

**Survey of Sea Kayak Owners  
in Minnesota:  
Kayaking the North Shore of  
Lake Superior**



# Survey of Sea Kayak Owners in Minnesota: Kayaking the North Shore of Lake Superior

## Summary Report



Minnesota Department of Natural Resources  
Division of Parks and Recreation  
Trails and Waterways Division  
Office of Management and Budget Services

Report prepared by:  
Office of Management and Budget Services

February 2001

*An electronic copy of this report can be found on the MN DNR's  
World Wide Web home page: [www.dnr.state.mn.us/trails\\_and\\_waterways/state\\_canoe\\_routes/](http://www.dnr.state.mn.us/trails_and_waterways/state_canoe_routes/)*

*Cover photograph by Craig Blacklock*

## CONTENTS

<u>Topic</u>	<u>Page</u>
Executive Summary . . . . .	4
Introduction . . . . .	9
Methodology . . . . .	11
Sea kayak use statewide . . . . .	12
Sea kayak use along the Minnesota portion of the North Shore of Lake Superior . . . . .	14
Interest in, and barriers to, using a sea kayak on the Minnesota portion of the North Shore of Lake Superior . . . . .	17
Interest in, and barriers to, kayak-camping on the Minnesota portion of the North Shore of Lake Superior . . . . .	20
Kayaking on the Water Trail of Lake Superior	
General information . . . . .	23
Characteristics of most recent trip . . . . .	26
Characteristics of sea kayak owners . . . . .	32
References . . . . .	35
Survey instrument . . . . .	36

## EXECUTIVE SUMMARY

### INTRODUCTION

The Lake Superior Water Trail provides an opportunity to experience the rugged North Shore of Lake Superior from the water, a perspective few North Shore visitors are able to enjoy. It is intended primarily for sea kayaks, which are larger than their whitewater cousins (a sea kayak is at least 14 feet long). The Water Trail—as envisioned in the future—will extend the entire 150-mile length of the North Shore in Minnesota, and will connect with Canadian and other U.S. state efforts to form a loop around all of Lake Superior.

At present, a 40-mile stretch of the Water Trail has been developed in Minnesota along the North Shore (see map). Before providing

additional amenities and maps for the Water Trail, the Minnesota Department of Natural Resources (MN DNR) wanted to obtain some background information about sea kayaking on the Trail and on the North Shore in general. The MN DNR wanted to know—among other things—how much the Trail and associated kayaking facilities are being used, what sea kayakers are looking for in terms of facilities/ services and experiences on the Trail, and what barriers exist to the further use of Lake Superior by sea kayakers. To obtain this knowledge, two efforts were undertaken in 2000. One was a mail survey of Minnesota-registered sea kayak owners, and the other was field counts of sea-kayak campgrounds and access facilities along the Water Trail.



### SEA KAYAK USE STATEWIDE

Minnesota had 3238 sea kayaks registered for pleasure (personal, noncommercial) use in early 2000. The typical sea kayak is used about 20 times a year. Since there is not a great deal of region-to-region variation in use rates, most of the sea kayaking originates where most of the sea kayaks are registered, namely the Twin Cities metro region.

Sea kayaking—like many recreation activities—is predominately a near-home activity: 62 percent of all sea kayaking occurs within an hour's drive of home. This pattern of use makes the Twin

Cities metro region the primary use area for the largest number of sea kayakers. The metro region is closely followed by Northeast Minnesota, where the North Shore of Lake Superior is a popular destination. Other popular destinations are the border lakes in the U.S. and Canada, and the South Shore of Lake Superior in Wisconsin, which includes the Apostle Islands.

### SEA KAYAK USE ALONG THE MINNESOTA PORTION OF THE NORTH SHORE OF LAKE SUPERIOR

Based on survey results, the North Shore of Lake Superior in Minnesota is the destination for 14 percent of all sea-kayak outings from Minnesota-registered sea kayakers (8,672 of 61,007 outings), and the Water Trail is the destination for five percent of all outings (3,078 of 61,007 outings).

These use figures—based on Minnesota sea kayakers registered for pleasure (personal, noncommercial) use—represent the large majority of sea kayaking at these locations, but they do not include two additional sources of sea kayakers: outfitters and kayakers registered in another state. Estimates for the former source were obtained directly from the outfitters for both the Water Trail and North Shore, and estimates for the latter were obtained from access counts for the Water Trail only. Together, the two additional sources would raise Water Trail use into the 3,500 to 4,000 outing range. The outfitters for the North Shore would raise Minnesota North Shore use into the 12,000 to 12,500 outing range. Most of the outfitter-related outings come from Duluth and Grand Marais.

Kayakers from Northeast Minnesota, who live near the North Shore, have a two to three times higher use rate of Lake Superior and the Water Trail than other Minnesota sea kayakers. Because of these high use rates, Northeast kayakers comprise a significant share of North Shore and Water Trail kayaking, but Metro kayakers—because of their sheer number—comprise a significant share as well.

Some 20 percent (19% to 21%) of the sea kayaking along the Water Trail and along the North Shore is associated with kayak-camping, while the remaining 80 percent is day use. This translates into about 590 Water Trail outings associated with kayak-camping, and about 1820 North Shore outings.

### INTEREST IN, AND BARRIERS TO, USING A SEA KAYAK ON THE MINNESOTA PORTION OF THE NORTH SHORE OF LAKE SUPERIOR

Owners who have kayaked in the last year on the Minnesota waters of Lake Superior have a high interest in kayaking more (90+%), and the large majority (80+%) have plans to do so. In contrast, owners who have *not* kayaked on these waters in the last year have a lower, but still sizable interest in kayaking there (73%), but only 30 percent have plans to do so.

Perceived barriers to further use of the North Shore for kayaking are strongly associated with a kayaker's current use of these waters, except for one universal barrier: time. Beyond time constraints, the major barriers for kayakers who have *not* used the North Shore in the last 12 months

have to do with intervening opportunities (good opportunities closer to home) and lack of knowledge of what kayaking is like on this part of Lake Superior.

A different set of barriers becomes evident for the owners who have kayaked these waters in the last year, and these barriers become larger with heavier use. The barriers are of two types: one has to do with the social setting kayakers desire (namely, an undeveloped Lake Superior shoreline), and the other involves the lack of specific facilities provided for kayakers. The facilities in the survey that were regularly found lacking were all of those listed (kayak campgrounds, safe landing places in case of bad weather, and good water access) so other facilities should be considered barrier candidates as well. In short, existing users want more amenities for their outing, and they want the outing to occur in a less developed setting.

A number of items did not show up as major barriers to any user or nonuser group, and they are noteworthy for that reason. Money is not a major barrier, nor is the current amount of kayaking on the North Shore, lack of overnight accommodations in the area, lack of additional leisure opportunities in the area, expecting interference from motorized watercraft, or expecting to encounter too many people.

#### INTEREST IN, AND BARRIERS TO, KAYAK-CAMPING ON THE MINNESOTA PORTION OF THE NORTH SHORE OF LAKE SUPERIOR

Consistent with the previous topic, an owner's participation in kayak-camping on the North Shore is strongly associated with their desire and plans to participate more, as well as with perceived barriers to further participation. Owners who have kayak-camped in the last year along the Minnesota waters of Lake Superior have a high interest in kayak-camping more (95%), and the large majority (83%) have plans to do so. Kayak owners who have *not* kayak-camped in the last year along Lake Superior have a lower, but still sizable interest in kayak-camping there (70+%), but far fewer have plans to do so.

For kayakers who have *not* kayak-camped on the North Shore in the last 12 months, the major perceived barrier to participation is lack of personal knowledge about this activity on the North Shore. In contrast, for those who have kayak-camped in the last year, the major barriers are a shortage of campsites (too few and too full), a related barrier on lack of guarantee of a campsite, and the need for more remote campsites with less human development around. Consistent with the need for more remoteness, the existing rustic nature of these campgrounds (no running water or toilets) is not a significant barrier. Weather is a moderate barrier to all kayak-camping user groups; all groups have some concern about getting stranded by bad weather.

These kayak-camping barriers are similar to the kayaking barriers reported earlier. Kayakers who are users identify a lack of amenities (facilities and services) and remote/less-developed settings as major barriers, while nonusers identify lack of personal knowledge as a major barrier.

