cat 3-PA	Waconia	1	C29	Waconia
Minnetonka	Minnetonka	10	H37	Spring Park
			(not on map)**	Wayzata
			H39	Halstead Bay

Category	Lake Name	#	Site code*	Site name
			H41	North Arm
			H42	Carsons Bay
			H43	Phelps Bay
			H44	Cooks Bay
			H45	Grays Bay
			H51	Maxwell Bay
			H52	Lake Mtka. Regional Park
<b>Chisago County Lakes</b>				
Cat 3-PA	Chisago,S Lindstrom	1		Chisago,S Lindstrom
Cat 3-PA	Green	1		Green
Cat 3-PA	Comfort	1		Comfort

**Table 6: Sample Public Accesses**

\* Site code from Twin Cities Water Recreation map and table

\*\* Located near the Wayzata Yacht Club

Table 7 is below.

Distribution of public access survey sampling effort				
		Use ranks	Number of	Fraction
<b>By use rank</b>	<u>Fraction</u>	<u>to sample</u>	<u>sites to sample</u>	<u>per sample site</u>
High	0.75	(high & medium)	18	0.042
Medium to high	0.25	(high & medium)	8	0.031
Total	1.00		26	
<b>By lake class</b>	<u>Fraction</u>	<u># of surveys</u>		
Cat1	0.33	363		
Cat 2-PA	0.33	363		
Cat 3-PA	0.34	374		
Total	1.00	1100		
<b>By day of week</b>	<u>Fraction</u>			
Weekend/holiday	0.60			
Weekday	0.40			
Total	1.00			
<b>By month</b>	<u>Fraction</u>			
May	0.10			
June	0.30			
July	0.30			
August (to Labor Day)	0.30			
Total	1.00			

----- Lake class -----				
	Cat1	Cat 2-PA	Cat 3-PA	Total
<b>Total public accesses</b>	7	9	12	28
<u>Use ranks</u>				
High	5	6	7	18
Medium to high	1	3	4	8
Low (not part of survey)	1	0	1	2

**Table 7: Public Access Sampling Rates**

Note: Low use sites are counted from the air, but aren't visited for survey recruitment. There were two low usage sites.

**4. Riparians.** The riparian surveys were distributed for each category sample into 3 equal parts, with one part mailed in late June, one part in mid-late July, and one part in mid August. Follow-ups to each of the three mailings were mailed three weeks after the initial mailing. DNR provided the sample names and addresses in an MS Excel file. The overall sample was sorted within each category by lake, zip code and name before taking every nth name. From this overall sample, every third name for each mailing (i.e., late June, mid July, mid August) was sent a survey. There were eleven hundred names and addresses selected. The initial mailing consisted of 367 addresses for each of the three months (June, July, August). See Tables 8 and 9 for Sampling Rates and Categories.

	Number	Number of residents
<u>Lake category</u>	<u>of surveys</u>	<u>on sample lakes</u>
Cat 1	385	1604
Cat 2-PA	290	780
Cat 3-PA	385	2528
Cat 3-no PA	<u>40</u>	<u>40</u>
Total	1100	4952

**Table 8: Resident Survey Allocation to Sample Lakes within Lake Categories**

<u>#residents/ #surveys</u>	<u>Every Nth record to select</u>	<u>Random start (1st record selected)</u>
4.2	4	2
2.7	2 then 3	1
6.6	6 then 7	5
1.0	1	1

**Table 9: Selections From Lake Categories\***

\*File sorted within lake class on lake ID and address



Note: Excess records were removed by assigning a random number to each selected record, sorting the file on the random number, and removing the excess records with the largest random numbers.

Note: Aerial boat count information, including trailer counts, was provided after each flight to the DNR to check for consistency.

A total of 1100 surveys were handed out at public accesses and 665 were returned (60.5%). Eleven hundred surveys were mailed to riparians and 671 (61.1%) were returned.

### III. PROJECT TASKS

Table 10 below presents the tasks and a brief description of how each task will be accomplished.

Task	Description
Prepare a final, detailed work plan and submit for review, discussion, and revision.	A detailed work plan was prepared that included primary and backup flight dates, the contact methods for public and private accesses, analysis methods, data collection formats, and a detailed schedule.
Print survey questionnaires.	DNR provided the survey questionnaires. The surveys were printed professionally using black ink on beige paper in a six page format (one 11x17 outer page and one 8.5x11 insert). A commercial post office box was used as the receptacle for boaters and riparians to mail in their completed surveys. The address is:  DNR Twin Cities Metro Area Boating Survey 855 Village Center Drive, #381 Saint Paul, MN 55127
Gather data using the surveys and aerial over-flights, the latter including photographs.	The methods described above for measuring total use by source of boater and measuring boater experiences, perceptions, and characteristics by source of boater were used to gather data.
Computerize collected data and deliver automated data files to participating public agencies in a format they require.	All data was entered into a database. The completed surveys were processed using data entry forms and recorded as records in an MS Excel database. The data was formatted in MS Excel.
Analyze study results.	All data was analyzed and the study results reflected total boat/trailer counts for each flight by boating classification and activity. Also each survey question was computed by response in



Task	Description
	percentages.
Prepare a report on study methodology and study results. Deliver a camera-ready copy of the report to the DNR, along with 10 copies of the report.	This document serves as the final report that includes project methodology, results, and analysis. All project materials will be boxed and delivered to DNR when requested. A camera-ready copy and 10 additional copies will be provided to DNR.
Orally present the report to the DNR at a meeting.	An oral presentation will be created based on the final report in MS PowerPoint for a DNR meeting. The presentation is planned for approximately 20 minutes.

Table 10: Tasks & Descriptions

## IV. PROJECT SCHEDULE

The project schedule utilized for this study is provided in Figure 4.

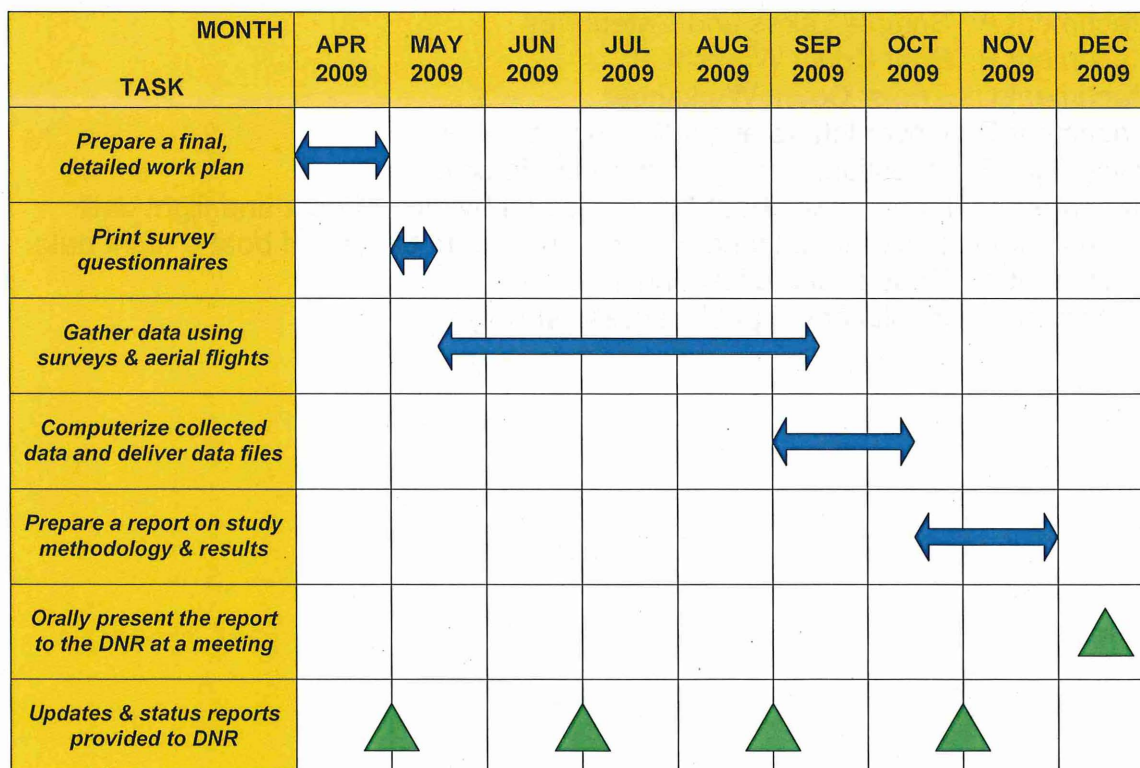


Figure 4: Schedule

## V. DELIVERABLES

The deliverables schedule used in this study is provided below in Table 11.

#	Task	Date
1	Final, detailed work and sampling plans	April
2	Finalize and print boat surveys	May
3	Conduct 1/3 of aerial flights & surveys	June
4	Conduct 1/3 of aerial flights & surveys	July
5	Conduct 1/3 of aerial flights & surveys	August
6	Delivery of automated files	September
7	Analyze data & deliver preliminary results	October
8	Study report of findings & copies of report	November
9	Oral report of findings	December

**Table 11: Delivery & Payment Schedule**

### **Attachments:**

Attachment A: Sample Lakes and Categories

Attachment B: Boat Count Worksheet

Attachment C: Trailer Count Worksheet

Attachment D: Cover letters and follow-up cover letters

Attachment E: Questionnaires (under separate cover)

Attachment F: Metro Lakes boat & trailer count by type of boat and flight date

Attachment G: Lake Minnetonka boat & trailer count by type of boat & flight date

Attachment H: Results of the lakeshore surveys

Attachment I: Results of the public access surveys

## Attachment A: Sample Lakes and Categories

Lake Number	Lake Name	Class 2009*	Class in '96*	Class in '84*	Lake Acres
<b>Seven-County Twin Cities Area Lakes</b>					
270133	Minnetonka	Minnetonka	Minnetonka	Minnetonka	14,034
100009	Minnewashta	Cat 1	Cat 1	Cat 1	763
700026	Lower Prior	Cat 1	Cat 1	Cat 1	1,146
700072	Upper Prior				
820052	Big Marine	Cat 1	Cat 1	Cat 1	1,577
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270067	Bryant	Cat 2-PA	Cat 2-PA	Cat 2-PA	199
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<b>Chisago County Lakes</b>					
130031	Sunrise	Cat 3-no PA	Cat 3-no PA	n/a	810
130012	Chisago	Cat 3-PA	Cat 3-PA	n/a	1,594
130028	S Lindstrom				
130041	Green	Cat 3-PA	Cat 3-PA	n/a	1,830
130053	Comfort	Cat 3-PA	Cat 3-PA	n/a	220

**Table 5: Listing of Sample Lakes by Category**

\* Class codes are as follows:

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Cat 2-PA: Built-up area lakes with public access

Cat 2-no PA: Built-up area lakes without public access

Cat 3-PA: Rural area lakes with public access

Cat 3-no PA: Rural area lakes without public access



**Attachment B: Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
Minnewashta										
Lower Prior										
Upper Prior										
Big Marine										
White Bear										
Josephine										
Christmas										
Turtle										
Calhoun										
Nokomis										
Bryant										
Eagle										
Johanna										
Owasso										
Netta										
Clear										
Thole										
Big Carnelian										
Centerville										
Forest										
Linwood										
Marion										
Waconia										
Sunrise										
Chisago										
South Lindstrom										
Green										
Comfort										

## Lake Minnetonka Worksheet

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
1 Halsteds										
2 Priests										
3 Cooks										
4 West Upper										
5 South Upper										
6 Smith Town										
7 Phelps										
8 East Upper										
9 Carmen's										
10 Old Channel										
11 Spring Park										
12 Black										
13 Emerald										
14 Seton										
15 Harrison's										
16 Jennings										
17 West Arm										
18 Forest										
19 Coffee Cove										
20 West Crystal										
21 East Crystal										
22 North Arm										
23 Stubbs										
24 Maxwell										
25 Lafayette										
26 Smiths										
27 Tanager										
28 Browns										

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
29 Wayzata										
30 Gray's										
31 Libb's										
32 Robinson										
33 St. Louis										
34 Carson's										
35 St. Alban's										
36 Excelsior										
37 Gideons										
38 Echo										
39 Big Island										
40 Veteran's										
41 Lower Lk S										
42 Lower Lk N										



**Attachment C: Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta		
Cat 1	Lower Prior	1	S14	Lower/Sand Point		
Cat 1	Upper Prior	1	S15	Upper/Dewitt		
Cat 1	Big Marine	2	W4	South Side		
			W5	North Side		
Cat 1	White Bear	2	R32	North Side		
			R33	Northwest Side		
Cat 2-PA	Josephine	1	R10	Josephine		
Cat 2-PA	Christmas	1	H8	Christmas		
Cat 2-PA	Turtle	1	R29	Turtle		
Cat 2-PA	Calhoun	1	H5	Calhoun		
Cat 2-PA	Nokomis	1	H63	Nokomis		
Cat 2-PA	Bryant	1	H2	Bryant		
Cat 2-PA	Eagle	1	H15	Eagle		
Cat 2-PA	Johanna	1	R9	Johanna		
Cat 2-PA	Owasso	1	R21	Owasso		
Cat 3-PA	Clear	1	W8	Clear		
Cat 3-PA	Thole	1	S18	Thole		
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian		
Cat 3-PA	Centerville	1	A2	Centerville		
Cat 3-PA	Forest	2	W12	North Side		
			W13	East Side		
Cat 3-PA	Linwood	1	A15	Linwood		
Cat 3-PA	Marion	1	D19	Marion		
Cat 3-PA	Waconia	1	C29	Waconia		
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom		
Cat 3-PA	Green	1		Green		
Cat 3-PA	Comfort	1		Comfort		

**Lake Minnetonka Trailer/Car Toppers/Pickups Count Worksheet**

<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Minnetonka	10	H37	Spring Park		
		(not on map)*	Wayzata		
		H39	Halstead Bay		
		H41	North Arm		
		H42	Carson's Bay		
		H43	Phelps Bay		
		H44	Cooks Bay		
		H45	Grays Bay		
		H51	Maxwell Bay		
		H52	Lk Mtka Regional Park		

Attachment D: Cover Letters & Follow-up Cover Letters

MN DNR letterhead paper and envelopes were used to print the letters.

Lakeshore resident cover letter #1

Dear (name\_coverletter),

Every few years we—the Minnesota Department of Natural Resources—survey boaters on recreational boating issues, such as boating opportunities and boating safety. We make many decisions that affect these issues. When making these decisions, we want to be sure we understand what you think.

**Please take 15 minutes to fill out the enclosed survey and return it to us.** You are one of only a small number of randomly selected lakeshore-resident boaters receiving this survey, so your views are very important to us. Your survey answers are strictly confidential and will never be associated with your name.

This boating study—for the greater Twin Cities metropolitan area—is being conducted by Thompson Engineering Company. If you have any questions about this survey, please contact me at 952-826-6769, or send me an email at [Martha.Reger@dnr.state.mn.us](mailto:Martha.Reger@dnr.state.mn.us).

Thanks for your help!

Sincerely,

A handwritten signature in black ink that reads "Martha J. Reger". The signature is written in a cursive style. To the right of the signature is a vertical line.