A number of items did not show up as major barriers to any user or nonuser group, and they are noteworthy for that reason. Dislike of camping is not a major barrier, nor is the rustic nature of the

campgrounds (noted above), the current amount of kayak-camping on the North Shore, or concerns about campground safety.

## KAYAKING ON THE WATER TRAIL OF LAKE SUPERIOR

Statewide, some 20 percent of owners report kayaking on the Water Trail in the last 12 months.

When owners were asked if they would kayak the Water Trail more if it was longer than its current length of 40 miles, current users of the Trail were far more likely to respond 'yes'. This response pattern is probably another reflection of the desire for more amenities among the current users.

Owners were queried about their level of knowledge of the Water Trail, and results indicate that self-described knowledge is not particularly high. Kayak owners—who know at least 'a few things' about the Water Trail—are most likely to have first heard about the Trail from the Lake Superior Water Trail Association. 'Family or friends' (a typically large information source) is the next most frequently indicated source, followed by 'special events' and the 'Minnesota DNR'.

The sea-kayak owners who have used the Water Trail sometime in the past (28% of all owners) were asked to describe their most recent outing. Outing characteristics include:

The vast majority of outings on the Water Trail (89%) are loop trips that start and stop at the same place. The most frequent launching sites are state parks along the Trail and Two Harbors.

The typical Water Trail trip is 10 miles in length.

Typical party size is two to three people in the same number of kayaks.

Kayaking along the Water Trail is almost entirely an adult pursuit; few teens and children are part of the outings.

Nearly three-fourths of Water Trail outings involve an overnight somewhere, typically 2 nights in length.

Camping is the most frequent type of overnight accommodation; 23 percent of overnights are at water-accessible kayak-campgrounds, and another 35 percent are at other types of campgrounds. Resorts are the next most common type of overnight accommodation (17%).

There are four campgrounds along the Water Trail that are provided for sea kayakers: Thompson Beach, Palisade Head, Gooseberry River and Crazy Bay. Field counts at these sites indicate that they are little used. This means that kayakers—in their survey responses—are considering other campgrounds as water accessible sites where they kayak-camp.

When engaging in day trips or overnight trips involving kayak-camping, kayakers participate in a range of activities, the most common of which are passive visual pursuits: a majority of kayakers participate in nature observation and sightseeing, while over one-third participate in photography and birdwatching. Kayak-campers, as opposed to day users, are far more likely to do park-type activities, including hiking, a self-guided nature walk, rock climbing, visiting historic sites, and photography.

Kayakers attain a host of beneficial experiences from kayaking on the Water Trail. Most frequently attained are those related to getting away to a natural, peaceful setting. Next most frequent are those involving sensual enjoyment: enjoying the smells/sounds of nature and the fresh clean air, and working the body to attain physical fitness. Also of high importance is experiencing adventure and taking risks, which are not the types of experiences recreators get from more routine outings, such as visiting state parks or using state trails. Many kayakers view their trail outing as a chance to connect to nature, feel a sense of wildness and attain spiritual renewal, all of which are facilitated by more primitive, less developed settings. As noted above, kayakers are sensitive to the development along the North Shore and want kayak-campgrounds to be more remote.

Associated with the use of the Water Trail by Minnesota-registered sea kayakers is trip spending, which contributes to the local economy. Trip spending totals just over \$100,000 annually. The typical kayaker spends \$34.53 per day. Most spending is on the essentials: food, transportation and lodging. Kayakers who spend the night away from home spend more each day than day users, mainly because of overnight accommodation costs.

### CHARACTERISTICS OF SEA KAYAK OWNERS

Most sea kayak owners are in households with one or two kayaks; the mean number per household is 1.8. In addition to sea kayaks, owners possess and use a distinctive mix of household recreational equipment. The most common types of equipment are associated with non-motorized physical activity, just like sea-kayaking. Over 60 percent of owners use their household's cross-country skiing equipment, backpacking equipment, mountain bike, fishing gear, and canoe.

The demographic characteristics of sea kayak owners include:

Sea kayak owners are mostly middle-aged, in the 40 to 60 age range.

Males account for three-fourths of owners, females one-fourth.

The educational attainment of sea kayakers is quite high: 78 percent have completed college, which includes 38 percent who have completed a postgraduate degree. Another 6 percent have completed vocational or technical school.

Nearly half of households (46%) are in middle income ranges of \$30,000 to \$80,000, while another 32 percent are over \$100,000. Overall, the incomes are high, with a median in the \$70,000 to \$80,000 range, well above the Minnesota household median which is probably near \$50,000 today.

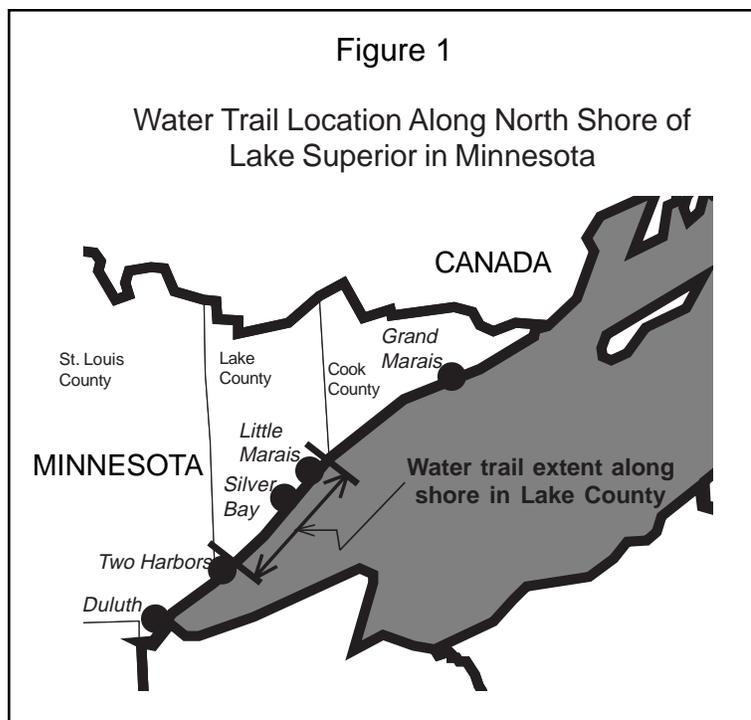
## INTRODUCTION

The Lake Superior Water Trail was officially designated in 1993 by the Minnesota Legislature (MS 85.0155). The Trail provides an opportunity to experience the rugged North Shore of Lake Superior from the water, a perspective few North Shore visitors are able to enjoy. It is intended primarily for sea kayaks, which are larger than their whitewater cousins (a sea kayak is at least 14 feet long). The long-term vision for the Trail in Minnesota is to have it extend the entire 150-mile length of the North Shore from Duluth to Canada. The Minnesota Trail—as envisioned—will connect with Canadian and other U.S. state efforts to form a loop around all of Lake Superior. The development and maintenance of the Water Trail in Minnesota is a joint effort of the Minnesota Department of Natural Resources (MN DNR) and the Lake Superior Water Trail Association of Minnesota.

At present, a forty mile stretch of the Water Trail has been developed in Minnesota along the North Shore from Two Harbors to just north of Little Marais near the Cook County line (Figure 1). Before providing additional amenities and maps for the

Water Trail, the MN DNR wanted to get some background information about sea kayaking on the Trail and on the North Shore in general. The MN DNR wanted to know—among other things—how much the Trail and associated kayaking facilities are being used, what sea kayakers are looking for in terms of facilities/services and experiences on the Trail, and what barriers exist to the further use of Lake Superior by sea kayakers.

To gather this information, two efforts were undertaken. One was a mail survey of Minnesota-registered sea kayak owners, and the other was field counts of sea-kayak campgrounds and access facilities along the Water Trail. The field counts



were designed to gauge the use of these facilities and to supplement the information collected in the mail survey. The survey was first mailed in April 2000. Field data collection covered the expected high-use period from mid June to the end of September 2000.

This report is a summary of findings from the survey and field data collection. After a brief description of methodology, the topics are presented as follows:

- Sea kayak use statewide
- Sea kayak use along the North Shore of Lake Superior
- Interest in, and barriers to, using a sea kayak on the North Shore of Lake Superior
- Interest in, and barriers to, kayak-camping on the North Shore of Lake Superior
- Awareness and characteristics of sea kayaking on the Water Trail of Lake Superior
- Characteristics of sea kayak owners

For those who would like more detailed information, survey tabulations with breakdowns and data files are available from the Minnesota Department of Natural Resources.

This project was a cooperative effort of the Minnesota Department of Natural Resources' Division of Parks and Recreation, Trails and Waterways Division, and Office of Management and Budget Services.

## METHODOLOGY

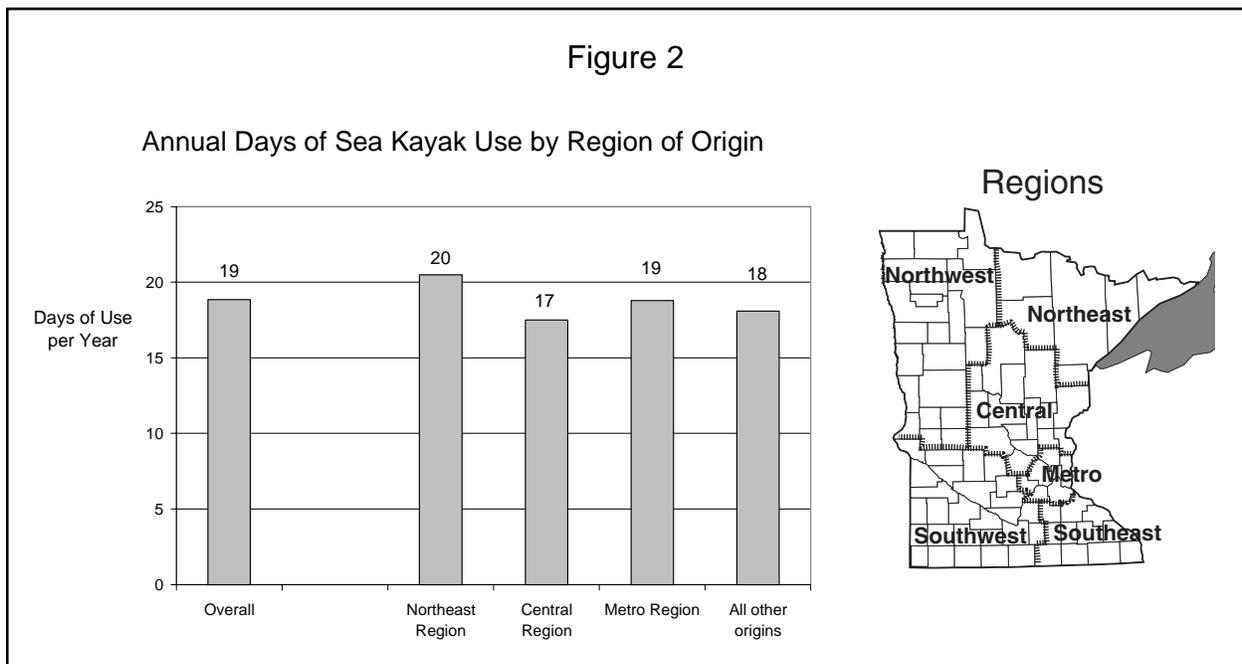
The survey (copy appended to this report) was mailed in April 2000 to a sample of 1000 owners of Minnesota-registered sea kayaks that are used for “pleasure” (personal, non-commercial purposes). The sample was systematically selected from a zip-code sorted registration file. After two remails, a return rate of 71 percent was achieved, which is a high enough return rate to allay concerns about nonresponse bias. Sea kayak owners who live along Lake Superior (Cook, Lake and St. Louis County) were oversampled relative to other places to help ensure a large enough sample of Lake Superior and Water Trail users. All survey results in this report are differentially weighted to account for this oversampling of owners in some places.

The use of two types of facilities along the Water Trail were estimated from field counts. One facility type was kayak-campgrounds, and the other was water access sites for launching/landing a sea kayak (see facility lists below). Counts were made according to a statistical sampling plan, and were made over the expected high use period from mid June to the end of September 2000. The campgrounds were counted a total of 30 times, and the water accesses a total of 50 times. Counts were stratified by day of week (weekdays and weekend/holidays), and by conjectured use rate of a site (high, medium, low).

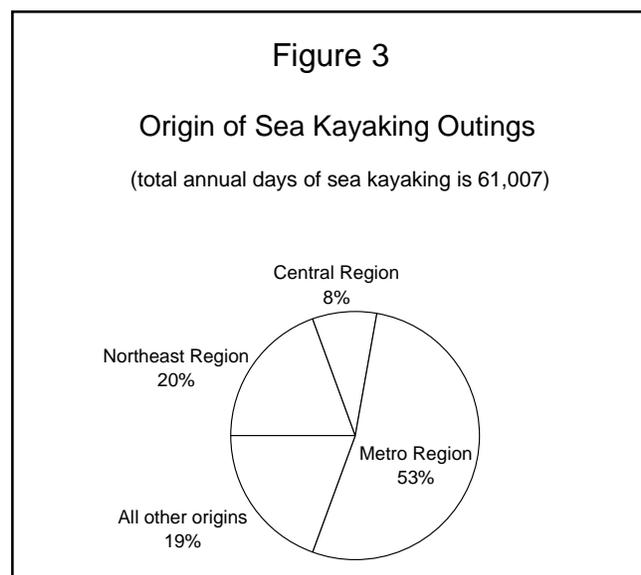
Facilities Included in Field Counts			
Campground Sites		Water Access Sites	
<u>Site Name</u>	Site Mile Marker on North Shore from Duluth	Site Name	Site Mile Marker on North Shore from Duluth
Gooseberry River	38.3	Agate Bay	25.3
Thompson Beach	39.7	Burlington Bay	26.0
Crazy Bay	42.3	Flood Bay	27.1
Palisade Head	55.5	Stewart River	28.0
		Gooseberry River	38.3
		Split Rock River	41.9
		Little Two Harbor	43.7
		Bayside Park	50.5
		Baptism River	56.3

## SEA KAYAK USE STATEWIDE

Minnesota had 3238 sea kayaks registered for pleasure (personal, noncommercial) use in early 2000. The typical Minnesota-registered sea kayak is used about 20 times a year, and there is not a great deal of region-to-region variation in use rates (Figure 2). An annual use rate of around 20 is not uncommon for outdoor recreation activities. Minnesota anglers fish 20 times a year on average, and Minnesota hunters hunt 13 times a year (USFWS, 1998).



Without much region-to-region variation in use rates, most of the sea kayaking originates where most of the sea kayaks are registered, namely the Twin Cities Metro Region (Figure 3). In addition to being the origin of around half of Minnesota's sea kayak outings, the Twin Cities contains about half of Minnesota's population.

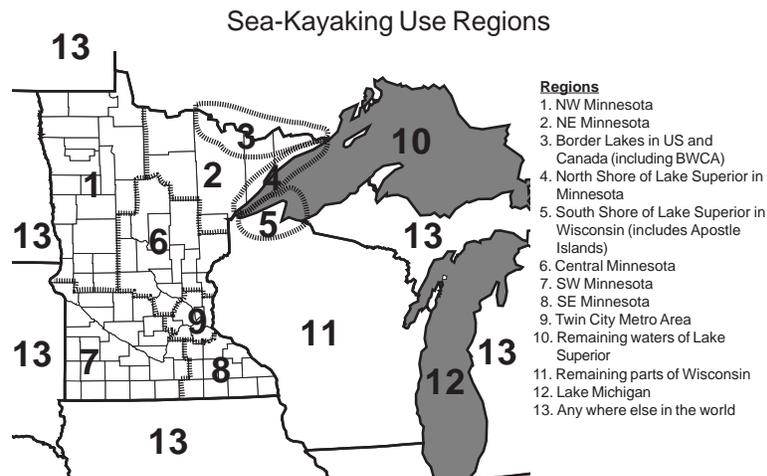


Sea kayaking—like many recreation activities—is predominately a near-home activity. Some 62 percent of all sea kayaking occurs within an hour’s drive of home. Thus, many of the sea kayaking outings that originate in a region have destinations in the same region. This pattern of use makes the Twin Cities metro region the primary destination for the largest number of sea kayakers (Table 1). The metro region is closely followed by Northeast Minnesota, where the North Shore of Lake Superior is a popular destination. Other popular destinations are the border lakes in the U.S. and Canada, and the South Shore of Lake Superior in Wisconsin, which includes the Apostle Islands.