Martha J. Reger, Area Supervisor  
Trails and Waterways Division

Lakeshore resident follow-up cover letter

Dear (name\_coverletter),

About three weeks ago we sent you a survey about your boating experiences in the Twin Cities metropolitan area. We've received many valuable responses to our survey, but we've missed hearing from you.

**Please take 15 minutes to fill out the enclosed survey and return it to us.** You are one of only a small number of randomly selected lakeshore-resident boaters receiving this survey, so your views are very important to us. Your survey answers are strictly confidential and will never be associated with your name.

Every few years we—the Minnesota Department of Natural Resources—survey boaters on recreational boating issues, such as boating opportunities and boating safety. We make many decisions that affect these issues. When making these decisions, we want to be sure we understand what you think.

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Thanks for your help!

Sincerely,



Martha J. Reger, Area Supervisor  
Trails and Waterways Division



Public Access Cover Letter

Dear Boater,

Every few years we—the Minnesota Department of Natural Resources—survey boaters on recreational boating issues, such as boating opportunities and boating safety. We make many decisions that affect these issues. When making these decisions, we want to be sure we understand what you think.

**Please take 15 minutes to fill out the enclosed survey and return it to us.** You are one of only a small number of randomly selected public-access boaters receiving this survey, so your views are very important to us. Your survey answers are strictly confidential and will never be associated with your name.

This boating study—for the greater Twin Cities metropolitan area—is being conducted by Thompson Engineering Company. If you have any questions about this survey, please contact me at 952-826-6769, or send me an email at [Martha.Reger@dnr.state.mn.us](mailto:Martha.Reger@dnr.state.mn.us).

Thanks for your help!

Sincerely,



Martha J. Reger, Area Supervisor  
Trails and Waterways Division

Public Access Follow-up Cover Letter

Dear Boater,

About three weeks ago we sent you a survey about your boating experiences in the Twin Cities metropolitan area. We've received many valuable responses to our survey, but we've missed hearing from you.

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Every few years we—the Minnesota Department of Natural Resources—survey boaters on recreational boating issues, such as boating opportunities and boating safety. We make many decisions that affect these issues. When making these decisions, we want to be sure we understand what you think.

This boating study is being conducted by Thompson Engineering Company. If you have any questions about this survey, please contact me at 952-826-6769, or send me an email at [Martha.Reger@dnr.state.mn.us](mailto:Martha.Reger@dnr.state.mn.us).

Thanks for your help!

Sincerely,

A handwritten signature in black ink that reads "Martha J. Reger". The signature is written in a cursive style. To the right of the signature is a vertical line.

Martha J. Reger, Area Supervisor  
Trails and Waterways Division



# Attachment E: Questionnaires

(sent under separate cover earlier)

# Attachment F: Metro Lakes Boat & Trailer Counts

Flight Date: Monday, May 25, 2009

Flight Start Time: 1330; Flight End Time: 1530 Partly Cloudy, Wind SE 15-20

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
Minnewashta	0	0	6	0	1	0	0	0	3	4
Lower Prior	0	41	10	0	21	4	0	0	29	47
Upper Prior	0	11	11	0	6	0	0	0	13	15
Big Marine	0	3	17	0	9	1	2	0	14	18
White Bear	0	15	31	10	15	3	0	12	40	46
Josephine	0	1	4	0	0	0	0	0	0	5
Christmas	0	1	4	0	3	0	0	0	1	7
Turtle	0	6	6	0	2	0	0	0	6	8
Calhoun	0	0	0	0	0	0	10	0	10	0
Nokomis	0	0	1	0	0	0	5	0	6	0
Bryant	0	1	12	0	2	0	1	0	9	7
Eagle	0	0	12	0	2	0	1	0	3	12
Johanna	0	1	4	2	2	0	0	0	3	6
Owasso	0	2	5	0	4	1	0	0	6	6
Netta	0	0	0	0	0	0	0	0	0	0
Clear	0	3	8	0	2	0	0	0	0	13
Thole	0	0	3	0	0	0	0	0	0	3
Big Carnelian	0	3	11	1	4	0	0	0	10	9
Centerville	0	3	14	0	2	1	0	0	11	9
Forest	0	5	21	1	24	4	0	0	28	27
Linwood	0	1	9	0	0	0	0	0	4	6
Marion	0	4	6	1	0	2	0	0	8	5
Waconia	0	7	13	5	10	2	0	0	20	17
Sunrise	0	1	12	0	0	0	0	0	4	9
Chisago	0	1	22	0	5	0	0	0	12	16
South Lindstrom	0	3	18	0	7	0	0	0	9	19
Green	0	5	12	0	2	2	0	0	14	7
Comfort	0	0	5	0	5	0	0	0	4	6



Flight Date: Monday, May 25, 2009

Flight Start Time: 1330; Flight End Time: 1530 Partly Cloudy, Wind SE 15-20

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	5	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	14	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	10	
Cat 1	Big Marine	2	W4	South Side	15	
			W5	North Side	10	
Cat 1	White Bear	2	R32	North Side	11	
			R33	Northwest Side	10	
Cat 2-PA	Josephine	1	R10	Josephine	4	
Cat 2-PA	Christmas	1	H8	Christmas	5	
Cat 2-PA	Turtle	1	R29	Turtle	13	
Cat 2-PA	Calhoun	1	H5	Calhoun	0	
Cat 2-PA	Nokomis	1	H63	Nokomis	1	
Cat 2-PA	Bryant	1	H2	Bryant	8	
Cat 2-PA	Eagle	1	H15	Eagle	3	
Cat 2-PA	Johanna	1	R9	Johanna	7	
Cat 2-PA	Owasso	1	R21	Owasso	4	
Cat 3-PA	Clear	1	W8	Clear	8	
Cat 3-PA	Thole	1	S18	Thole	2	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	5	
Cat 3-PA	Centerville	1	A2	Centerville	15	
Cat 3-PA	Forest	2	W12	North Side	11	
			W13	East Side	14	
Cat 3-PA	Linwood	1	A15	Linwood	9	
Cat 3-PA	Marion	1	D19	Marion	9	
Cat 3-PA	Waconia	1	C29	Waconia	7	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	12	
Cat 3-PA	Green	1		Green	10	
Cat 3-PA	Comfort	1		Comfort	3	

Flight Date Saturday, June 13, 2009

Flight Start Time: 1400; Flight End Time: 1645 Clear, Wind S 5

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jet ski	Canoe	Other	Wake	No Wake
Minnewashta	0	4	20	0	5	1	2	0	5	27
Lower Prior	0	58	10	0	15	7	0	0	20	70
Upper Prior	0	12	12	0	10	4	0	0	9	29
Big Marine	0	15	38	2	6	2	0	0	11	52
White Bear	0	22	20	36	28	0	0	0	31	75
Josephine	0	1	1	0	0	2	0	0	1	3
Christmas	0	3	4	0	2	0	0	0	3	6
Turtle	0	5	8	0	3	0	0	0	3	13
Calhoun	0	0	0	0	0	0	20	5	20	5
Nokomis	0	0	2	0	0	0	14	5	18	3
Bryant	0	4	10	0	4	0	0	0	4	14
Eagle	0	3	16	0	6	0	0	0	2	23
Johanna	0	2	4	0	1	0	0	0	2	5
Owasso	0	3	6	0	11	0	1	0	6	15
Netta	0	0	2	0	0	0	0	0	0	2
Clear	0	2	4	0	3	2	0	0	3	8
Thole	0	6	0	0	0	0	0	0	0	6
Big Carnelian	0	9	12	0	5	0	0	0	6	20
Centerville	0	4	8	0	2	0	0	0	5	9
Forest	0	15	34	2	32	3	0	1	24	63
Linwood	0	2	11	0	6	2	0	0	5	16
Marion	0	12	11	0	6	2	0	0	5	26
Waconia	0	9	33	4	25	2	0	0	15	58
Sunrise	0	1	6	0	2	0	0	0	0	9
Chisago	0	7	22	0	6	3	0	0	15	23
South Lindstrom	0	4	12	0	5	0	0	0	6	15
Green	0	3	17	0	2	3	0	0	8	17
Comfort	0	3	3	0	2	1	0	0	4	5

Flight Date Saturday, June 13, 2009

Flight Start Time: 1400; Flight End Time: 1645 Clear, Wind S 5

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	15	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	11	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	24	
Cat 1	Big Marine	2	W4	South Side	27	
			W5	North Side	28	
Cat 1	White Bear	2	R32	North Side	15	
			R33	Northwest Side	26	
Cat 2-PA	Josephine	1	R10	Josephine	1	
Cat 2-PA	Christmas	1	H8	Christmas	3	
Cat 2-PA	Turtle	1	R29	Turtle	5	
Cat 2-PA	Calhoun	1	H5	Calhoun	0	
Cat 2-PA	Nokomis	1	H63	Nokomis	2	
Cat 2-PA	Bryant	1	H2	Bryant	11	
Cat 2-PA	Eagle	1	H15	Eagle	6	
Cat 2-PA	Johanna	1	R9	Johanna	0	
Cat 2-PA	Owasso	1	R21	Owasso	13	
Cat 3-PA	Clear	1	W8	Clear	7	
Cat 3-PA	Thole	1	S18	Thole	3	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	4	
Cat 3-PA	Centerville	1	A2	Centerville	10	
Cat 3-PA	Forest	2	W12	North Side	12	
			W13	East Side	14	
Cat 3-PA	Linwood	1	A15	Linwood	16	
Cat 3-PA	Marion	1	D19	Marion	19	
Cat 3-PA	Waconia	1	C29	Waconia	14	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	46	
Cat 3-PA	Green	1		Green	10	
Cat 3-PA	Comfort	1		Comfort	5	



Flight Date: Wednesday, June 17, 2009

Flight Start Time: 1500; Flight End Time: 1730 Mostly Cloudy, Wind E 8

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
Minnewashta	0	0	5	0	0	0	0	0	1	4
Lower Prior	0	4	6	0	0	5	0	0	7	8
Upper Prior	0	3	6	0	0	1	0	0	2	8
Big Marine	0	0	14	0	0	0	0	0	4	10
White Bear	0	2	16	0	2	1	0	0	8	13
Josephine	0	0	1	0	0	0	0	0	0	1
Christmas	0	0	1	0	2	0	0	0	1	2
Turtle	0	1	4	0	0	0	0	0	1	4
Calhoun	0	0	0	0	0	0	3	1	4	0
Nokomis	0	0	0	0	0	0	4	0	4	0
Bryant	0	0	8	0	0	0	1	0	0	9
Eagle	0	0	2	0	0	0	0	0	0	2
Johanna	0	0	2	0	0	0	0	0	0	2
Owasso	0	2	3	1	0	0	0	0	2	4
Netta	0	0	1	0	0	0	0	0	0	1
Clear	0	0	0	0	0	0	0	0	0	0
Thole	0	0	1	0	0	0	0	0	0	1
Big Carnelian	0	3	3	0	0	0	0	0	3	3
Centerville	0	2	5	0	1	0	0	0	2	6
Forest	0	2	21	0	7	3	0	0	8	25
Linwood	0	0	3	0	0	0	4	0	0	7
Marion	0	1	4	0	0	1	0	0	1	5
Waconia	0	1	11	0	1	2	0	0	4	11
Sunrise	0	0	4	0	0	0	0	0	1	3
Chisago	0	0	11	0	1	2	0	0	4	10
South Lindstrom	0	0	3	0	1	0	0	0	3	1
Green	0	0	9	0	0	0	0	0	1	8
Comfort	0	0	2	0	0	0	0	0	1	1

Flight Date: Wednesday, June 17, 2009

Flight Start Time: 1500; Flight End Time: 1730 Mostly Cloudy, Wind E 8

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	4	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	7	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	6	
Cat 1	Big Marine	2	W4	South Side	2	
			W5	North Side	7	
Cat 1	White Bear	2	R32	North Side	10	
			R33	Northwest Side	0	
Cat 2-PA	Josephine	1	R10	Josephine	0	
Cat 2-PA	Christmas	1	H8	Christmas	2	
Cat 2-PA	Turtle	1	R29	Turtle	2	
Cat 2-PA	Calhoun	1	H5	Calhoun	0	
Cat 2-PA	Nokomis	1	H63	Nokomis	0	
Cat 2-PA	Bryant	1	H2	Bryant	5	
Cat 2-PA	Eagle	1	H15	Eagle	1	
Cat 2-PA	Johanna	1	R9	Johanna	0	
Cat 2-PA	Owasso	1	R21	Owasso	2	
Cat 3-PA	Clear	1	W8	Clear	0	
Cat 3-PA	Thole	1	S18	Thole	1	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	3	
Cat 3-PA	Centerville	1	A2	Centerville	7	
Cat 3-PA	Forest	2	W12	North Side	6	
			W13	East Side	5	
Cat 3-PA	Linwood	1	A15	Linwood	2	
Cat 3-PA	Marion	1	D19	Marion	0	
Cat 3-PA	Waconia	1	C29	Waconia	4	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	9	
Cat 3-PA	Green	1		Green	3	
Cat 3-PA	Comfort	1		Comfort	0	

Flight Date: Saturday, June 27, 2009

Flight Start Time: 1400; Flight End Time: 1600 Mostly Cloudy, Wind SW 15-25

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jet ski	Canoe	Other	Wake	No Wake
Minnewashta	0	2	2	0	1	0	0	0	0	5
Lower Prior	0	8	12	0	7	0	0	0	6	21
Upper Prior	0	4	4	0	7	0	0	0	4	11
Big Marine	0	1	14	1	1	2	0	0	8	11
White Bear	0	6	17	4	10	2	0	2	9	32
Josephine	0	0	1	0	1	0	0	0	0	2
Christmas	0	3	0	0	0	1	0	0	1	3
Turtle	0	1	2	0	0	1	0	0	2	2
Calhoun	0	0	4	2	0	0	4	36	10	36
Nokomis	0	0	2	0	0	0	3	11	2	14
Bryant	0	0	2	0	0	0	1	0	0	3
Eagle	0	0	7	0	0	0	0	0	1	6
Johanna	0	2	6	0	2	0	0	0	3	7
Owasso	0	2	3	0	1	1	0	0	2	5
Netta	0	0	3	0	0	0	0	0	1	2
Clear	0	0	2	0	0	0	0	0	1	1
Thole	0	4	1	0	2	0	0	0	1	6
Big Carnelian	0	3	6	0	1	0	0	0	4	6
Centerville	0	2	5	0	1	0	0	0	3	5
Forest	0	4	25	2	7	2	0	0	12	28
Linwood	0	0	2	0	1	0	0	0	1	2
Marion	0	1	4	0	0	0	0	0	1	4
Waconia	0	3	6	2	7	1	0	2	8	13
Sunrise	0	0	3	0	1	0	0	0	1	3
Chisago	0	3	9	0	3	0	0	0	3	12
South Lindstrom	0	1	6	0	2	0	0	0	4	5
Green	0	2	10	0	1	0	0	0	4	9
Comfort	0	0	2	0	1	0	0	0	0	3



Flight Date: Saturday, June 27, 2009

Flight Start Time: 1400; Flight End Time: 1600 Mostly Cloudy, Wind SW 15-25

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	3	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	11	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	4	
Cat 1	Big Marine	2	W4	South Side	4	
			W5	North Side	3	
Cat 1	White Bear	2	R32	North Side	7	
			R33	Northwest Side	6	
Cat 2-PA	Josephine	1	R10	Josephine	2	
Cat 2-PA	Christmas	1	H8	Christmas	1	
Cat 2-PA	Turtle	1	R29	Turtle	2	
Cat 2-PA	Calhoun	1	H5	Calhoun	3	
Cat 2-PA	Nokomis	1	H63	Nokomis	2	
Cat 2-PA	Bryant	1	H2	Bryant	3	
Cat 2-PA	Eagle	1	H15	Eagle	6	
Cat 2-PA	Johanna	1	R9	Johanna	6	
Cat 2-PA	Owasso	1	R21	Owasso	4	
Cat 3-PA	Clear	1	W8	Clear	1	
Cat 3-PA	Thole	1	S18	Thole	1	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	4	
Cat 3-PA	Centerville	1	A2	Centerville	4	
Cat 3-PA	Forest	2	W12	North Side	11	
			W13	East Side	5	
Cat 3-PA	Linwood	1	A15	Linwood	2	
Cat 3-PA	Marion	1	D19	Marion	3	
Cat 3-PA	Waconia	1	C29	Waconia	6	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	11	
Cat 3-PA	Green	1		Green	5	
Cat 3-PA	Comfort	1		Comfort	0	

Flight Date: Saturday, July 4, 2009

Flight Start Time: 1350; Flight End Time: 1730 Sunny, Wind S 10

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jet ski	Canoe	Other	Wake	No Wake
Minnewashta	0	6	5	0	2	0	3	0	5	11
Lower Prior	4	126	2	0	80	5	0	1	32	186
Upper Prior	2	21	3	0	18	2	0	0	7	39
Big Marine	0	49	11	1	12	4	0	1	34	44
White Bear	0	44	1	1	42	3	0	0	11	80
Josephine	1	0	5	0	0	1	0	0	1	6
Christmas	0	5	2	0	3	1	1	0	2	10
Turtle	0	9	5	0	2	1	0	0	6	11
Calhoun	0	0	4	3	0	0	11	66	11	73
Nokomis	0	0	4	1	0	0	6	29	10	30
Bryant	0	4	3	0	7	0	0	0	2	12
Eagle	0	3	5	0	4	0	0	0	3	9
Johanna	0	2	4	0	0	0	1	0	2	5
Owasso	0	6	5	0	2	0	0	0	5	8
Netta	0	0	0	0	0	0	0	0	0	0
Clear	0	8	3	0	11	2	0	0	10	14
Thole	0	1	2	0	0	0	0	0	0	3
Big Carnelian	0	19	3	0	11	2	1	0	10	26
Centerville	0	9	3	0	1	4	0	0	9	8
Forest	0	65	5	0	77	5	0	0	80	72
Linwood	0	2	3	0	5	2	0	0	8	4
Marion	0	21	4	0	1	4	0	0	9	21
Waconia	0	56	21	1	11	0	0	11	20	80
Sunrise	0	0	1	0	1	0	0	0	1	1
Chisago	0	10	7	0	12	2	0	0	4	27
South Lindstrom	0	22	0	0	19	0	0	0	3	38
Green	0	11	9	0	18	2	0	1	13	28
Comfort	0	6	6	0	11	2	1	0	7	19

Flight Date: Saturday, July 4, 2009

Flight Start Time: 1350; Flight End Time: 1730Sunny, Wind S 10

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	8	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	45	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	13	
Cat 1	Big Marine	2	W4	South Side	27	
			W5	North Side	46	
Cat 1	White Bear	2	R32	North Side	32	
			R33	Northwest Side	21	
Cat 2-PA	Josephine	1	R10	Josephine	3	
Cat 2-PA	Christmas	1	H8	Christmas	4	
Cat 2-PA	Turtle	1	R29	Turtle	22	
Cat 2-PA	Calhoun	1	H5	Calhoun	8	
Cat 2-PA	Nokomis	1	H63	Nokomis	11	
Cat 2-PA	Bryant	1	H2	Bryant	13	
Cat 2-PA	Eagle	1	H15	Eagle	2	
Cat 2-PA	Johanna	1	R9	Johanna	13	
Cat 2-PA	Owasso	1	R21	Owasso	5	
Cat 3-PA	Clear	1	W8	Clear	10	
Cat 3-PA	Thole	1	S18	Thole	2	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	9	
Cat 3-PA	Centerville	1	A2	Centerville	17	
Cat 3-PA	Forest	2	W12	North Side	33	
			W13	East Side	18	
Cat 3-PA	Linwood	1	A15	Linwood	14	
Cat 3-PA	Marion	1	D19	Marion	32	
Cat 3-PA	Waconia	1	C29	Waconia	39	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	52	
Cat 3-PA	Green	1		Green	17	
Cat 3-PA	Comfort	1		Comfort	10	



Flight Date: Saturday, July 11, 2009

Flight Start Time: 1230; Flight End Time: 1400 Mostly Cloudy, Wind E 8

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
Minnewashta	0	4	9	0	0	1	0	0	2	12
Lower Prior	2	34	8	0	15	6	0	0	15	50
Upper Prior	0	17	6	0	7	0	2	0	10	22
Big Marine	0	13	37	2	10	1	0	0	11	52
White Bear	0	17	15	12	18	1	4	0	13	54
Josephine	0	1	2	0	1	0	0	0	1	3
Christmas	0	3	5	0	1	0	0	0	2	7
Turtle	0	2	5	0	1	0	0	0	0	8
Calhoun	0	0	3	0	0	0	1	21	4	21
Nokomis	0	0	2	0	0	0	1	8	0	11
Bryant	0	2	3	0	3	0	0	0	0	8
Eagle	0	0	13	0	1	0	0	0	1	13
Johanna	0	2	4	1	1	0	0	0	2	6
Owasso	0	9	7	0	2	0	0	0	6	12
Netta	0	0	1	0	0	0	0	0	0	1
Clear	0	1	5	0	1	0	0	0	1	6
Thole	0	0	1	0	0	0	0	0	0	1
Big Carnelian	0	6	6	0	3	0	0	0	4	11
Centerville	0	4	7	0	3	3	0	0	7	10
Forest	0	13	19	1	18	4	0	0	19	36
Linwood	0	3	8	0	3	0	0	0	2	12
Marion	0	6	34	0	2	0	0	0	9	33
Waconia	0	6	30	3	10	2	0	0	21	30
Sunrise	0	1	7	0	2	0	0	0	0	10
Chisago	0	5	19	1	4	0	0	0	5	24
South Lindstrom	0	6	8	0	5	2	0	0	7	14
Green	0	4	16	1	4	0	0	0	3	22
Comfort	0	3	5	0	2	0	0	0	1	9

Flight Date: Saturday, July 11, 2009

Flight Start Time: 1230; Flight End Time: 1400 Mostly Cloudy, Wind E 8

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	6	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	19	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	12	
Cat 1	Big Marine	2	W4	South Side	22	
			W5	North Side	20	
Cat 1	White Bear	2	R32	North Side	34	
			R33	Northwest Side	15	
Cat 2-PA	Josephine	1	R10	Josephine	2	
Cat 2-PA	Christmas	1	H8	Christmas	5	
Cat 2-PA	Turtle	1	R29	Turtle	7	
Cat 2-PA	Calhoun	1	H5	Calhoun	2	
Cat 2-PA	Nokomis	1	H63	Nokomis	1	
Cat 2-PA	Bryant	1	H2	Bryant	3	
Cat 2-PA	Eagle	1	H15	Eagle	4	
Cat 2-PA	Johanna	1	R9	Johanna	4	
Cat 2-PA	Owasso	1	R21	Owasso	6	
Cat 3-PA	Clear	1	W8	Clear	5	
Cat 3-PA	Thole	1	S18	Thole	0	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	7	
Cat 3-PA	Centerville	1	A2	Centerville	16	
Cat 3-PA	Forest	2	W12	North Side	17	
			W13	East Side	13	
Cat 3-PA	Linwood	1	A15	Linwood	9	
Cat 3-PA	Marion	1	D19	Marion	21	
Cat 3-PA	Waconia	1	C29	Waconia	14	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	33	
Cat 3-PA	Green	1		Green	11	
Cat 3-PA	Comfort	1		Comfort	1	

Flight Date: Wednesday, July 15, 2009

Flight Start Time: 1400; Flight End Time: 1630 Partly Cloudy, Wind W 15-20

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
Minnewashta	0	0	5	0	0	0	0	0	0	5
Lower Prior	0	7	7	0	3	1	0	0	5	13
Upper Prior	0	5	2	0	0	0	0	0	2	5
Big Marine	0	0	6	0	0	0	0	0	1	5
White Bear	0	3	4	15	6	2	0	0	6	24
Josephine	0	0	0	0	0	0	0	0	0	0
Christmas	0	0	3	0	1	0	0	0	2	2
Turtle	0	0	1	0	0	0	0	0	0	1
Calhoun	0	0	0	0	0	0	0	5	0	5
Nokomis	0	0	0	0	0	0	2	2	0	4
Bryant	0	0	5	0	0	0	0	0	1	4
Eagle	0	1	2	0	0	0	0	0	1	2
Johanna	0	0	1	0	0	0	2	0	0	3
Owasso	0	3	0	0	0	0	0	0	2	1
Netta	0	0	0	0	0	0	0	0	0	0
Clear	0	0	2	0	0	0	0	0	0	2
Thole	0	0	0	0	0	0	0	0	0	0
Big Carnelian	0	3	2	0	0	0	0	0	2	3
Centerville	0	0	4	0	0	0	0	0	1	3
Forest	0	2	8	0	1	1	0	0	2	10
Linwood	0	0	3	0	0	0	0	0	0	3
Marion	0	0	5	0	0	0	0	0	2	3
Waconia	0	0	9	8	0	0	0	3	3	17
Sunrise	0	0	0	0	0	0	0	0	0	0
Chisago	0	0	2	0	0	0	0	0	0	2
South Lindstrom	0	1	3	0	1	0	0	0	2	3
Green	0	2	2	0	0	0	0	0	0	4
Comfort	0	0	3	0	0	0	0	0	0	3



Flight Date: Wednesday, July 15, 2009

Flight Start Time: 1400; Flight End Time: 1630 Partly Cloudy, Wind W 15-20

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	2	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	7	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	3	
Cat 1	Big Marine	2	W4	South Side	1	
			W5	North Side	3	
Cat 1	White Bear	2	R32	North Side	5	
			R33	Northwest Side	2	
Cat 2-PA	Josephine	1	R10	Josephine	0	
Cat 2-PA	Christmas	1	H8	Christmas	3	
Cat 2-PA	Turtle	1	R29	Turtle	0	
Cat 2-PA	Calhoun	1	H5	Calhoun	0	
Cat 2-PA	Nokomis	1	H63	Nokomis	0	
Cat 2-PA	Bryant	1	H2	Bryant	4	
Cat 2-PA	Eagle	1	H15	Eagle	3	
Cat 2-PA	Johanna	1	R9	Johanna	1	
Cat 2-PA	Owasso	1	R21	Owasso	1	
Cat 3-PA	Clear	1	W8	Clear	2	
Cat 3-PA	Thole	1	S18	Thole	0	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	1	
Cat 3-PA	Centerville	1	A2	Centerville	2	
Cat 3-PA	Forest	2	W12	North Side	3	
			W13	East Side	1	
Cat 3-PA	Linwood	1	A15	Linwood	3	
Cat 3-PA	Marion	1	D19	Marion	5	
Cat 3-PA	Waconia	1	C29	Waconia	2	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	6	
Cat 3-PA	Green	1		Green	2	
Cat 3-PA	Comfort	1		Comfort	0	

Flight Date: Wednesday, July 29, 2009

Flight Start Time: 1500; Flight End Time: 1645 Overcast, Wind W 10

**Boat Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
Minnewashta	0	4	5	0	1	0	3	0	3	10
Lower Prior	0	14	9	0	3	4	1	0	9	22
Upper Prior	0	8	5	0	2	1	0	0	4	12
Big Marine	0	3	9	0	1	0	0	0	3	10
White Bear	0	6	8	6	8	0	0	0	10	18
Josephine	0	0	1	0	1	0	0	0	0	2
Christmas	0	3	3	0	0	0	0	0	1	5
Turtle	0	0	2	0	0	1	0	0	1	2
Calhoun	0	0	0	0	0	0	0	2	0	2
Nokomis	0	0	1	0	0	0	1	1	3	0
Bryant	0	2	2	0	0	0	4	1	0	9
Eagle	0	1	4	0	3	0	1	0	1	8
Johanna	0	0	3	0	0	0	0	0	0	3
Owasso	0	2	2	0	1	0	0	0	1	4
Netta	0	1	0	0	0	0	0	0	0	1
Clear	0	0	1	0	1	0	0	0	1	1
Thole	0	0	0	0	0	0	0	0	0	0
Big Carnelian	0	3	2	0	0	0	2	0	2	5
Centerville	0	0	4	0	0	0	0	0	1	3
Forest	0	4	9	0	10	0	0	0	6	17
Linwood	0	0	4	0	0	0	0	0	0	4
Marion	0	3	5	0	1	0	0	0	2	7
Waconia	0	5	12	1	4	0	0	0	3	19
Sunrise	0	0	1	0	0	0	0	0	0	1
Chisago	0	0	9	0	2	0	0	0	4	7
South Lindstrom	0	2	3	0	2	0	0	0	1	6
Green	0	0	5	0	1	0	0	0	1	5
Comfort	0	0	1	0	0	0	0	0	0	1

Flight Date: Wednesday, July 29, 2009

Flight Start Time: 1500; Flight End Time: 1645 Overcast, Wind W 10

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	3	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	12	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	7	
Cat 1	Big Marine	2	W4	South Side	6	
			W5	North Side	5	
Cat 1	White Bear	2	R32	North Side	Closed	
			R33	Northwest Side	15	
Cat 2-PA	Josephine	1	R10	Josephine	2	
Cat 2-PA	Christmas	1	H8	Christmas	4	
Cat 2-PA	Turtle	1	R29	Turtle	2	
Cat 2-PA	Calhoun	1	H5	Calhoun	0	
Cat 2-PA	Nokomis	1	H63	Nokomis	1	
Cat 2-PA	Bryant	1	H2	Bryant	4	
Cat 2-PA	Eagle	1	H15	Eagle	2	
Cat 2-PA	Johanna	1	R9	Johanna	3	
Cat 2-PA	Owasso	1	R21	Owasso	4	
Cat 3-PA	Clear	1	W8	Clear	1	
Cat 3-PA	Thole	1	S18	Thole	0	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	2	
Cat 3-PA	Centerville	1	A2	Centerville	4	
Cat 3-PA	Forest	2	W12	North Side	5	
			W13	East Side	4	
Cat 3-PA	Linwood	1	A15	Linwood	4	
Cat 3-PA	Marion	1	D19	Marion	8	
Cat 3-PA	Waconia	1	C29	Waconia	6	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	10	
Cat 3-PA	Green	1		Green	4	
Cat 3-PA	Comfort	1		Comfort	0	