**Table 1**

In what region did most of your sea kayaking outings occur?

<u>Region</u>	<u>Percent who indicated region as primary use region</u>
<b>Twin City Metro Region</b>	<b>30</b>
<b>Northeast Minnesota</b>	<b>28</b>
<i>North Shore of Lake Superior in Minnesota</i>	13
<i>Remainder of Northeast Minnesota</i>	8
<i>Border Lakes in US and Canada (including BWCA)</i>	7
<b>Central Minnesota</b>	<b>12</b>
<b>Wisconsin</b>	<b>10</b>
<i>South Shore of Lake Superior in Wisconsin (includes Apostle Islands)</i>	7
<i>Remaining parts of Wisconsin</i>	3
<b>Northwest Minnesota</b>	<b>7</b>
<b>Southeast Minnesota</b>	<b>4</b>
<b>Southwest Minnesota</b>	<b>3</b>
<b>All other regions</b>	<b>5</b>
Total percent	100

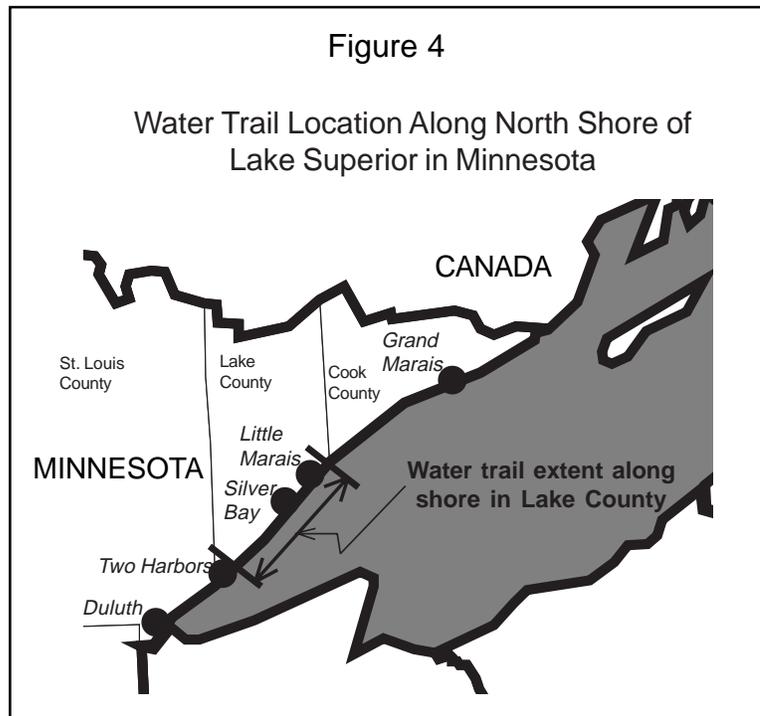


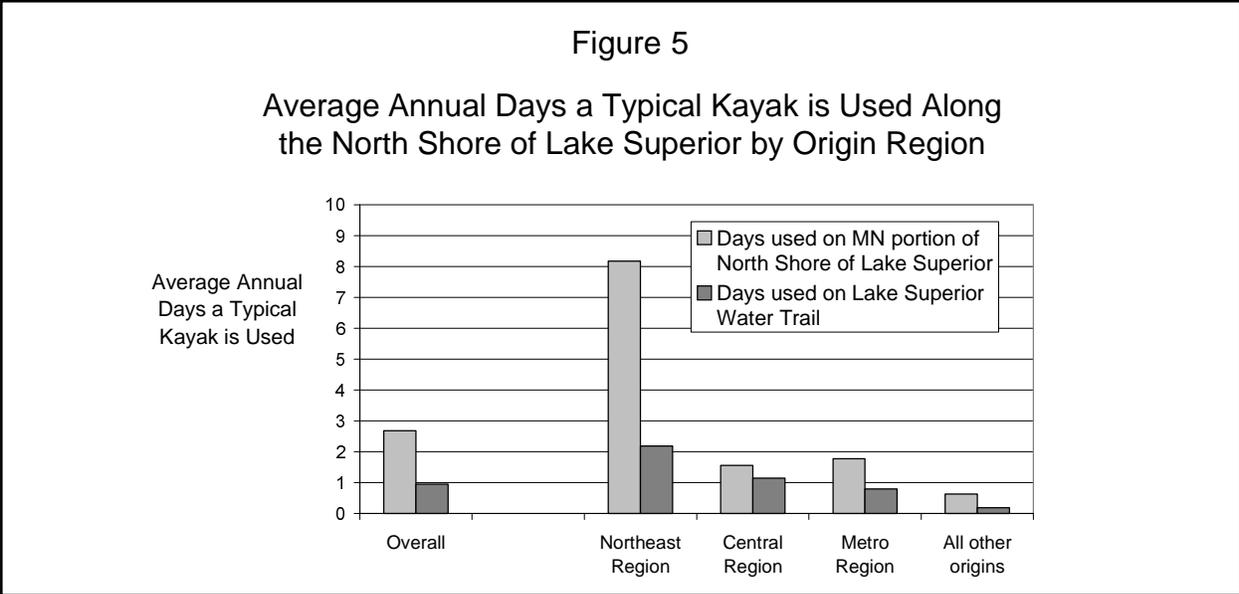
## SEA KAYAK USE ALONG THE MINNESOTA PORTION OF THE NORTH SHORE OF LAKE SUPERIOR

Based on survey results, the North Shore of Lake Superior is the destination for 14 percent of all sea-kayak outings from Minnesota-registered sea kayakers (8,672 of 61,007 outings), and the Water Trail is the destination for five percent of all outings (3,078 of 61,007 outings)—(see Figure 4). The Water Trail accounts for just over one-third of North Shore outings (35%).

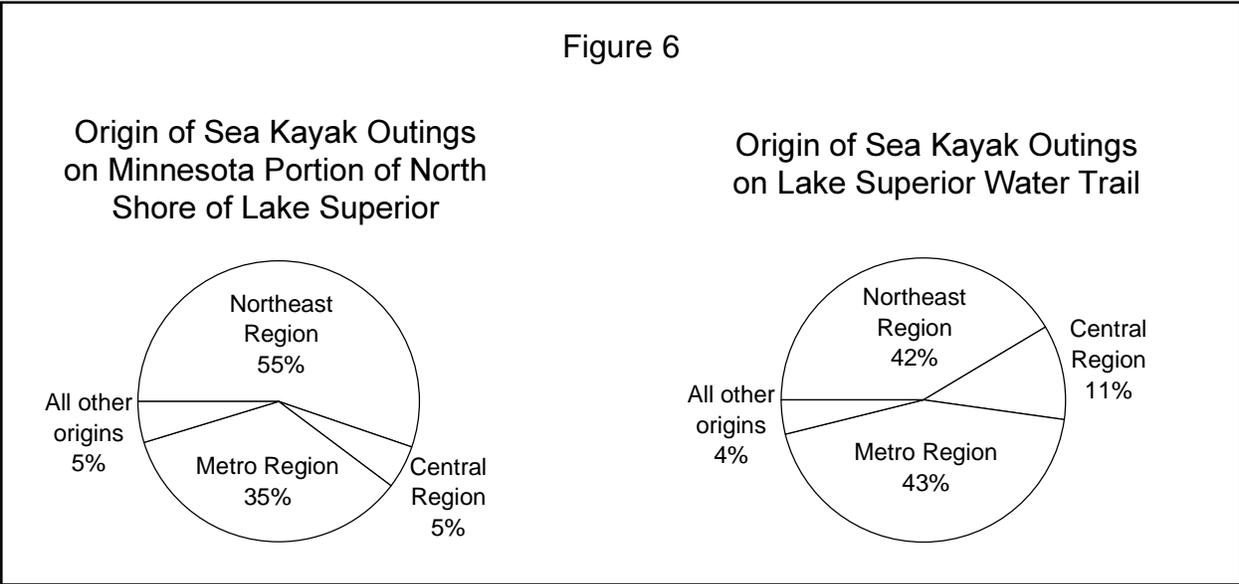
These use figures—based on Minnesota sea kayakers registered for pleasure (personal, noncommercial) use—represent the large majority of sea kayaking at these locations, but they do not include two additional sources of sea kayakers: outfitters and kayakers registered in another state. Estimates for the former source were obtained directly from the outfitters for both the Water Trail and North Shore, and estimates for the latter were obtained from access counts for the Water Trail only. Together, the two additional sources would raise Water Trail use into the 3,500 to 4,000 outing range; these two sources are approximately the same size for the Water Trail. The outfitters for the North Shore would raise Minnesota North Shore use into the 12,000 to 12,500 outing range. Most of the outfitter-related outings come from Duluth and Grand Marais.

Kayakers from Northeast Minnesota, who live nearer the North Shore than other Minnesotans, have higher use rates of Lake Superior and the Water Trail. Compared with the typical sea kayak registered in Minnesota, a sea kayak from the Northeast is used two to three times more often on the North Shore and the Water Trail (Figure 5).





Northeast kayakers—because of their nearby location and associated high use rate—comprise a significant share of North Shore and Water Trail kayaking. Metro kayakers—because of their sheer number—comprise a significant share as well. The Water Trail appears to be more of a tourist destination (less dominated by local users) than the North Shore as a whole (Figure 6).



Northeast kayakers—again because of their proximity—are far more likely to use the North Shore and Water Trail as part of a day trip, whereas those traveling a long distance are much more likely to stay overnight. The origin of kayak-

camping reflects this: kayakers from Northeast Minnesota comprise just 20 to 25 percent of kayak-camping on the North Shore and the Water Trail, which is about half their share of kayaking outings along these same stretches. In contrast, metro region kayakers comprise some 60 percent of kayak-camping along these same stretches, well above their share of kayaking outings.

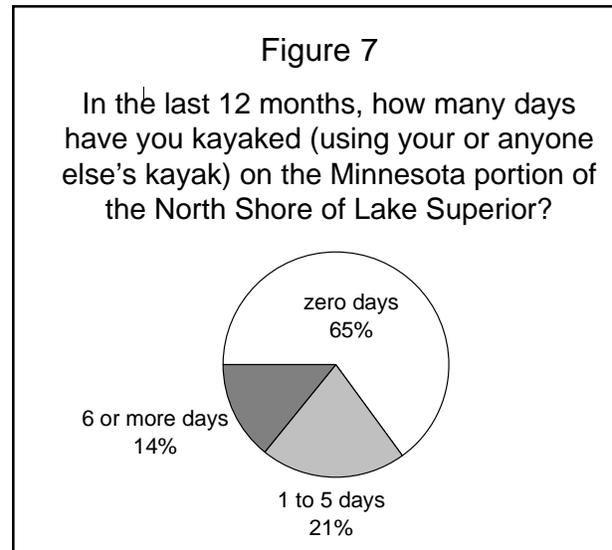
Overall, some 20 percent (19% to 21%) of the sea kayaking along the Water Trail and along the North Shore is associated with kayak-camping, while the remaining 80 percent is day use. This translates into about 590 Water Trail outings associated with kayak-camping, and about 1820 North Shore outings. In comparison, about 15 percent of Minnesota state park attendance is camping and the remaining 85 percent is day use.

Kayak-camping was defined in the survey as camping at a facility entered from the water. There are four campgrounds along the Water Trail that are provided for sea kayakers: Thompson Beach, Palisade Head, Gooseberry River and Crazy Bay. Field counts at these sites indicate that they are little used. This means that kayakers—in their survey responses—are considering other campgrounds as water accessible sites where they kayak-camp. The locations of these “other campgrounds” was not ascertained in the survey, although some likely sites include the walk-in sites at Tettegouche and Split Rock Lighthouse State Parks, and the municipal campground at Two Harbors.

## INTEREST IN, AND BARRIERS TO, USING A SEA KAYAK ON THE MINNESOTA PORTION OF THE NORTH SHORE OF LAKE SUPERIOR

Just over one-third of Minnesota-registered sea kayak owners have kayaked on the North Shore of Lake Superior in the last 12 months (Figure 7). Most who have kayaked the North Shore have kayaked five or fewer days, although a fair portion have kayaked six or more days.

Owners who have kayaked in the last year on the Minnesota waters of Lake Superior have a high interest in kayaking more (90+%), and the large majority (80+%) have plans to do so (Table 2). This is especially true of the heavier users. In contrast, owners who have *not* kayaked on these waters in the last year have a lower, but still sizable interest in kayaking there (73%), but only 30 percent have plans to do so.



**Table 2**

Interest and Plans to Kayak on the Minnesota Waters of Lake Superior  
(percent responding 'YES' to interest and plans questions)

	<i>Days used MN waters of Lake Superior in last 12 months:</i>			<i>All Respondents</i>
	<i>Zero</i>	<i>1 to 5</i>	<i>6 or more</i>	
<b>Interest</b>				
Would you like to kayak (or kayak more often) on the Minnesota waters of Lake Superior?	73	92	96	81
<b>Plans</b>				
Do you have any plans in the next 12 months to kayak (or kayak more often) on the Minnesota waters of Lake Superior?	30	82	96	50

Perceived barriers to further use of the North Shore for kayaking are strongly associated with a kayaker's current use of these waters, except for one universal barrier: time (Table 3). Time is a constraint regardless of how much a kayaker uses the North Shore now. Interestingly, money is not a barrier to any of the

analysis groups in Table 3.

Beyond time constraints, the major barriers for kayakers who have *not* used the North Shore in the last 12 months have to do with intervening opportunities (good opportunities closer to home) and lack of knowledge of what kayaking is like on this part of Lake Superior. Intervening opportunities is a barrier that is difficult to break through. Removing intervening opportunities requires differentiating the North Shore opportunity and raising its perceived value as a place to kayak.

With respect to the knowledge barrier, two-thirds of the owners who have *not* used the North Shore in the last 12 months feel they do not know enough about kayaking in this area. And about 40 percent indicate barriers related to their skills to kayak there, the coldness of the water, and the difficulty of finding others to go with them (perhaps the other kayakers they know are also nonusers and share the same barriers to use).

The lighter users (1 to 5 days in the last 12 months) of these Lake Superior waters have all the same barriers as the preceding nonuser group, except the barriers are less salient. For heavier users (6 or more days in the last 12 months), these same barriers are further diminished and no longer constitute major barriers.

A different set of barriers becomes evident for the owners who have kayaked these waters in the last year, and these barriers become larger with heavier use. The barriers are of two types: one has to do with the social setting kayakers desire (namely, an undeveloped Lake Superior shoreline), and the other involves the lack of specific facilities provided for kayakers. The facilities in the survey that were regularly found lacking were all of those listed (kayak campgrounds, safe landing places in case of bad weather, and good water access) so other facilities should be considered barrier candidates as well (for example, trails from kayak campgrounds). In short, existing users want more amenities for their outing, and they want the outing to occur in a less developed setting.

A number of items did not show up as major barriers to any user or nonuser group, and they are noteworthy for that reason. Money is not a major barrier (as noted above), nor is the current amount of kayaking on the North Shore, lack of overnight accommodations in the area, lack of additional leisure opportunities in the area, expecting interference from motorized watercraft, or expecting to encounter too many people.