Flight Date: Saturday, August 1, 2009

Flight Start Time: 1400; Flight End Time: 1545

Mostly Cloudy, Wind W 10

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
Minnewashta	0	2	4	0	3	0	0	0	2	7
Lower Prior	1	12	4	0	6	0	0	0	9	14
Upper Prior	0	6	3	1	6	2	1	0	7	12
Big Marine	0	2	12	1	0	0	2	0	1	16
White Bear	0	10	13	64	15	0	0	2	6	98
Josephine	0	0	0	0	0	0	0	0	0	0
Christmas	0	1	2	0	0	0	1	0	1	3
Turtle	0	7	2	0	0	0	0	0	1	8
Calhoun	0	0	2	0	0	0	6	25	8	25
Nokomis	0	0	1	0	0	0	4	13	17	1
Bryant	0	2	1	0	0	0	1	0	1	3
Eagle	0	0	1	0	2	0	0	0	1	2
Johanna	0	1	2	0	0	0	0	0	0	3
Owasso	0	3	4	0	1	0	0	0	3	5
Netta	0	0	2	0	0	0	0	0	0	2
Clear	0	0	1	0	1	0	0	0	0	2
Thole	0	0	1	0	0	0	0	0	0	1
Big Carnelian	0	0	3	0	1	0	0	0	1	3
Centerville	0	1	3	0	1	1	0	0	1	5
Forest	0	4	11	1	6	2	0	0	10	14
Linwood	0	2	3	0	1	2	0	0	3	5
Marion	0	3	4	0	0	0	0	0	2	5
Waconia	0	0	5	8	2	0	0	4	4	15
Sunrise	0	1	1	0	0	0	0	0	0	2
Chisago	1	1	4	0	0	0	0	0	2	4
South Lindstrom	0	1	6	0	1	0	0	0	1	7
Green	0	3	4	0	4	0	0	0	3	8
Comfort	0	1	1	0	1	0	0	0	0	3

Flight Date: Saturday, August 1, 2009

Flight Start Time: 1400; Flight End Time: 1545

Mostly Cloudy, Wind W 10

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	2	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	14	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	7	
Cat 1	Big Marine	2	W4	South Side	7	
			W5	North Side	10	
Cat 1	White Bear	2	R32	North Side	Closed	
			R33	Northwest Side	18	
Cat 2-PA	Josephine	1	R10	Josephine	0	
Cat 2-PA	Christmas	1	H8	Christmas	3	
Cat 2-PA	Turtle	1	R29	Turtle	5	
Cat 2-PA	Calhoun	1	H5	Calhoun	2	
Cat 2-PA	Nokomis	1	H63	Nokomis	1	
Cat 2-PA	Bryant	1	H2	Bryant	3	
Cat 2-PA	Eagle	1	H15	Eagle	1	
Cat 2-PA	Johanna	1	R9	Johanna	3	
Cat 2-PA	Owasso	1	R21	Owasso	5	
Cat 3-PA	Clear	1	W8	Clear	2	
Cat 3-PA	Thole	1	S18	Thole	1	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	2	
Cat 3-PA	Centerville	1	A2	Centerville	2	
Cat 3-PA	Forest	2	W12	North Side	10	
			W13	East Side	5	
Cat 3-PA	Linwood	1	A15	Linwood	5	
Cat 3-PA	Marion	1	D19	Marion	5	
Cat 3-PA	Waconia	1	C29	Waconia	4	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	10	
Cat 3-PA	Green	1		Green	6	
Cat 3-PA	Comfort	1		Comfort	1	

Flight Date: Sunday, August 23, 2009

Flight Start Time: 1340; Flight End Time: 1530

Mostly Sunny, Wind E 5-10

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jet ski	Canoe	Other	Wake	No Wake
Minnewashta	0	3	3	0	4	0	0	0	3	7
Lower Prior	1	15	7	0	8	0	0	0	14	17
Upper Prior	0	9	8	2	10	1	0	0	11	19
Big Marine	0	4	19	0	1	0	1	0	2	23
White Bear	0	7	16	59	28	0	0	2	7	105
Josephine	0	0	0	0	0	0	1	0	1	0
Christmas	0	1	1	0	0	0	1	0	1	2
Turtle	0	6	5	0	0	0	0	0	1	10
Calhoun	0	0	4	0	0	0	16	31	8	43
Nokomis	0	0	1	0	0	0	7	12	16	4
Bryant	0	2	1	0	0	0	1	0	1	3
Eagle	0	0	1	0	2	6	2	0	7	4
Johanna	0	3	0	0	0	0	0	0	1	2
Owasso	0	5	6	0	2	0	0	0	3	10
Netta	0	0	1	0	0	0	0	0	0	1
Clear	0	0	4	0	0	2	0	0	2	4
Thole	0	0	0	0	0	0	0	0	0	0
Big Carnelian	0	0	1	0	0	0	0	0	0	1
Centerville	0	1	16	0	2	7	0	0	8	18
Forest	0	7	20	0	11	8	0	0	10	36
Linwood	0	1	7	0	4	0	0	0	0	12
Marion	0	6	2	0	2	6	0	0	8	8
Waconia	0	0	7	7	4	0	0	8	6	20
Sunrise	0	0	1	0	0	0	0	0	0	1
Chisago	0	3	9	0	0	0	0	0	0	12
South Lindstrom	0	0	3	0	3	0	0	0	3	3
Green	0	7	3	0	6	0	0	0	3	13
Comfort	0	1	1	0	2	0	0	0	0	4



Flight Date: Sunday, August 23, 2009

Flight Start Time: 1340; Flight End Time: 1530

Mostly Sunny, Wind E 5-10

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	3	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	19	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	11	
Cat 1	Big Marine	2	W4	South Side	3	
			W5	North Side	12	
Cat 1	White Bear	2	R32	North Side	14	
			R33	Northwest Side	14	
Cat 2-PA	Josephine	1	R10	Josephine	0	
Cat 2-PA	Christmas	1	H8	Christmas	2	
Cat 2-PA	Turtle	1	R29	Turtle	9	
Cat 2-PA	Calhoun	1	H5	Calhoun	4	
Cat 2-PA	Nokomis	1	H63	Nokomis	1	
Cat 2-PA	Bryant	1	H2	Bryant	6	
Cat 2-PA	Eagle	1	H15	Eagle	2	
Cat 2-PA	Johanna	1	R9	Johanna	4	
Cat 2-PA	Owasso	1	R21	Owasso	9	
Cat 3-PA	Clear	1	W8	Clear	3	
Cat 3-PA	Thole	1	S18	Thole	0	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	1	
Cat 3-PA	Centerville	1	A2	Centerville	7	
Cat 3-PA	Forest	2	W12	North Side	4	
			W13	East Side	13	
Cat 3-PA	Linwood	1	A15	Linwood	6	
Cat 3-PA	Marion	1	D19	Marion	6	
Cat 3-PA	Waconia	1	C29	Waconia	8	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	11	
Cat 3-PA	Green	1		Green	8	
Cat 3-PA	Comfort	1		Comfort	1	

Flight Date: Wednesday, August 26, 2009  
 Flight Start Time: 1415; Flight End Time: 1600

Mostly Sunny, Wind N 15

### Boat Count Worksheet

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
Minnewashta	0	1	2	0	1	1	1	0	2	4
Lower Prior	0	9	4	0	8	3	0	0	8	16
Upper Prior	0	10	2	0	2	1	2	0	2	15
Big Marine	0	1	20	0	3	0	1	0	6	19
White Bear	0	4	25	11	3	4	1	0	7	41
Josephine	0	0	2	0	1	0	1	0	0	4
Christmas	0	1	2	0	0	0	2	0	0	5
Turtle	0	0	4	0	0	1	0	0	1	4
Calhoun	0	0	2	0	0	0	5	2	4	5
Nokomis	0	0	1	0	0	0	3	1	0	5
Bryant	0	2	4	0	0	0	0	0	1	5
Eagle	0	0	6	0	0	0	0	0	2	4
Johanna	0	0	1	0	0	0	1	0	0	2
Owasso	0	2	4	0	0	0	1	0	1	6
Netta	0	0	1	0	0	0	0	0	0	1
Clear	0	1	3	0	0	1	0	0	2	3
Thole	0	0	1	0	0	0	2	0	0	3
Big Carnelian	0	2	7	0	0	0	0	0	2	7
Centerville	0	2	7	0	0	1	0	0	4	6
Forest	0	2	24	0	11	0	2	0	10	29
Linwood	0	0	2	0	0	0	0	0	0	2
Marion	0	3	3	0	1	0	0	0	2	5
Waconia	0	2	7	1	5	0	0	0	4	11
Sunrise	0	0	1	0	0	0	0	0	0	1
Chisago	0	1	8	0	3	0	0	0	2	10
South Lindstrom	0	0	5	0	2	0	0	0	1	6
Green	0	1	7	0	3	0	0	0	2	9
Comfort	0	0	4	0	2	0	0	0	0	6

Flight Date: Wednesday, August 26, 2009

Flight Start Time: 1415; Flight End Time: 1600

Mostly Sunny, Wind N 15

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	5	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	11	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	6	
Cat 1	Big Marine	2	W4	South Side	4	
			W5	North Side	11	
Cat 1	White Bear	2	R32	North Side	21	
			R33	Northwest Side	9	
Cat 2-PA	Josephine	1	R10	Josephine	2	
Cat 2-PA	Christmas	1	H8	Christmas	1	
Cat 2-PA	Turtle	1	R29	Turtle	3	
Cat 2-PA	Calhoun	1	H5	Calhoun	1	
Cat 2-PA	Nokomis	1	H63	Nokomis	1	
Cat 2-PA	Bryant	1	H2	Bryant	5	
Cat 2-PA	Eagle	1	H15	Eagle	5	
Cat 2-PA	Johanna	1	R9	Johanna	1	
Cat 2-PA	Owasso	1	R21	Owasso	3	
Cat 3-PA	Clear	1	W8	Clear	4	
Cat 3-PA	Thole	1	S18	Thole	1	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	7	
Cat 3-PA	Centerville	1	A2	Centerville	4	
Cat 3-PA	Forest	2	W12	North Side	11	
			W13	East Side	9	
Cat 3-PA	Linwood	1	A15	Linwood	1	
Cat 3-PA	Marion	1	D19	Marion	6	
Cat 3-PA	Waconia	1	C29	Waconia	8	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	7	
Cat 3-PA	Green	1		Green	3	
Cat 3-PA	Comfort	1		Comfort	3	



Flight Date: Sunday, September 6, 2009

Flight Start Time: 1400; Flight End Time: 1535 Mostly Sunny, Wind S 5

**Boat Count Worksheet**

Lake	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
Minnewashta	0	10	3	1	2	4	2	0	7	15
Lower Prior	0	58	5	1	40	6	0	0	23	87
Upper Prior	0	14	4	0	14	7	1	2	10	32
Big Marine	0	23	28	0	18	3	0	0	21	51
White Bear	0	40	16	25	42	2	3	0	19	109
Josephine	0	2	1	1	2	3	0	0	4	5
Christmas	0	13	3	0	3	0	0	5	4	20
Turtle	0	6	2	0	2	1	1	0	3	9
Calhoun	0	0	3	0	0	0	16	25	10	34
Nokomis	0	0	2	0	0	0	13	7	10	12
Bryant	0	3	3	0	0	0	1	2	1	8
Eagle	0	6	2	0	10	3	0	0	2	19
Johanna	0	4	1	1	1	0	1	0	4	4
Owasso	0	9	4	0	5	2	0	0	7	13
Netta	0	0	1	0	0	0	0	0	1	0
Clear	0	2	6	0	5	2	0	0	6	9
Thole	0	0	2	0	0	0	0	0	0	2
Big Carnelian	0	8	7	2	5	3	0	0	9	16
Centerville	0	7	7	0	8	1	1	0	8	16
Forest	0	30	14	1	50	4	0	0	36	63
Linwood	0	4	5	0	6	1	0	0	6	10
Marion	0	9	9	2	8	4	1	0	11	22
Waconia	0	29	21	8	14	0	0	0	13	59
Sunrise	0	0	5	0	1	0	0	0	1	5
Chisago	0	8	12	1	11	0	0	0	5	27
South Lindstrom	0	3	5	0	8	2	0	0	5	13
Green	0	9	10	0	11	5	0	0	16	19
Comfort	0	3	3	0	2	1	0	0	2	7

Flight Date: Sunday, September 6, 2009

Flight Start Time: 1400; Flight End Time: 1535 Mostly Sunny, Wind S 5

**Trailer/Car Toppers/Pickups Count Worksheet**

<u>Category</u>	<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick-ups</u>	<u>Comments</u>
Cat 1	Minnewashta	1	C17	Minnewashta	9	
Cat 1	Lower Prior	1	S14	Lower/Sand Point	35	
Cat 1	Upper Prior	1	S15	Upper/Dewitt	16	
Cat 1	Big Marine	2	W4	South Side	28	
			W5	North Side	22	
Cat 1	White Bear	2	R32	North Side	29	
			R33	Northwest Side	20	
Cat 2-PA	Josephine	1	R10	Josephine	5	
Cat 2-PA	Christmas	1	H8	Christmas	6	
Cat 2-PA	Turtle	1	R29	Turtle	8	
Cat 2-PA	Calhoun	1	H5	Calhoun	3	
Cat 2-PA	Nokomis	1	H63	Nokomis	7	
Cat 2-PA	Bryant	1	H2	Bryant	5	
Cat 2-PA	Eagle	1	H15	Eagle	8	
Cat 2-PA	Johanna	1	R9	Johanna	7	
Cat 2-PA	Owasso	1	R21	Owasso	11	
Cat 3-PA	Clear	1	W8	Clear	11	
Cat 3-PA	Thole	1	S18	Thole	2	
Cat 3-PA	Big Carnelian	1	W3	Big Carnelian	9	
Cat 3-PA	Centerville	1	A2	Centerville	11	
Cat 3-PA	Forest	2	W12	North Side	24	
			W13	East Side	14	
Cat 3-PA	Linwood	1	A15	Linwood	9	
Cat 3-PA	Marion	1	D19	Marion	19	
Cat 3-PA	Waconia	1	C29	Waconia	30	
Cat 3-PA	Chisago, S Lindstrom	1		Chisago, S Lindstrom	32	
Cat 3-PA	Green	1		Green	18	
Cat 3-PA	Comfort	1		Comfort	8	