**Table 3**

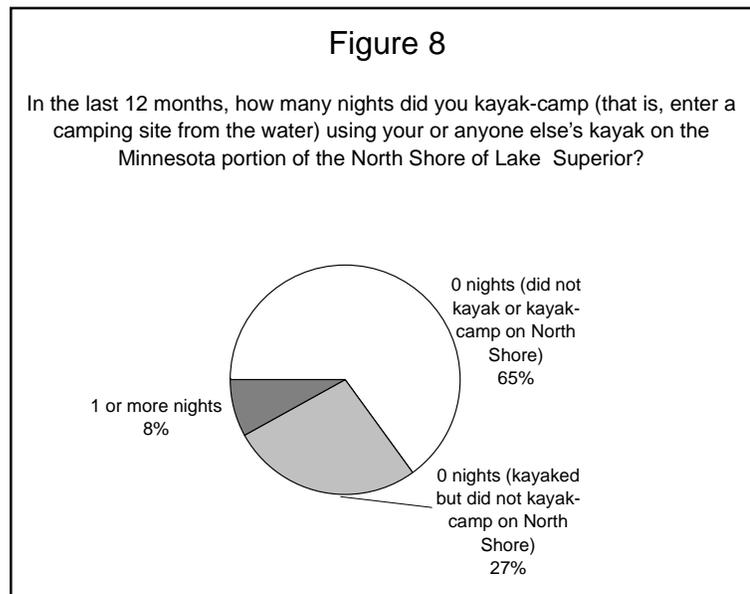
Barriers to Kayaking (or Kayaking more often) on the Minnesota Waters of Lake Superior  
(percent who 'mildly' or 'strongly' agree that item is a barrier)

<b>Category</b>	<b>Item</b>	<i>Days used MN waters of Lake Superior in last 12 months:</i>			<b>All Respondents</b>
		<b>Zero</b>	<b>1 to 5</b>	<b>6 or more</b>	
<b>Time</b>	<ul style="list-style-type: none"> <li>• I don't have enough time to kayak there as much as I would like</li> </ul>	73	80	76	75
<b>Intervening opportunities</b>	<ul style="list-style-type: none"> <li>• There are other good places to kayak closer to home</li> </ul>	70	45	23	57
<b>Personal knowledge and skills</b>	<ul style="list-style-type: none"> <li>• I don't know enough about kayaking on the Minnesota portion of Lake Superior</li> <li>• I lack the skills needed to kayak there</li> </ul>	67	40	16	54
<b>Physical setting</b>	<ul style="list-style-type: none"> <li>• The water is too cold</li> <li>• The waves are too large</li> <li>• It's too dangerous</li> <li>• The weather is unpleasant</li> </ul>	41	31	19	36
<b>Social setting</b>	<ul style="list-style-type: none"> <li>• The Lake Superior shoreline is too developed</li> <li>• I expect motorized watercraft will interfere with the enjoyment of my kayaking</li> <li>• I expect I will encounter too many other people</li> </ul>	22	45	55	32
<b>Kayak-specific facilities</b>	<ul style="list-style-type: none"> <li>• Suitable kayak camping sites that are accessible only by water are lacking</li> <li>• There are not enough safe places to land in case of bad weather</li> <li>• A good way to get on the water is lacking</li> </ul>	29	54	70	41
<b>Additional leisure opportunities</b>	<ul style="list-style-type: none"> <li>• There are not enough things to do other than kayaking</li> <li>• The fishing is poor</li> </ul>	7	5	6	6
<b>Overnight accommodations</b>	<ul style="list-style-type: none"> <li>• It is too difficult to find any camping in this part of Minnesota.</li> <li>• It is too difficult to find in-door lodging in this part of Minnesota.</li> </ul>	16	20	36	20
<b>Companionship</b>	<ul style="list-style-type: none"> <li>• I can't find others to go with me</li> </ul>	37	32	19	33
<b>Expense</b>	<ul style="list-style-type: none"> <li>• It's too expensive to kayak there</li> </ul>	7	5	6	7
<b>Do enough already</b>	<ul style="list-style-type: none"> <li>• I already kayak enough on the Minnesota portion of Lake Superior</li> </ul>	4	5	14	6

## INTEREST IN, AND BARRIERS TO, KAYAK-CAMPING ON THE MINNESOTA PORTION OF THE NORTH SHORE OF LAKE SUPERIOR

Consistent with the previous topic, an owner’s participation in an activity—in this case kayak-camping on the North Shore—is strongly associated with their desire and plans to participate more, as well as with barriers to further participation.

In the last year, fewer than 10 percent of Minnesota-registered sea kayak owners have kayak-camped on the North Shore of Lake Superior (Figure 8). Another 27 percent have kayaked, but not kayak-camped, on the North Shore. Nearly two-thirds have neither kayaked nor kayak-camped along the North Shore in the last 12 months.



Owners who have kayak-camped in the last year along the Minnesota waters of Lake Superior have a high interest in kayak-camping more (95%), and the large majority (83%) have plans to do so (Table 4). Kayak owners who have *not*

**Table 4**

Interest and Plans to Kayak-Camp on the Minnesota Waters of Lake Superior  
(percent responding 'YES' to interest and plans questions)

	<i>Kayaking and kayak-camping on the MN waters of Lake Superior in last 12 months:</i>			All Respondents
	Did not kayak or kayak-camp	Kayaked but did not kayak-camp	Kayaked and kayak-camped	
<b>Interest</b> Would you like to kayak-camp (or kayak-camp more often) on the MN shoreline of Lake Superior?	72	78	95	75
<b>Plans</b> Do you have any plans in the next 12 months to kayak-camp (or kayak-camp more often) on the MN shoreline of Lake Superior?	22	40	83	32

kayak-camped in the last year along Lake Superior have a lower, but still sizable interest in kayak-camping there (70+%), but far fewer have plans to do so. Plans to participate are least frequent among those who neither kayak-camped nor kayaked in the last year.

One potential barrier to more kayak-camping on the North Shore—a simple dislike of camping—is minor among kayakers (Table 5). Sea kayakers, it appears, are a camping friendly group.

For kayakers who have *not* kayak-camped on the North Shore in the last 12 months, the major barrier to participation is lack of personal knowledge about this activity on the North Shore. In contrast, for those who have kayak-camped in the last year, the major barriers are a shortage of campsites (too few and too full), a related barrier on lack of guarantee of a campsite, and the need for more remote campsites with less human development around. Consistent with the need for more remoteness, the existing rustic nature of these campgrounds (no running water or toilets) is not a significant barrier. The shortage of campsites and lack of guarantee of campsite availability also are important barriers to kayakers who used the North Shore but did not kayak-camp last year. Weather is a moderate barrier to all kayak-camping user groups; all groups have some concern about getting stranded by bad weather.

These kayak-camping barriers are similar to the kayaking barriers reported earlier. Kayakers who are users identify a lack of amenities (facilities and services) and remote/less-developed settings as major barriers, while nonusers identify lack of personal knowledge as a major barrier.

A number of items did not show up as major barriers to any user or nonuser group, and they are noteworthy for that reason. Dislike of camping is not a major barrier (as noted above), nor is the rustic nature of the campgrounds (also noted above), the current amount of kayak-camping on the North Shore, or concerns about campground safety.

Table 5

Barriers to Kayak-Camping (or Kayak-Camping more often) on the Minnesota Waters of Lake Superior  
(percent who 'mildly' or 'strongly' agree that item is a barrier)

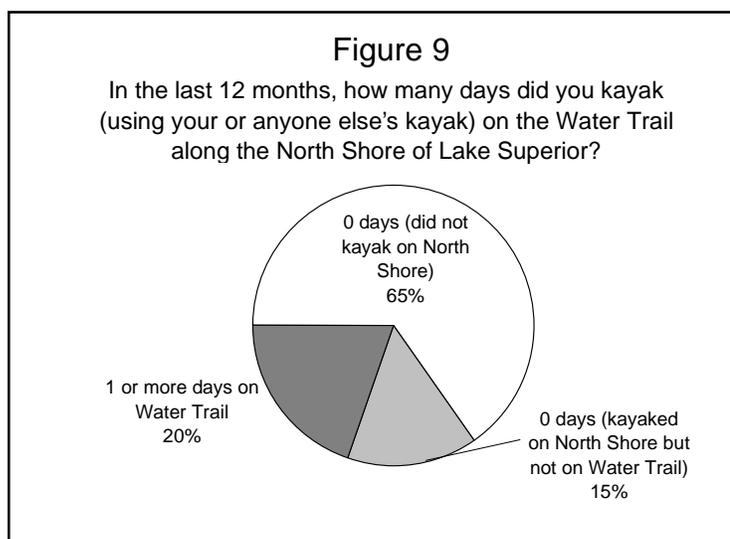
Category	Item	<i>Kayaking and kayak-camping on the MN waters of Lake Superior in last 12 months:</i>			All respondents
		Did not kayak or kayak-camp	Kayaked but did not kayak-camp	Kayaked and kayak-camped	
<b>Personal knowledge</b>					
	• I don't know enough about kayak-camping on the MN portion of Lake Superior	72	62	25	65
<b>Shortage of campsites</b>					
	• Water-accessible campgrounds are too few in number	26	57	77	39
	• Existing water-accessible campgrounds are too full	12	24	53	19
<b>Guarantee of a campsite</b>					
	• There is no way to guarantee (such as through a reservation) that a water-accessible campsite will be available for my use	23	47	66	34
<b>Weather</b>					
	• I don't want to get stranded by bad weather	36	35	33	35
<b>Campground setting</b>					
	• The kayak campgrounds are not remote enough (that is, there is too much human development around)	13	24	58	20
	• The facilities in kayak-campgrounds are too rustic (that is, no running water or toilets)	5	9	7	6
<b>Dislike of camping</b>					
	• I don't like camping of any kind	5	9	0	6
	• I don't like kayak-camping	6	8	0	6
<b>Do enough already</b>					
	• I already kayak-camp enough on the MN portion of Lake Superior	5	3	8	5
<b>Campground safety</b>					
	• I don't feel safe in the kayak-campgrounds	2	2	0	1

## KAYAKING ON THE WATER TRAIL OF LAKE SUPERIOR

### General information

The Water Trail stretches some 40 miles along the North Shore of Lake Superior. As reported earlier, about five percent of all sea-kayaking outings from Minnesota registered kayakers occurs along this Trail. Northeast and Metro Region sea-kayakers dominate the use of the Trail; each region contributes just over 40 percent of all Trail outings.