# **Attachment G: Lake Minnetonka Boat & Trailer Counts**



Flight Date: Sunday, May 24, 2009

Flight Start Time: 1300; Flight End Time: 1500

Clear, Wind E 0-5

**Lake Minnetonka Worksheet**

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
1 Halsted's	0	15	6	5	4	0	0	0	9	21
2 Priests	0	6	5	3	1	0	0	0	7	8
3 Cooks	7	15	3	1	6	2	0	0	14	20
4 West Upper	9	16	5	0	0	0	0	0	12	18
5 South Upper	1	6	7	0	4	0	0	0	7	11
6 Smith Town	0	3	6	0	1	0	0	0	3	7
7 Phelps	0	6	0	0	3	3	0	0	7	5
8 East Upper	2	12	5	0	1	0	0	0	14	6
9 Carmen's	0	5	0	0	3	0	0	0	5	3
10 Old Channel	1	15	4	0	1	0	0	0	17	4
11 Spring Park	4	15	2	1	7	0	0	0	18	11
12 Black	1	15	5	0	0	0	0	0	11	10
13 Emerald	0	2	2	0	5	0	0	0	1	8
14 Seton	0	1	4	0	0	0	0	0	0	5
15 Harrison's	2	11	6	0	6	0	0	0	16	9
16 Jennings	1	10	3	0	8	0	0	0	17	5
17 West Arm	1	12	2	0	3	0	0	0	12	6
18 Forest	1	12	3	0	4	3	0	0	9	14
19 Coffee Cove	1	24	6	0	6	0	0	0	8	29
20 West Crystal	2	7	3	0	0	0	0	0	4	8
21 East Crystal	1	10	1	0	3	0	0	0	8	7
22 North Arm	0	3	11	0	9	0	0	0	4	19
23 Stubbs	1	5	3	0	0	0	0	0	3	6
24 Maxwell	0	22	4	0	0	4	0	0	8	22
25 Lafayette	2	15	8	0	7	0	0	0	11	21
26 Smiths	0	3	1	0	2	0	0	0	2	4
27 Tanager	0	2	3	0	3	0	0	0	4	4
28 Browns	2	6	8	0	2	0	0	0	10	8
29 Wayzata	1	21	4	0	11	2	0	0	20	19
30 Gray's	0	14	6	0	0	0	0	0	13	7
31 Libb's	1	0	2	0	0	0	0	0	0	3

Flight Date: Sunday, May 24, 2009

Flight Start Time: 1300; Flight End Time: 1500

Clear, Wind E 0-5

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
32 Robinson	0	5	1	0	0	0	0	0	2	4
33 St. Louis	0	16	3	0	0	0	0	0	13	6
34 Carson's	0	0	2	16	1	0	0	0	16	3
35 St. Alban's	0	8	6	0	2	3	0	0	7	12
36 Excelsior	1	15	0	1	8	3	0	0	12	16
37 Gideons	2	12	1	1	10	0	0	0	9	17
38 Echo	2	11	4	0	7	0	0	0	9	15
39 Big Island	1	7	0	0	2	0	0	0	1	9
40 Veteran's	0	15	5	0	3	1	0	0	2	22
41 Lower Lk S	0	36	20	19	7	0	0	0	60	22
42 Lower Lk N	0	15	16	56	5	2	0	0	70	24

Flight Date: Sunday, May 24, 2009

Flight Start Time: 1300; Flight End Time: 1500

Clear; Wind E 0-5

**Lake Minnetonka Trailer/Toppers/Pickups Count Worksheet**

<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick- ups</u>	<u>Comments</u>
Minnetonka	10	H37	Spring Park	7	
		(not on map)*	Wayzata	10	
		H39	Halstead Bay	28	
		H41	North Arm	48	
		H42	Carson's Bay	13	
		H43	Phelps Bay	4	
		H44	Cooks Bay	21	
		H45	Grays Bay	70	
		H51	Maxwell Bay	52	
		H52	Lk Mtka Regional Park	60	



Flight Date: Saturday, June 6, 2009

Flight Start Time: 1400; Flight End Time: 1545 Overcast, Light Rain, Wind ENE 10

**Lake Minnetonka Worksheet**

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jet ski	Canoe	Other	Wake	No Wake
1 Halsted's	0	0	0	0	0	0	0	0	0	0
2 Priest's	0	0	1	0	0	0	0	0	1	0
3 Cook's	0	0	1	0	0	0	0	0	0	1
4 West Upper	0	0	2	0	0	0	0	0	1	1
5 South Upper	0	0	1	0	0	0	0	0	1	0
6 Smith Town	1	0	1	0	0	0	0	0	2	0
7 Phelps	0	0	1	0	0	0	0	0	0	1
8 East Upper	0	0	2	0	0	0	0	0	0	2
9 Carmen's	0	0	1	0	0	0	0	0	1	0
10 Old Channel	0	0	1	0	0	0	0	0	1	0
11 Spring Park	0	0	2	0	0	0	0	0	0	2
12 Black	0	0	0	0	0	0	0	0	0	0
13 Emerald	0	0	0	0	0	0	0	0	0	0
14 Seton	0	0	0	0	0	0	0	0	0	0
15 Harrison's	0	0	0	0	0	0	0	0	0	0
16 Jennings	1	0	1	0	0	0	0	0	1	1
17 West Arm	0	0	3	0	0	0	0	0	2	1
18 Forest	0	1	0	0	0	0	0	0	0	1
19 Coffee Cove	0	1	1	0	0	0	0	0	1	1
20 West Crystal	0	0	3	1	0	0	0	0	2	2
21 East Crystal	0	0	2	0	0	0	0	0	1	1
22 North Arm	0	2	3	0	0	0	0	0	3	2
23 Stubbs	0	0	1	0	0	0	0	0	0	1
24 Maxwell	0	0	2	1	0	0	0	0	1	2
25 Lafayette	1	0	1	0	0	0	0	0	1	1
26 Smith's	0	0	1	0	0	0	0	0	1	0
27 Tanager	0	0	0	0	0	0	0	0	0	0
28 Browns	1	0	2	0	0	0	0	0	1	2

Flight Date: Saturday, June 6, 2009

Flight Start Time: 1400; Flight End Time: 1545 Overcast, Light Rain, Wind ENE 10

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
29 Wayzata	1	0	4	0	1	0	0	0	3	3
30 Gray's	0	0	1	0	0	0	0	0	1	0
31 Libb's	0	0	0	0	0	0	0	0	0	0
32 Robinson	0	0	1	1	0	0	0	0	0	2
33 St. Louis	0	0	0	0	0	0	0	0	0	0
34 Carson's	0	0	0	0	0	0	0	0	0	0
35 St. Alban's	0	0	0	0	0	0	0	0	0	0
36 Excelsior	1	0	1	0	0	0	0	0	1	1
37 Gideons	0	0	0	0	0	0	0	0	0	0
38 Echo	0	0	1	0	0	0	0	0	1	0
39 Big Island	0	0	2	0	0	0	0	0	1	1
40 Veteran's	0	0	1	0	0	0	0	0	0	1
41 Lower Lk S	2	0	5	0	0	0	0	1	2	6
42 Lower Lk N	0	1	4	13	0	0	0	0	12	6

Flight Date: Saturday, June 6, 2009

Flight Start Time: 1400; Flight End Time: 1545 Overcast, Light Rain, Wind ENE 10

**Lake Minnetonka Trailer/Car Toppers/Pickups Count Worksheet**

<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick- ups</u>	<u>Comments</u>
Minnetonka	10	H37	Spring Park	4	
		(not on map)*	Wayzata	2	
		H39	Halstead Bay	0	
		H41	North Arm	4	
		H42	Carson's Bay	1	
		H43	Phelps Bay	2	
		H44	Cooks Bay	3	
		H45	Grays Bay	12	
		H51	Maxwell Bay	21	
		H52	Lk Mtka Regional Park	5	



Flight Date: Saturday, June 20, 2009

Flight Start Time: 1600; Flight End Time: 1700 Clear, Wind W 5

**Lake Minnetonka Worksheet**

<b>Mgmt Area</b>	<b>Cruiser</b>	<b>Runabout</b>	<b>Fishing</b>	<b>Sailboat</b>	<b>Pontoon</b>	<b>Jet ski</b>	<b>Canoe</b>	<b>Other</b>	<b>Wake</b>	<b>No Wake</b>
1 Halsted's	0	8	3	0	0	0	0	0	1	10
2 Priests	0	6	1	0	2	2	0	0	5	6
3 Cooks	0	15	1	0	2	2	0	0	4	16
4 West Upper	1	17	5	0	1	0	0	0	13	11
5 South Upper	0	8	1	0	1	0	0	0	5	5
6 Smith Town	0	16	0	0	4	0	0	0	9	11
7 Phelps	0	3	2	0	1	0	0	0	1	5
8 East Upper	0	19	3	0	3	0	0	0	14	11
9 Carmen's	0	4	4	0	1	0	0	0	1	8
10 Old Channel	1	4	3	0	0	0	0	0	1	7
11 Spring Park	0	33	0	0	2	0	0	0	12	23
12 Black	0	8	2	0	10	0	0	0	0	20
13 Emerald	0	7	0	0	4	0	0	0	0	11
14 Seton	0	2	2	0	2	0	0	0	0	6
15 Harrison's	0	5	1	0	7	0	0	0	5	8
16 Jennings	0	4	1	0	3	0	0	0	2	6
17 West Arm	0	15	2	0	12	0	0	0	14	15
18 Forest	0	3	4	0	7	0	0	0	0	14
19 Coffee Cove	0	15	3	0	5	0	0	0	3	20
20 West Crystal	0	13	3	0	0	0	0	0	8	8
21 East Crystal	0	18	4	0	5	0	0	0	14	13
22 North Arm	0	6	2	0	3	0	0	0	7	4
23 Stubbs	1	7	2	0	5	0	0	0	1	14
24 Maxwell	0	14	0	0	4	1	0	0	0	19
25 Lafayette	0	15	2	0	2	0	0	0	10	9
26 Smiths	0	4	0	0	5	0	0	0	2	7
27 Tanager	0	3	1	0	3	0	0	0	1	6
28 Browns	0	8	0	0	1	0	0	0	2	7
29 Wayzata	0	15	2	0	5	0	0	0	9	13

Flight Date: Saturday, June 20, 2009

Flight Start Time: 1600; Flight End Time: 1700 Clear, Wind W 5

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
30 Gray's	0	3	5	0	1	0	0	0	2	7
31 Libb's	0	0	3	0	0	0	0	0	0	3
32 Robinson	2	12	3	0	7	0	0	0	1	23
33 St. Louis	0	13	0	0	2	0	0	0	7	8
34 Carson's	0	34	5	1	5	0	0	0	3	42
35 St. Alban's	0	8	2	0	4	0	0	0	6	8
36 Excelsior	1	12	1	0	6	0	0	0	7	13
37 Gideons	0	7	6	1	6	0	0	0	5	15
38 Echo	0	3	3	0	4	0	0	0	4	6
39 Big Island	0	5	3	0	2	0	0	0	0	10
40 Veteran's	1	13	2	0	3	0	0	0	0	19
41 Lower Lk S	0	24	0	2	8	0	0	0	19	15
42 Lower Lk N	0	225	12	4	22	5	0	0	17	251

Flight Date: Saturday, June 20, 2009

Flight Start Time: 1600; Flight End Time: 1700 Clear, Wind W 5

**Lake Minnetonka Trailer/Car Toppers/Pickups Count Worksheet**

<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick- ups</u>	<u>Comments</u>
Minnetonka	10	H37	Spring Park	12	
		(not on map)*	Wayzata	13	
		H39	Halstead Bay	29	
		H41	North Arm	53	
		H42	Carson's Bay	14	
		H43	Phelps Bay	7	
		H44	Cooks Bay	9	
		H45	Grays Bay	72	
		H51	Maxwell Bay	61	
		H52	Lk Mtka Regional Park	47	



Flight Date: Friday, July 3, 2009

Flight Start Time: 1500; Flight End Time: 1600 Mostly Cloudy, Wind SE 4

**Lake Minnetonka Worksheet**

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jet ski	Canoe	Other	Wake	No Wake
1 Halsted's	0	9	3	0	5	0	0	0	4	13
2 Priests	0	5	2	0	2	0	0	0	5	4
3 Cooks	0	12	4	0	5	1	0	0	9	13
4 West Upper	2	29	5	0	6	2	0	0	16	28
5 South Upper	1	38	8	0	12	6	0	0	19	46
6 Smith Town	0	9	1	0	4	0	0	0	6	8
7 Phelps	0	1	3	0	1	0	0	0	1	4
8 East Upper	0	15	4	0	7	2	0	0	17	11
9 Carmen's	0	7	1	0	2	0	0	0	1	9
10 Old Channel	1	5	1	0	2	0	0	0	2	7
11 Spring Park	0	26	0	0	3	3	0	0	3	29
12 Black	0	6	1	0	2	0	0	0	0	9
13 Emerald	0	2	1	0	4	0	0	0	0	7
14 Seton	0	8	3	0	3	0	0	0	0	14
15 Harrison's	0	10	6	0	6	1	0	0	8	15
16 Jennings	1	7	1	0	3	2	0	0	4	10
17 West Arm	2	8	8	0	0	0	0	0	9	9
18 Forest	0	7	4	0	0	1	0	0	1	11
19 Coffee Cove	3	12	3	0	0	0	0	0	0	18
20 West Crystal	0	17	2	0	6	2	0	0	10	17
21 East Crystal	0	9	4	0	6	0	0	0	7	12
22 North Arm	3	7	2	0	1	1	0	0	4	10
23 Stubbs	0	12	0	0	0	3	0	0	0	15
24 Maxwell	1	25	3	0	4	1	0	0	8	26
25 Lafayette	1	15	2	0	3	4	0	0	7	18
26 Smiths	1	19	6	0	5	2	0	0	11	22
27 Tanager	0	4	1	0	1	0	0	0	1	5
28 Browns	0	9	0	0	3	0	0	0	4	8
29 Wayzata	0	24	7	2	9	2	0	0	18	26
30 Gray's	1	7	0	0	1	0	0	0	4	5

Flight Date: Friday, July 3, 2009

Flight Start Time: 1500; Flight End Time: 1600 Mostly Cloudy, Wind SE 4

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
31 Libb's	0	1	2	0	0	0	2	0	0	5
32 Robinson	0	13	0	1	0	0	0	0	0	14
33 St. Louis	0	8	1	0	0	0	0	0	0	9
34 Carson's	2	12	3	2	5	0	0	0	0	24
35 St. Alban's	0	14	2	0	3	5	0	0	5	19
36 Excelsior	0	10	6	2	2	0	0	0	7	13
37 Gideons	0	10	6	0	5	1	0	0	9	13
38 Echo	0	7	0	0	1	2	0	0	0	10
39 Big Island	1	7	0	1	1	0	0	0	0	10
40 Veteran's	1	9	0	0	4	0	0	0	0	14
41 Lower Lk S	0	20	5	4	8	0	2	0	14	25
42 Lower Lk N	30	97	50	11	64	0	0	0	0	252

**NOTE:** Mgmt Area 42 Lower Lk N count includes **185 No Wake** observations at **Big Island Beach**

Flight Date: Friday, July 3, 2009

Flight Start Time: 1500; Flight End Time: 1600 Mostly Cloudy, Wind SE 4

**Lake Minnetonka Trailer/Car Toppers/Pickups Count Worksheet**

<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick- ups</u>	<u>Comments</u>
Minnetonka	10	H37	Spring Park	12	
		(not on map)*	Wayzata	15	
		H39	Halstead Bay	27	
		H41	North Arm	44	
		H42	Carson's Bay	12	
		H43	Phelps Bay	4	
		H44	Cooks Bay	14	
		H45	Grays Bay	98	
		H51	Maxwell Bay	90	
		H52	Lk Mtka Regional Park	52	