Overall, some 20 percent of kayak owners report kayaking on the Water Trail in the last 12 months (Figure 9). Another 15 percent kayaked somewhere on the North Shore but not on the Water Trail. The remaining two-thirds did not kayak on the North Shore or the Water Trail.



When kayak owners were asked if they would use the Water Trail more if it was longer than its current length of 40 miles, responses were strongly associated with their current use of the Trail (Table 6):

A majority of kayak owners (62%) who used the Trail in the last 12 months indicated they would use the trail more if it was longer than 40 miles, though nearly a third (31%) were 'not sure' if they would use it more. Few (6%) responded that they would definitely not use it more.

For kayak owners who used the North Shore but not the Water Trail in the last 12 months, the 'not sure' responses comprised the plurality (42%), followed closely by 'yes', they would use the trail more (40%).

For kayak owners who did not use the Trail or the North Shore in the last year, the majority (53%) were 'not sure', and the definite 'no' response (27%) was larger than the definite 'yes' response (20%).

This response pattern is probably another reflection of the desire for more amenities among the current users. As noted earlier, major barriers among current users

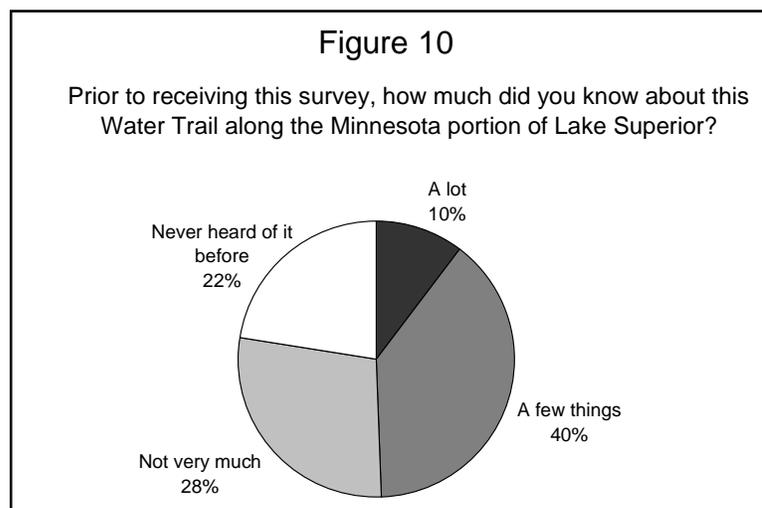
Table 6

Would you kayak more on the Water Trail if the Trail was longer than the current 40 miles?  
(percent of kayakers giving a reponse)

Response to question	Kayaking on the North Shore and Water Trail in last 12 months:			All Respondents
	Did not kayak on North Shore or Water Trail	Kayaked on North Shore but not on Water Trail	Kayaked on the Water Trail	
"Yes"	20	40	62	32
"No"	27	19	6	22
"Not sure/don't know"	53	42	31	47
Total percent	100	100	100	100
Number of kayakers (116 kayakers did not respond to this question)	2037	468	617	3122

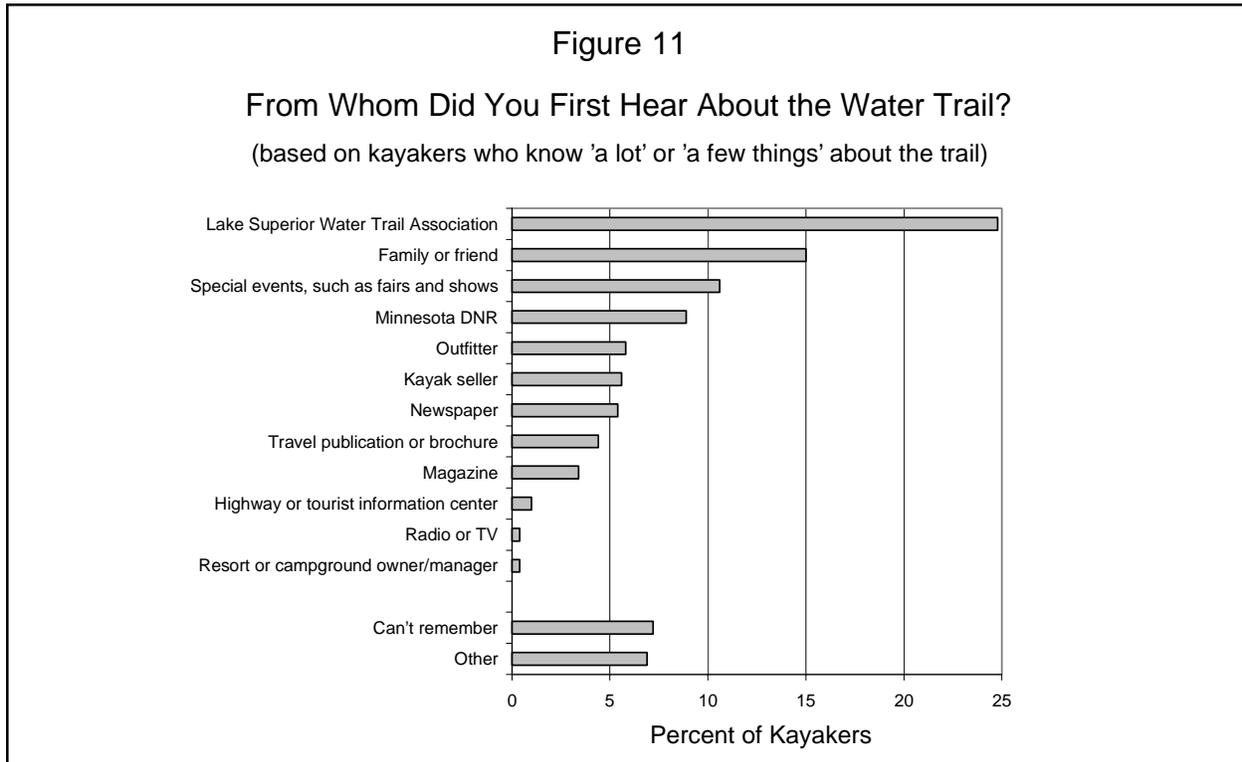
to kayaking (or kayak-camping) are related to the perceived lack of amenities, both facility and service amenities.

The large number of ‘not sure’ responses in Table 6 from owners who are not regular Water Trail users is indicative of a lack of knowledge about kayaking the Trail. It is another reflection of an earlier finding: a major barrier to the use of the North Shore for the owners who are not regular users is a lack of personal knowledge. This lack of knowledge is further evidenced in the responses of owners to a direct question about their level of knowledge of the Water Trail. Half of owners statewide either ‘never heard of the Trail’ (22%) or ‘did not know very much’ about it (28%)—(see Figure 10). Another 40 percent know ‘a few things’ about the Water Trail, and 10 percent claim to know ‘a lot’. Overall, self-describe knowledge of the Trail is not particularly high.



Kayak owners—who know at least ‘a few things’ about the Water Trail—are most

likely to have first heard about the Trail from the Lake Superior Water Trail Association (Figure 11). ‘Family or friends’ (a typically large information source) is the next most frequently indicated source, followed by ‘special events’ and the ‘Minnesota DNR’. Other sources from which at least 5 percent first heard about the Trail include ‘outfitters’, ‘kayak sellers’, and ‘newspapers’.