Flight Date: Saturday, July 25, 2009

Flight Start Time: 1330; Flight End Time: 1530 Mostly Cloudy, Wind NW 15

**Lake Minnetonka Worksheet**

<b>Mgmt Area</b>	<b>Cruiser</b>	<b>Runabout</b>	<b>Fishing</b>	<b>Sailboat</b>	<b>Pontoon</b>	<b>Jetski</b>	<b>Canoe</b>	<b>Other</b>	<b>Wake</b>	<b>No Wake</b>
1 Halsted's	0	2	0	0	0	0	0	0	1	1
2 Priests	0	4	0	0	0	0	0	0	2	2
3 Cooks	0	5	2	0	1	0	0	0	3	5
4 West Upper	1	2	3	0	2	2	0	0	3	7
5 South Upper	0	4	3	0	0	0	2	0	5	4
6 Smith Town	0	4	1	0	1	0	0	0	0	6
7 Phelps	0	0	3	1	0	0	0	0	0	4
8 East Upper	3	3	4	1	0	0	0	0	3	8
9 Carmen's	0	0	1	0	0	0	0	0	0	1
10 Old Channel	0	5	1	0	2	0	0	0	1	7
11 Spring Park	0	10	2	0	0	0	0	0	8	4
12 Black	0	6	0	0	0	0	0	0	0	6
13 Emerald	0	2	3	0	0	0	0	0	0	5
14 Seton	1	8	0	0	2	0	0	0	0	11
15 Harrison's	0	2	0	0	0	0	1	0	0	3
16 Jennings	0	1	1	0	0	0	0	0	1	1
17 West Arm	0	8	0	0	0	3	0	0	4	7
18 Forest	0	6	1	0	1	2	0	0	0	10
19 Coffee Cove	0	7	0	0	0	3	0	0	0	10
20 West Crystal	4	5	2	0	2	1	0	0	5	9
21 East Crystal	3	9	2	0	5	1	0	0	7	13
22 North Arm	0	6	0	0	0	0	2	0	6	2
23 Stubbs	1	2	1	0	0	0	0	0	3	1
24 Maxwell	0	4	4	0	1	0	0	0	4	5
25 Lafayette	2	12	3	0	6	4	0	0	7	20
26 Smiths	1	6	1	0	2	0	0	0	6	4
27 Tanager	0	0	1	0	0	0	0	0	0	1
28 Browns	0	3	5	0	2	0	0	0	3	7
29 Wayzata	1	13	4	1	2	0	0	0	10	11
30 Gray's	0	3	1	0	0	0	0	0	0	4

Flight Date: Saturday, July 25, 2009

Flight Start Time: 1330; Flight End Time: 1530 Mostly Cloudy, Wind NW 15

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
31 Libb's	0	0	1	0	1	0	0	0	2	0
32 Robinson	0	1	0	0	0	0	0	0	0	1
33 St. Louis	0	2	0	8	1	0	0	0	0	11
34 Carson's	0	1	0	0	1	0	0	0	0	2
35 St. Alban's	0	3	2	0	1	0	0	0	1	5
36 Excelsior	0	7	1	0	2	0	0	0	8	2
37 Gideons	1	4	2	0	2	0	0	0	2	7
38 Echo	2	5	1	0	1	0	0	0	6	3
39 Big Island	2	5	0	0	0	0	0	0	0	7
40 Veteran's	2	6	1	0	3	0	0	0	0	12
41 Lower Lk S	2	13	1	4	0	0	0	0	13	7
42 Lower Lk N	7	86	4	25	5	0	0	0	30	97

Flight Date: Saturday, July 25, 2009

Flight Start Time: 1330; Flight End Time: 1530 Mostly Cloudy, Wind NW 15

**Lake Minnetonka Trailer/Car Toppers/Pickups Count Worksheet**

<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick- ups</u>	<u>Comments</u>
Minnetonka	10	H37	Spring Park	8	
		(not on map)*	Wayzata	8	
		H39	Halstead Bay	2	
		H41	North Arm	15	
		H42	Carson's Bay	3	
		H43	Phelps Bay	1	
		H44	Cooks Bay	3	
		H45	Grays Bay	40	
		H51	Maxwell Bay	21	
		H52	Lk Mtk Regional Park	12	



Flight Date: Saturday, August 8, 2009

Flight Start Time: 1400; Flight End Time: 1615 Mostly Sunny, Wind S 15-20

**Lake Minnetonka Worksheet**

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other*	Wake	No Wake
1 Halsted's	1	10	1	0	1	0	0	0	3	10
2 Priests	0	5	1	0	2	0	0	0	5	3
3 Cooks	1	8	1	0	2	0	0	0	6	6
4 West Upper	0	9	0	1	3	2	0	0	6	9
5 South Upper	0	25	4	0	6	0	0	0	7	28
6 Smith Town	2	3	1	0	0	0	0	0	1	5
7 Phelps	0	29	1	0	1	0	0	0	4	27
8 East Upper	0	12	2	5	2	1	0	2	11	13
9 Carmen's	1	0	2	0	0	0	0	0	0	3
10 Old Channel	1	3	1	0	0	0	0	0	2	3
11 Spring Park	0	7	1	0	0	0	0	0	1	7
12 Black	0	4	0	0	0	0	0	0	0	4
13 Emerald	1	6	2	0	0	0	0	0	0	9
14 Seton	3	8	0	0	0	0	0	0	0	11
15 Harrison's	1	7	2	0	1	0	0	0	3	8
16 Jennings	1	8	1	0	0	2	0	0	4	8
17 West Arm	2	11	0	0	0	2	0	0	6	9
18 Forest	1	9	2	0	0	1	0	0	3	10
19 Coffee Cove	5	9	1	0	2	2	0	0	1	18
20 West Crystal	1	9	0	0	0	2	0	0	9	3
21 East Crystal	1	19	3	0	3	4	0	0	18	12
22 North Arm	0	5	2	0	2	4	0	0	4	9
23 Stubbs	0	9	2	0	2	3	0	0	4	12
24 Maxwell	1	14	5	0	2	3	0	0	5	20
25 Lafayette	4	5	1	0	2	0	0	0	8	4
26 Smiths	0	1	3	0	0	0	0	0	1	3
27 Tanager	0	3	0	0	0	0	0	0	0	3
28 Browns	2	2	0	0	0	0	0	0	1	3
29 Wayzata	2	18	5	2	4	0	0	0	14	17
30 Gray's	0	2	3	0	0	0	0	0	1	4

Flight Date: Saturday, August 8, 2009

Flight Start Time: 1400; Flight End Time: 1615 Mostly Sunny, Wind S 15-20

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
31 Libb's	0	1	1	0	0	0	0	0	0	2
32 Robinson	3	5	3	0	1	0	0	0	0	12
33 St. Louis	1	2	1	0	0	0	0	0	1	3
34 Carson's	1	6	2	0	2	1	0	0	2	10
35 St. Alban's	2	6	2	0	1	0	0	0	6	5
36 Excelsior	1	9	3	0	0	1	0	0	8	6
37 Gideons	1	8	1	2	0	1	0	0	9	4
38 Echo	0	7	0	1	1	0	0	0	7	2
39 Big Island	1	3	0	0	2	2	0	0	2	6
40 Veteran's	3	3	1	0	0	2	0	0	2	7
41 Lower Lk S	5	12	5	6	5	0	0	0	23	10
42 Lower Lk N	22	133	27	22	50	0	0	0	21	233

**NOTE:** Mgmt Area 42 Lower Lk N count includes **195 No Wake** observations at **Big Island Beach**

Flight Date: Saturday, August 8, 2009

Flight Start Time: 1400; Flight End Time: 1615 Mostly Sunny, Wind S 15-20

**Lake Minnetonka Trailer/Car Toppers/Pickups Count Worksheet**

<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick- ups</u>	<u>Comments</u>
Minnetonka	10	H37	Spring Park	10	
		(not on map)*	Wayzata	11	
		H39	Halstead Bay	15	
		H41	North Arm	17	
		H42	Carson's Bay	12	
		H43	Phelps Bay	3	
		H44	Cooks Bay	13	
		H45	Grays Bay	119	
		H51	Maxwell Bay	51	
		H52	Lk Mtka Regional Park	14	



Flight Date: Saturday, August 29, 2009

Flight Start Time: 1415; Flight End Time: 1645 Mostly Sunny, Wind N 15-20

**Lake Minnetonka Worksheet**

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jet ski	Canoe	Other	Wake	No Wake
1 Halsted's	1	1	1	0	0	0	0	0	1	2
2 Priests	0	1	0	0	0	0	0	0	1	0
3 Cooks	0	2	3	0	2	0	0	0	3	4
4 West Upper	1	3	6	6	0	0	0	0	7	9
5 South Upper	1	2	5	0	0	1	0	0	5	4
6 Smith Town	0	0	1	0	0	0	0	0	0	1
7 Phelps	1	2	5	0	0	0	0	0	2	6
8 East Upper	3	3	1	0	0	0	0	0	4	3
9 Carmen's	0	1	0	0	0	0	0	0	0	1
10 Old Channel	0	0	1	0	2	0	0	0	2	1
11 Spring Park	0	2	0	0	0	1	0	0	3	0
12 Black	1	0	0	0	0	0	0	0	0	1
13 Emerald	0	1	0	0	0	0	0	0	1	0
14 Seton	0	3	0	0	0	0	0	0	0	3
15 Harrison's	0	5	1	0	0	0	0	0	4	2
16 Jennings	0	0	1	0	0	0	0	0	0	1
17 West Arm	0	1	3	1	1	0	0	0	0	6
18 Forest	0	1	0	0	1	0	0	0	1	1
19 Coffee Cove	0	2	2	0	1	0	0	0	5	0
20 West Crystal	0	2	1	0	1	0	0	0	1	3
21 East Crystal	0	1	4	4	0	0	0	0	2	7
22 North Arm	0	0	5	0	0	0	0	0	1	4
23 Stubbs	0	0	0	0	0	0	0	0	0	0
24 Maxwell	0	2	2	0	0	0	0	0	2	2
25 Lafayette	4	3	3	0	2	0	0	0	8	4
26 Smiths	0	2	0	0	0	0	0	0	0	2
27 Tanager	0	1	0	0	0	0	0	0	0	1
28 Browns	1	1	1	0	0	0	0	0	0	3
29 Wayzata	2	4	5	1	1	2	0	0	11	4

Flight Date: Saturday, August 29, 2009

Flight Start Time: 1415; Flight End Time: 1645 Mostly Sunny, Wind N 15-20

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
30 Gray's	0	1	0	0	0	0	0	0	0	1
31 Libb's	0	2	0	0	0	0	0	0	0	2
32 Robinson	1	0	0	0	0	0	0	0	0	1
33 St. Louis	0	0	1	2	0	0	0	0	0	3
34 Carson's	0	2	2	0	0	0	0	0	0	4
35 St. Alban's	2	2	2	0	2	0	0	0	3	5
36 Excelsior	1	2	1	0	0	0	0	0	3	1
37 Gideons	0	0	2	3	0	0	0	0	2	3
38 Echo	1	3	0	0	0	0	0	0	4	0
39 Big Island	0	1	1	0	2	0	0	0	0	4
40 Veteran's	0	1	2	1	1	0	0	0	0	5
41 Lower Lk S	3	6	3	8	2	0	0	0	13	9
42 Lower Lk N	0	10	5	7	4	0	0	1	16	11

Flight Date: Saturday, August 29, 2009

Flight Start Time: 1415; Flight End Time: 1645 Mostly Sunny, Wind N 15-20

**Lake Minnetonka Trailer/Car Toppers/Pickups Count Worksheet**

<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick- ups</u>	<u>Comments</u>
Minnetonka	10	H37	Spring Park	3	
		(not on map)*	Wayzata	4	
		H39	Halstead Bay	4	
		H41	North Arm	10	
		H42	Carson's Bay	0	
		H43	Phelps Bay	2	
		H44	Cooks Bay	5	
		H45	Grays Bay	19	
		H51	Maxwell Bay	8	
		H52	Lk Mtka Regional Park	4	



Flight Date: Saturday, September 5, 2009

Flight Start Time: 1400; Flight End Time: 1610

Mostly Sunny, Wind S 7

**Lake Minnetonka Worksheet**

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
1 Halsted's	1	10	2	0	2	2	0	0	8	9
2 Priests	1	2	2	0	0	1	0	0	3	3
3 Cooks	2	14	0	0	3	0	0	0	10	9
4 West Upper	5	43	4	0	4	0	0	0	10	46
5 South Upper	1	15	0	0	7	0	0	0	12	11
6 Smith Town	1	10	5	0	3	2	0	0	6	15
7 Phelps	1	19	0	0	2	1	0	0	6	17
8 East Upper	2	11	4	9	6	2	0	0	20	14
9 Carmen's	0	4	1	0	2	0	0	0	0	7
10 Old Channel	4	6	1	0	0	0	0	0	4	7
11 Spring Park	2	8	0	0	0	0	0	0	7	3
12 Black	2	7	0	0	0	0	0	0	0	9
13 Emerald	2	2	0	0	0	0	0	0	0	4
14 Seton	1	6	1	0	0	0	0	0	0	8
15 Harrison's	1	4	2	0	1	0	0	0	3	5
16 Jennings	1	0	0	0	0	0	0	0	0	1
17 West Arm	2	16	3	0	12	2	0	0	22	13
18 Forest	0	9	3	0	5	2	0	0	6	13
19 Coffee Cove	3	9	2	0	4	2	0	0	0	20
20 West Crystal	1	6	5	0	6	0	0	0	7	11
21 East Crystal	3	16	3	0	4	16	0	0	12	30
22 North Arm	0	8	4	0	1	2	0	0	3	12
23 Stubbs	1	8	5	0	5	2	0	0	5	16
24 Maxwell	5	22	0	0	8	1	0	0	10	26
25 Lafayette	2	11	3	0	10	0	0	0	15	11
26 Smiths	0	3	0	0	0	0	0	0	0	3
27 Tanager	1	2	2	0	0	1	0	0	1	5
28 Browns	1	5	0	0	0	0	0	0	1	5
29 Wayzata	6	13	0	3	4	1	0	0	16	11
30 Gray's	1	4	0	2	0	0	0	0	3	4
31 Libb's	0	1	2	0	1	0	0	0	1	3
32 Robinson	3	9	0	0	2	0	0	0	1	13
33 St. Louis	1	5	0	0	5	1	0	0	9	3

Flight Date: Saturday, September 5, 2009

Flight Start Time: 1400; Flight End Time: 1610

Mostly Sunny, Wind S 7

Mgmt Area	Cruiser	Runabout	Fishing	Sailboat	Pontoon	Jetski	Canoe	Other	Wake	No Wake
34 Carson's	7	10	0	0	1	0	0	0	2	16
35 St. Alban's	0	11	0	0	4	2	0	0	4	13
36 Excelsior	2	6	2	0	4	0	0	0	14	0
37 Gideons	2	11	1	1	4	0	0	5	12	12
38 Echo	2	7	0	0	0	0	0	0	7	2
39 Big Island	1	5	0	0	0	1	0	0	2	5
40 Veteran's	1	10	0	3	0	0	0	0	1	13
41 Lower Lk S	3	12	7	8	9	5	0	0	27	17
42 Lower Lk N	15	195	19	13	105	8	0	0	33	322

Flight Date: Saturday, September 5, 2009

Flight Start Time: 1400; Flight End Time: 1610

Mostly Sunny, Wind S 7

**Lake Minnetonka Trailer/Car Toppers/Pickups Count Worksheet**

<u>Lake Name</u>	<u>Total Accesses</u>	<u>Site Code</u>	<u>Site Name</u>	<u># Trailers/Car Toppers/Pick- ups</u>	<u>Comments</u>
Minnetonka	10	H37	Spring Park	10	
		(not on map)*	Wayzata	9	
		H39	Halstead Bay	25	
		H41	North Arm	28	
		H42	Carson's Bay	10	
		H43	Phelps Bay	6	
		H44	Cooks Bay	10	
		H45	Grays Bay	123	
		H51	Maxwell Bay	81	
		H52	Lk Mtka Regional Park	31	



**Attachment H: Lakeshore Residents Survey Results**

Q#	Question	Responses	Results
1	Do you own property with lake frontage or lake access rights in Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, or Washington Cty?	Yes	97.9%
		No	2.1%
2	Is this property your permanent home?	Yes	91.5%
		No	8.5%
3	How many years have you been boating on this lake that fronts your property?	0-5 years	13.0%
		6-10 years	17.5%
		11-20 years	27.8%
		21-40 years	29.7%
		Over 40 years	11.9%
4	When was the last time you used a boat on this lake?	Before 1/1/09	14.7%
		1/1/08-6/30/09	10.4%
		7/1/08-7/31/09	42.6%
		After 8/1/09	32.4%
5	Did you yourself operate the boat for any of the time on that day?	Yes	84.7%
		No	15.3%
6-1	Including you, how many adults, teens, and children were in your boat on this trip? <i>Adults 55 or older</i>	0	45.2%
		1-2	45.2%
		3-5	8.5%
		6 or over	1.2%
6-2	Including you, how many adults, teens, and children were in your boat on this trip? <i>Adults 18 to 54</i>	0	76.2%
		1-2	16.8%
		3-5	6.4%
		6 or over	0.6%
6-3	Including you, how many adults, teens, and children were in your boat on this trip? <i>Teens (12 to 17)</i>	0	92.7%
		1-2	6.4%
		3-5	0.9%
		6 or over	0.6%
6-4	Including you, how many adults, teens, and children were in your boat on this trip? <i>Children (11 or younger)</i>	0	86.6%
		1-2	9.4%
		3-5	3.9%
		6 or over	0.1%
6a	What is the age of the primary boat operator in years?	<18	0.7%
		18-40	10.5%
		41-54	36.0%
		> 55	52.8%
7	What time did you leave from shore on this trip?	Before 8 am	7.9%
		8 am – 1 pm	38.0%
		1 pm – 5 pm	36.0%
		5 pm – 7 pm	15.4%
		After 7 pm	2.8%
8	How many hours did you boat on this trip?	1 hour or less	38.3%
		1-2 hours	36.0%
		2-4 hours	21.1%
		Over 4 hours	4.6%

9	What was your group's primary activity on the lake on this trip?	Fishing	14.0%
		Swimming	5.0%
		Sailing	2.6%
		Jet skiing	1.4%
		Boat ride	35.8%
		Water skiing	3.5%
		Transport to/from	0.9%
		Canoeing/kayaking	0.8%
		Other	4.9%
10	What type of boat did you use on this trip?	Cruiser	0.3%
		Runabout	32.6%
		Fishing	7.6%
		Jetski	1.9%
		Pontoon	46.6%
		Canoe/Kayak	1.6%
		Sailboat	2.3%
		Other	4.7%
11	What is the length of that boat?	Less than 16 ft	19.6%
		17-20 feet	44.1%
		21-24 feet	31.8%
		25-30 feet	4.3%
		Over 30 feet	0.2%
12a	What type(s) of motor(s) does that boat have?	Gas	85.3%
		Electric	0.9%
		Both	5.1%
		No motor	7.3%
		Don't know	1.4%
12b	Gas horsepower	25 hp or less	12.3%
		26-50 hp	28.6%
		51-100 hp	18.7%
		101-150 hp	17.3%
		151-200 hp	7.4%
		Over 200 hp	15.7%
13	Which of the following beverages did you have with you on the boat on this trip?	Soft drinks	44.7%
		Coffee/tea/water	31.0%
		Other nonalcoholic	4.6%
		Beer	19.5%
		Wine	6.1%
		Other alcoholic	4.0%
		No Beverages	28.3%
		Refuse to answer	0.3%
		Don't know/not sure	1.2%

14	Below are experiences you might have during this boating trip. How important to you was attaining each experience on this trip?					
	Experience	not important	slightly important	moderately important	very important	don't know
	1. relax	2.5%	3.2%	18.2%	76.2%	0.0%
	2. enjoy smells and sounds of nature	8.2%	12.8%	32.2%	43.2%	3.7%
	3. explore and discover new things	22.2%	27.2%	28.0%	15.8%	6.8%
	4. enjoy different experiences from home	15.3%	17.7%	33.2%	23.8%	10.0%
	5. spend leisure time with family/friends	3.8%	3.5%	15.2%	74.3%	3.2%
	6. get/keep physically fit	34.0%	23.5%	20.2%	14.2%	8.2%
	7. experience a sense of adventure	25.2%	26.5%	25.0%	16.0%	7.3%
	8. catch some fish	55.7%	10.3%	13.3%	13.8%	6.8%
	9. enjoy natural scenery	5.5%	11.3%	29.3%	49.7%	4.2%
	10. get away from crowds	13.7%	14.7%	30.5%	34.5%	6.7%
	11. experience silence and quiet	17.5%	22.2%	26.2%	25.2%	9.0%
	12. get a chance to use or test my equipment	40.0%	22.5%	18.8%	9.5%	9.2%
	13. experience solitude	32.0%	20.8%	24.2%	14.5%	8.5%
15	Overall, how satisfied or dissatisfied were you with your boating experience on this trip?				Very satisfied	43.5%
					Satisfied	38.3%
					Dissatisfied	6.3%
					Very dissatisfied	3.3%
					Don't know/not sure	8.6%
16	What was the main reason(s) you were so satisfied or dissatisfied?				Did not describe	99.3%
					Describe	0.7%
17	While you were on the lake on this trip, did you see an enforcement officer?				Yes	13.9%
					No	73.2%
					Don't know/not sure	13.0%
18	Were you checked by an enforcement officer on this trip?				Yes	0.3%
					No	99.7%
18a	How would you rate the officer's professional conduct during this check?				Excellent	6.1%
					Good	9.1%
					Fair	3.0%
					Poor	0.0%
					Very poor	0.0%
					Don't know	81.8%
19	On this trip, did you travel through any parts of the lake where you thought there were too many boats?				Yes	15.4%
					No	74.1%
					Don't know/not sure	10.6%



20	How does the number of boats you encountered on this trip compare to the number of boats you have seen on other trips on this same part of the lake?				Substantially fewer		16.1%
					Slightly more		8.9%
					Don't know/not sure		3.3%
					Slightly fewer		16.7%
					Substantially more		9.4%
					Haven't boated here		45.6%
					About the same		16.7%
21	Would you boat again if you knew there were going to be about the same number of boats as on this trip?				Yes		84.4%
					No		2.4%
					Don't know/not sure		13.3%
22	Based on your experience on this trip, how much of a problem is each of the following on this lake?						
	Item	not a problem	slight problem	moderate problem	serious problem	very serious problem	don't know
	1. careless or inconsiderate operation of boats	49.3%	26.5%	15.3%	5.0%	2.8%	1.0%
	2. boat operators who have been drinking too much	60.0%	15.5%	6.7%	1.7%	1.0%	15.2%
	3. the amount of noise from boats on the lake	50.3%	25.2%	17.0%	5.0%	1.5%	1.0%
	4. near miss or collision	77.5%	11.0%	5.2%	1.3%	1.3%	3.7%
	5. high wakes	58.2%	19.2%	15.0%	3.5%	2.2%	2.0%
	6. use of personal watercraft (jet skis)	47.0%	23.2%	18.0%	5.7%	4.3%	1.8%
	7. large boats (boats over 24 feet)	81.5%	7.3%	5.0%	0.8%	0.8%	4.5%
	8. boats operating too fast, too close to shore/docks	55.8%	22.0%	11.2%	5.7%	3.2%	2.2%
	9. boats not yielding the right-of-way	58.3%	23.5%	9.2%	3.7%	1.8%	3.5%
	10. number of boats on the lake	55.2%	22.0%	14.8%	3.7%	2.5%	1.8%
	11. excessive speed in channels and crowded areas	66.2%	16.5%	7.2%	4.2%	1.8%	4.2%
	12. excessive speed in open water	66.5%	17.0%	9.0%	3.2%	2.0%	2.3%
	13. fishing tournament activities on the water	84.0%	4.5%	2.3%	1.0%	1.2%	7.0%
23	What special boating restrictions are there for this lake?		None				31.3%
			Boat type and size restrictions				1.9%
			Time restrictions				15.9%
			Don't know/not sure				20.4%
			Horsepower restrictions				2.1%
			Speed restrictions/quiet waters				35.3%
			Area of lake restrictions				10.9%
			Other				6.3%
24	Overall, how do these restrictions affect your enjoyment of the lake?		Add to enjoyment				28.7%
			Detract from enjoyment				6.4%
			Neutral with respect to enjoyment				64.9%

25	Overall, do you think special boating restrictions on this lake are:	Too restrictive			4.3%
		About right			58.6%
		Not restrictive enough			13.3%
		Don't know			23.7%
26	What special boating restrictions are needed for this lake?	None			29.2%
		Boat type and size restrictions			7.7%
		Time restrictions			9.2%
		Don't know/not sure			7.0%
		Special restrictions for personal watercraft (jet skis)			23.4%
		Horsepower restrictions			6.6%
		Speed restrictions/quiet waters			22.2%
		Area of lake restrictions			5.1%
		Other			9.5%
27	Have you taken a formal course in boating safety?	Yes			26.1%
		No			62.1%
		Don't know/not sure			11.8%
28	Should all motorboat operators be required to complete a boating safety course?	Yes			36.2%
		No			32.3%
		Don't know/not sure			31.4%
29a	In the last 12 months, did you hear a boating safety advertisement on the radio?	Yes			28.6%
		No			50.1%
		Don't know			21.3%
29b	In the last 12 months, did you see a boating safety advertisement on television?	Yes			30.8%
		No			47.7%
		Don't know			21.5%
30	In the past 12 months, how many times did you use a free public access on this lake?	zero			36.9%
		1-2			41.5%
		3-5			15.6%
		6-10			5.1%
		over 10			0.8%
31	In the last 12 months, how many times did you use a free public access to launch a boat onto a Minnesota lake or river?	zero			47.8%
		1-2			30.8%
		3-5			11.5%
		6-10			6.8%
		over 10			3.1%
32	Do you know of a lake(s) within 50 miles of this lake that needs an additional (or initial) public boat access?	Yes			3.4%
		No			53.5%
		Don't know/not sure			43.1%
33	Do you think an additional (or initial) public boat access is needed on this lake?	Yes			4.5%
		No			79.9%
		Don't know/not sure			15.6%
34	How many other lakes do you boat on within about 50 miles of this lake?	zero			72.7%
		1-2			19.5%
		3-5			5.2%
		6-10			1.7%
		over 10			0.8%

34a	How do you gain access to these lakes?	free public access launch site				62.1%
		my home or cabin				14.9%
		road end/road right-of-way-unimproved site				1.5%
		friend or relative's home/cabin				18.4%
		resort, marina or private launch site				14.9%
		other or no answer				9.2%
35	How important to you are each of the following items at a public boat access?					
	Item	not important	slightly important	moderately important	very important	don't know
	1. dock to aid launching/landing	12.4%	8.2%	16.2%	48.7%	3.0%
	2. toilets	26.4%	17.3%	19.1%	21.8%	3.3%
	3. map of the lake showing depth, hazards	18.8%	14.5%	24.3%	26.7%	3.1%
	4. map of lake showing boating restrictions	12.5%	6.9%	23.7%	40.8%	2.8%
	5. emergency information	19.1%	18.3%	24.0%	22.5%	3.3%
	6. paved parking lot (as opposed to gravel)	30.8%	20.1%	18.3%	14.6%	3.1%
	7. fishing information for this lake	33.5%	20.4%	17.6%	11.9%	3.3%
	8. description of natural history of this lake	37.6%	25.8%	12.8%	7.3%	3.3%
	9. information on where to buy gas & other boating supplies	41.6%	20.4%	14.9%	6.9%	3.4%
36	In the last 12 months, about how many times did you move your boat(s) between this lake and another body of water?	0				82.1%
		1-2				11.2%
		3-5				4.3%
		over 5				2.4%
36a	When you launched your boat(s) back into this lake, where did you do the launching?	launched through my property at my home or cabin on this lake				20.4%
		launched at a free public access site on this lake				73.4%
		launched at a resort, marina or private site on this lake				8.7%
		launched elsewhere on this lake				4.3%
37	What type of radio station do you primarily listen to?	Classical				6.6%
		Easy listening/lite				18.0%
		Sports				7.3%
		Country				11.8%
		Jazz				2.5%
		Rock & roll				22.8%
		Talk				19.1%
		Public radio				16.4%
		Religious radio				5.5%
		Other				5.7%



38	Have you ever obtained boating-related information from the Minnesota DNR web page (www.dnr.state.mn.us)	Yes			44.7%
		No			44.6%
		Don't know/not sure			10.7%
39	Which category best describes your total household income before taxes last year?	Less than \$20,000			1.3%
		\$20,000-\$29,999			1.8%
		\$30,000-\$39,999			2.7%
		\$40,000-\$49,999			3.7%
		\$50,000-\$74,999			8.6%
		\$75,000-\$99,999			11.3%
		\$100,000 or more			42.6%
		Refuse to answer			25.8%
		Don't know/not sure			2.1%

**Attachment I: Public Access Survey Results**

Q#	Question	Responses	Results
1	How many years have you been boating on this lake?	0-5 years	50.5%
		6-10 years	16.5%
		11-20 years	17.1%
		21-40 years	13.7%
		Over 40 years	2.1%
2	How far is your permanent home from this lake?	less than 10 miles	54.3%
		11-25 miles	30.4%
		26-100 miles	14.4%
		over 100 miles	0.9%
2a	What is the zip code of your permanent home?	zip = 55XXX	98.1%
		zip = 56XXX	1.1%
		zip = other	0.8%
3	Do you have a home or residence on this lake?	Yes	2.0%
		No	98.0%
4	Where did you launch your boat on this trip?	here at this public access	97.3%
		private access or marina	1.1%
		another public access	0.3%
		resort/private campground	0.0%
		other	1.4%
5	Where did you park?	in lot at this public access	85.2%
		resort or campground	0.2%
		street	10.1%
		at my home	1.4%
		another lot	1.1%
		friend's home	1.2%
		other	0.9%
6a-1	Including you, how many adults, teens, and children were in your boat on this trip? <i>Adults 55 or older</i>	0	73.1%
		1-2	26.0%
		3-5	0.9%
		6 or over	0.0%
6a-2	Including you, how many adults, teens, and children were in your boat on this trip? <i>Adults 18 to 54</i>	0	18.9%
		1-2	66.6%
		3-5	13.1%
		6 or over	1.4%
6a-3	Including you, how many adults, teens, and children were in your boat on this trip? <i>Teens (12 to 17)</i>	0	81.7%
		1-2	16.1%
		3-5	2.3%
		6 or over	0.0%
6a-4	Including you, how many adults, teens, and children were in your boat on this trip? <i>Children (11 or younger)</i>	0	74.4%
		1-2	20.9%
		3-5	4.4%
		6 or over	0.3%
6a	What is the age of the primary boat operator in years?	< 18	1.4%
		18-40	32.2%
		41-54	43.9%
		> 55	22.5%

7	What time did you leave from shore on this trip?	Before 8 am	14.2%
		8 am – 1 pm	50.2%
		1 pm – 5 pm	28.0%
		5 pm – 7 pm	6.5%
		After 7 pm	1.1%
8	How many hours did you boat on that day?	1 hour or less	2.9%
		1-2 hours	12.2%
		2-4 hours	43.6%
		Over 4 hours	41.3%
9	What was your group's primary activity on the lake on that day?	Fishing	54.3%
		Swimming	2.9%
		Sailing	3.6%
		Jet skiing	1.1%
		Boat ride	14.6%
		Water skiing	15.2%
		Transport to/from	3.9%
		Canoeing/kayaking	4.5%
		Other	3.6%
10	What type of boat did you use on that day?	Cruiser	0.8%
		Runabout	43.5%
		Fishing	38.0%
		Jetski	1.5%
		Pontoon	2.0%
		Canoe/Kayak	0.2%
		Sailboat	3.3%
		Other	6.8%
11	What is the length of that boat?	Less than 16 ft	41.9%
		17-20 feet	51.1%
		21-24 feet	6.5%
		25-30 feet	0.5%
		Over 30 feet	0.0%
12a	What type(s) of motor(s) does that boat have?	Gas	54.9%
		Electric	0.8%
		Both	33.7%
		No motor	8.0%
		Don't know	2.7%
12b	Gas horsepower	25 hp or less	17.8%
		26-50 hp	14.8%
		51-100 hp	21.7%
		101-150 hp	27.8%
		151-200 hp	8.7%
		Over 200 hp	9.3%



13	Which of the following beverages did you have with you on the boat on that day?				Soft drinks	67.4%
					Coffee/tea/water	58.5%
					Other nonalcoholic	10.7%
					Beer	22.3%
					Wine	1.1%
					Other alcoholic	3.5%
					No Beverages	8.6%
					Refuse to answer	0.3%
					Don't know/not sure	0.6%
14	Below are experiences you might have during this boating trip. How important to you was attaining each experience on this trip?					
	Item	not important	slightly important	moderately important	very important	don't know
	1. Relax	2.0%	6.2%	23.0%	68.3%	0.5%
	2. Enjoy smells & sounds of nature	8.7%	18.3%	33.9%	37.3%	1.8%
	3. Explore & discover new things	19.2%	26.5%	32.3%	19.2%	2.9%
	4. Enjoy different experiences from home	11.4%	16.3%	36.7%	31.8%	3.8%
	5. Spend leisure time with family & friends	6.4%	5.5%	18.4%	68.0%	1.7%
	6. Get/keep physically fit	30.4%	26.8%	26.3%	13.7%	2.7%
	7. Experience a sense of adventure	15.4%	25.4%	36.1%	19.8%	3.3%
	8. Catch some fish	27.1%	8.1%	19.8%	44.0%	1.1%
	9. Enjoy natural scenery	5.0%	14.2%	38.1%	41.1%	1.7%
	10. Get away from crowds	8.4%	17.0%	32.0%	41.2%	1.4%
	11. Experience silence & quiet	14.9%	25.9%	31.4%	25.7%	2.1%
	12. Get a chance to use or test my equipment	21.2%	20.5%	31.7%	22.8%	3.8%
	13. Experience solitude	26.6%	24.8%	29.7%	16.6%	2.3%
15	Overall, how satisfied or dissatisfied were you with your boating experience on that day?				Very satisfied	36.3%
					Satisfied	53.2%
					Dissatisfied	6.2%
					Very dissatisfied	4.2%
					Don't know/not sure	0.2%
16	What was the main reason(s) you were so satisfied or dissatisfied?				Did not describe	99.8%
					Describe	0.2%
17	While you were on the lake on this trip, did you see an enforcement officer?				Yes	24.5%
					No	72.1%
					Don't know/not sure	3.3%
18	Were you checked by an enforcement officer on that day?				Yes	2.4%
					No	97.6%
18a	How would you rate the officer's professional conduct during this check?				Excellent	24.1%
					Good	18.5%
					Fair	0.0%
					Poor	0.0%
					Very poor	0.0%
					Don't know	57.4%

19	On this trip, did you travel through any parts of the lake where you thought there were too many boats?				Yes		19.1%
					No		78.6%
					Don't know/not sure		2.3%
20	How does the number of boats you encountered on this last boating trip compare to the number of boats you have seen on other trips on this same part of the lake?				Substantially fewer		14.4%
					Slightly more		13.4%
					Don't know/not sure		3.5%
					Slightly fewer		17.0%
					Substantially more		8.5%
					Haven't boated here		6.7%
					About the same		36.6%
21	Would you boat again if you knew there were going to be about the same number of boats as on your last boating trip?				Yes		90.6%
					No		4.4%
					Don't know/not sure		5.0%
22	Based on your experience on your last boating trip, how much of a problem is each of the following on this lake?						
	Item	not a problem	slight problem	moderate problem	serious problem	very serious problem	don't know
	1. careless or inconsiderate operation of boats	57.6%	21.6%	11.5%	5.8%	2.4%	1.1%
	2. boat operators who have been drinking too much	71.9%	6.4%	3.4%	1.4%	1.2%	15.7%
	3. the amount of noise from boats on the lake	71.6%	16.8%	7.6%	1.1%	1.4%	1.5%
	4. near miss or collision	82.6%	9.3%	3.1%	1.1%	1.5%	2.4%
	5. high wakes	61.5%	19.7%	11.8%	3.1%	2.3%	1.7%
	6. use of personal watercraft (jet skis)	58.6%	19.3%	13.8%	4.4%	2.9%	1.1%
	7. large boats (boats over 24 feet)	84.7%	8.7%	2.4%	0.8%	0.8%	2.6%
	8. boats operating too fast, too close to shore/docks	74.6%	13.6%	6.3%	2.6%	1.1%	1.8%
	9. boats not yielding the right-of-way	72.6%	14.4%	6.3%	3.5%	2.1%	1.1%
	10. number of boats on the lake	65.3%	19.1%	8.4%	4.3%	1.5%	1.4%
	11. excessive speed in channels and crowded areas	78.4%	11.6%	3.5%	2.3%	2.0%	2.1%
	12. excessive speed in open water	82.6%	9.9%	3.8%	1.1%	0.9%	1.7%
	13. fishing tournament activities on the water	87.0%	3.4%	1.8%	0.6%	0.2%	7.0%
	14. fishing tournament activities at the public access	84.9%	4.1%	2.0%	1.1%	0.6%	7.3%
23	What special boating restrictions are there for this lake?		None				23.9%
			Boat type and size restrictions				2.7%
			Time restrictions				8.6%
			Don't know/not sure				34.7%
			Horsepower restrictions				2.3%
			Speed restrictions/quiet waters				33.2%
			Area of lake restrictions				8.1%
			Other				6.3%

24	Overall, how do these restrictions affect your enjoyment of the lake?	Add to enjoyment	18.0%
		Detract from enjoyment	3.2%
		Neutral with respect to enjoyment	78.8%
25	Overall, do you think special boating restrictions on this lake are:	Too restrictive	2.1%
		About right	51.0%
		Not restrictive enough	4.4%
		Don't know	42.6%
26	What special boating restrictions are needed for this lake?	None	40.5%
		Boat type and size restrictions	5.0%
		Time restrictions	2.1%
		Don't know/not sure	15.0%
		Special restrictions for personal watercraft (jet skis)	20.5%
		Horsepower restrictions	3.9%
		Speed restrictions/quiet waters	13.1%
		Area of lake restrictions	4.5%
		Other	6.5%
27	Have you taken a formal course in boating safety?	Yes	25.6%
		No	73.3%
		Don't know/not sure	1.1%
28	Should all motorboat operators be required to complete a boating safety course?	Yes	39.8%
		No	45.6%
		Don't know/not sure	14.5%
29a	In the last 12 months, did you hear a boating safety advertisement on the radio?	Yes	46.0%
		No	45.7%
		Don't know/not sure	8.4%
29b	In the last 12 months, did you hear a boating safety advertisement on television?	Yes	46.2%
		No	45.1%
		Don't know/not sure	8.6%
30	Have you ever used this access before?	Yes	87.5%
		No	10.7%
		Don't know/not sure	1.8%
31	Have you ever tried to use free public access on this lake and found the access parking lot full?	Yes	60.9%
		No	35.0%
		Don't know/not sure	4.1%
31a	How many times did you find the lot full in the past 12 months?	zero	13.8%
		1-2	42.1%
		3-5	22.8%
		6-10	13.6%
		over 10	7.7%
31b	What did you do when you found the parking lot full?	parked on the road	24.4%
		waited for place in lot to open up	14.3%
		went to another lake	20.5%
		went to another access on this lake	6.9%
		didn't boat that day	9.2%
		other	7.1%



32	How would you rate this access for launching and landing a boat?	excellent	21.8%
		good	45.9%
		fair	19.4%
		poor	5.9%
		very poor	3.6%
		don't know/not sure	3.5%
33	Did you have any particular problems using this access on this boating trip?	Yes	31.4%
		No	66.2%
		Don't know/not sure	2.4%
33a	(IF YES) What was the problem(s)?	not enough parking spaces	13.7%
		ramp blocked by parked cars, campers etc.	1.5%
		access parking lot being used by non-boaters	7.4%
		insufficient number of launch lanes/ramps	3.8%
		difficult to launch/land because of wind or waves	3.0%
		inadequate directional signs to access	0.8%
		not enough maneuvering room on land near ramp for launch/landing	3.2%
		swimmers near ramp made it difficult to launch/land a boat	1.2%
		not enough maneuvering room on water near ramp for launch/landing	3.6%
		people fishing from the dock at the access made it difficult to maneuver	4.5%
		safety of entry to access area from road or highway	0.0%
		couldn't find the access from the lake after dark	0.9%
		water too shallow	22.9%
		no dock	1.8%
		access site in disrepair	1.7%
		ramp slope too steep	2.1%
		ramp too short	4.1%
		other	10.1%
34	Which of the following improvements do you feel are needed at this launch site?	Better directional signs to access	3.6%
		better informational signs at access	2.0%
		a dock to aid launching	7.1%
		better lighting of access/parking area	6.9%
		beacon light visible from lake	7.7%
		more parking spaces in lot	0.3%
		protection from wind/waves in front of launch ramp	3.9%
		litter pickup	12.3%
		toilets	7.4%
		toilet maintenance (if applicable)	8.3%
		more launch lanes/ramps	10.2%
		better enforcement	10.8%
		trash containers	4.4%
		larger parking spaces in access lot	31.1%
		other	18.2%

35	Do you currently have a disability that affects when or where you boat?	Yes	2.1%
		No	97.9%
35a	Was this public access facility adequate for your needs?	Yes	86.3%
		No	13.8%
35b	Did you park in a designated handicapped space at this access?	Yes	7.1%
		No	92.9%
36	How large a problem to you were any effects of "power loading" at this launch site ("effects" include scouring a hole at the end of the ramp and building a ridge off the end of the ramp)?	No problem	57.9%
		serious problem	5.0%
		slight problem	11.9%
		very serious problem	2.7%
		moderate problem	5.3%
		don't know	17.3%
37	When you landed your boat today, did you "power load" the boat onto your trailer?	Yes	26.0%
		No	68.4%
		Don't know/not sure	5.6%
38	In the last 12 months, how many times did you use a free public access to launch a boat onto a Minnesota lake or river?	Zero	4.1%
		1-2	6.5%
		3-5	13.1%
		6-10	23.4%
		11-25	31.9%
		over 25	21.0%
39	Do you know of a lake(s) within 50 miles of this lake that needs an additional (or initial) public boat access?	Yes	22.9%
		No	41.5%
		Don't know/not sure	35.6%
40	Do you think an additional (or initial) public boat access is needed on this lake?	Yes	18.9%
		No	61.2%
		Don't know/not sure	19.8%
41	How many other lakes do you boat on within about 50 miles of this lake?	Zero	10.5%
		1-2	23.3%
		3-5	37.4%
		6-10	19.5%
		over 10	9.3%
41a	How do you gain access to these lakes?	Free public access launch site	87.4%
		my home or cabin	2.4%
		road end/road right-of-way-unimproved site	2.7%
		friend or relative's home/cabin	5.0%
		resort, marina or private launch site	11.0%
		other or no answer	5.4%
42	To help prevent the spread of aquatic invasive species, how likely or unlikely would you be to power wash your boat at this access?	Very unlikely	16.1%
		Slightly unlikely	6.5%
		Neither	8.0%
		Slightly likely	16.5%
		Very likely	45.3%
		Don't know	7.7%

43	How important to you are each of the following items at a public boat access?					
	Item	not important	slightly important	moderately important	very important	don't know
	1. dock to aid launching/landing	10.4%	5.7%	14.0%	67.2%	2.7%
	2. toilets	4.1%	13.5%	29.9%	49.6%	2.9%
	3. map of the lake showing depth, hazards	14.1%	22.3%	28.6%	32.2%	2.9%
	4. map of lake showing boating restrictions	6.0%	11.6%	30.8%	48.4%	3.2%
	5. emergency/boating safety information	15.5%	31.6%	28.7%	19.7%	4.5%
	6. paved parking lot (as opposed to gravel)	22.1%	18.8%	25.1%	30.5%	3.5%
	7. fishing information for this lake	23.9%	23.3%	26.3%	23.2%	3.3%
	8. description of natural history of this lake	38.0%	31.1%	20.6%	6.9%	3.3%
	9. information on where to buy boat gas & other boating supplies	49.5%	27.1%	15.2%	5.1%	3.2%
44	What type of radio station do you primarily listen to?			Classical	2.9%	
				Easy listening/lite	9.8%	
				Sports	9.8%	
				Country	24.7%	
				Jazz	2.6%	
				Rock & roll	35.5%	
				Talk	19.8%	
				Public radio	12.2%	
				Religious radio	5.1%	
				Other	5.0%	
45	Have you ever obtained boating-related information from the Minnesota DNR web page (www.dnr.state.mn.us)			Yes	66.2%	
				No	30.2%	
				Don't know/not sure	3.6%	
46	Which category best describes your total household income before taxes last year?			less than \$20,000	1.4%	
				\$20,000-\$29,999	3.0%	
				\$30,000-\$39,999	4.8%	
				\$40,000-\$49,999	7.1%	
				\$50,000-\$74,900	18.8%	
				\$75,000-\$99,999	20.8%	
				\$100,000 or more	30.4%	
				Refuse to answer	8.7%	
				Don't know/not sure	5.1%	