In early 2000 the Lake Superior Water Trail Association did a large mailing to kayak owners about the Trail. The effectiveness of that mailing is evident in these findings.

Nineteen percent of kayak owners indicated they had used the Water Trail map from the Minnesota DNR. Most of these map users rate the map as ‘excellent’ or ‘good’ (20% and 59%, respectively)—(see Table 7). ‘Fair’

**Table 7**  
**How would you rate the usefulness of the Water Trail map published by the Minnesota DNR?**  
 (based on the 19% of all respondents who indicated they used this map)

<u>Rating</u>	<u>Percent of Map Users</u>
Excellent	20
Good	59
Fair	18
Poor	3
Total percent	100

ratings are given by 18 percent of map users, and only 3 percent give a clearly negative rating of ‘poor’. These ratings, although skewed toward positive, probably indicate room for improvement, mostly because the positive ratings are mainly ‘good’ and not ‘excellent’, and because 21 percent of users give middling or negative ratings.

Characteristics of most recent trip

To gain insight on how the Water Trail is used, the survey asked Trail users to describe their most recent trip. Of all sea kayak owners, nearly 30 percent (28%) indicated they had used the Water Trail sometime in the past, and the most recent outing for most of these (71%) was within the last 12 months.

The vast majority of outings on the Water Trail (89%) are loop trips that start and stop at the same place. The most frequent launching sites are state parks along the Trail and Two Harbors (Table 8). State parks, when combined, account for nearly half (47%) of trip start points. Stop points, when different from start points, overlap a lot with the familiar start points (mainly state parks).

<u>Start Place</u>	<u>Percent of Outings</u>
Split Rock Lighthouse State Park	26
Two Harbors	24
Tettegouche State Park	12
Gooseberry Falls State Park	9
Silver Bay	8
All other start places	<u>21</u>
Total percent	100

Outing characteristics include (Table 9):

The typical Water Trail trip is 10 miles in length. The mean trip length is longer at nearly 30 miles, in part because two respondents' most recent trip was a circumnavigation of Lake Superior (1200 miles).

Typical party size is two to three people in the same number of kayaks; one person per kayak is the norm.

Kayaking along the Water Trail is almost entirely an adult pursuit; few teens and children are part of the outings.

Nearly three-fourths of Water Trail outings involve an overnight somewhere, typically 2 nights in length; the mean length of overnights is much larger at 3.9 nights because of a few very long trips, including the two respondents who circumnavigated Lake Superior.

Camping is the most frequent type of overnight accommodation; 23 percent of overnights are at water-accessible kayak-campgrounds, and another 35 percent are at other types of campgrounds. Resorts are the next most common type of overnight accommodation (17%).

With regards to overnight accommodations, kayak-camping was defined in the survey as camping at a facility entered from the water. There are four campgrounds along the Water Trail that are provided for sea kayakers: Thompson Beach, Palisade Head, Gooseberry River and Crazy Bay. Field counts at these sites indicate that they are little used. This means that kayakers—in their survey responses—are considering other campgrounds as water accessible sites where they kayak-camp. The locations of these “other campgrounds” was not ascertained in the survey, although some likely sites include the walk-in sites at Tettegouche and Split Rock Lighthouse State Parks, and the municipal campground at Two Harbors.

When engaging in day trips or overnight trips involving kayak-camping, kayakers participate in a range of activities. The most common activities are passive visual pursuits: a majority of kayakers participate in nature observation and sightseeing, while over one-third participate in photography and birdwatching (Figure 12). Picnicking, too, is a leading activity. All the remaining activities are participated in by fewer than 30 percent of kayakers. Water-based activities like fishing and swimming are done by few kayakers. Kayak-campers, as opposed to day users, are far more likely to do park-type activities, including hiking (especially prevalent—done by 71% of kayak-campers), a self-guided nature walk, rock climbing, visiting historic sites, and photography.

Table 9

Water Trail Trip Characteristics for Most Recent Outing

**Miles traveled in kayak for the outing**

Mean =	28.3
Median =	10.0

**Number of kayaks that were part of outing**

Mean =	2.7
Median =	2.0

**Number of people on outing**

Mean =	2.8
Median =	2.0

**Kayaks per person on outing**

Mean =	1.0
Median =	1.0

**Party composition**

	<u>Percent</u>
Adults (over 18)	96.9
Teens (13-18)	1.9
Children (12 or under)	1.2
Total percent	100.0

**Did the outing involve an overnight?**

	<u>Percent</u>
"Yes"	73.4
"No"	26.6
Total percent	100.0

**Number of nights away from home for overnight outings**

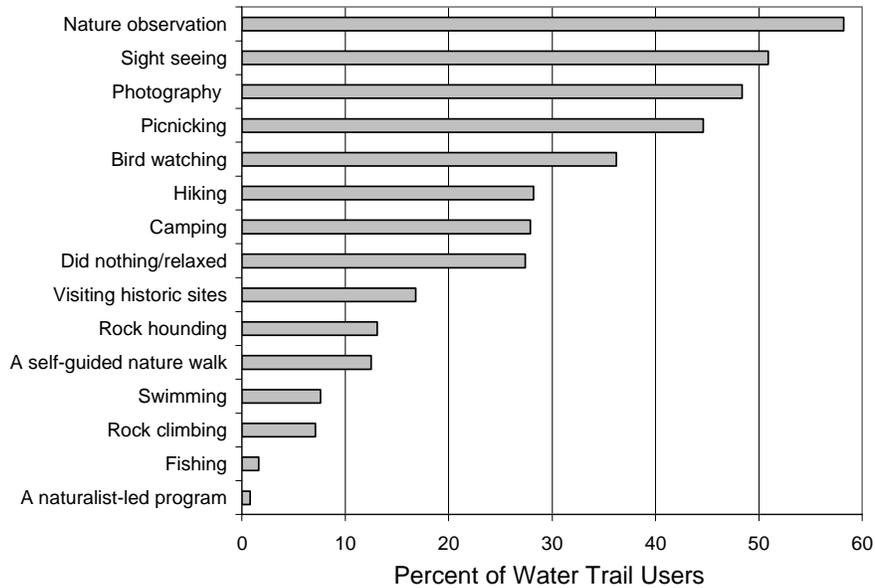
Mean =	3.9
Median =	2.0

**Types of overnight accommodations used for overnight outings**

	<u>Percent</u>
Other campground (not a water-accessible kayak campground)	34.7
Water-accessible kayak campground along Water Trail	22.9
Resort	16.7
Friend's or relative's home	11.2
My cabin	3.2
Other	11.2
Total percent	100.0

Figure 12

Recreational Activities (in addition to kayaking) that Trail Users Participated in While Using The Water Trail on Day and Overnight (kayak-camping) Trips



Kayakers attain a host of beneficial experiences from kayaking on the Water Trail. Through their responses, kayakers grouped 29 individual experiences and benefits into eight categories (Table 10). Primary among the categories of benefits and experiences is one related to getting away to a natural, peaceful setting. Closely following this is a category involving sensual enjoyment: enjoying the smells/sounds of nature and the fresh clean air, and working the body to attain physical fitness. Also of high importance is experiencing adventure and taking risks, which are not the types of experiences recreators get from more routine outings, such as visiting state parks or using state trails. Many kayakers view their trail outing as a chance to connect to nature, feel a sense of wildness and attain spiritual renewal, all of which are facilitated by more primitive, less developed settings. This desire for more primitive settings is probably why so many kayakers are sensitive to the development along the North Shore and why many kayak-campers want the campgrounds to be more remote.

The less frequently attained beneficial experiences have to do with learning and exploring; learning about their equipment is a leading item here. Learning about nature, however, is not particularly prevalent, and only 28 percent of kayakers indicated they attained this beneficial experience. Also less frequently attained are the beneficial experiences that involve kayakers feeling invigorated doing new things, and finding solitude and dark night skies (kayak-campers).

Table 10

Beneficial Experiences Attained on Water Trail Outing  
 (percent of kayakers attaining an item while using the Trail during day  
 outings or kayak-camping overnights)

<u>Category</u>	<u>Item</u>	<u>Percent</u>
<b>Got away and enjoyed natural setting</b>		
	Enjoyed natural scenery	97
	Experienced silence and quiet	77
	Got away from crowds	76
	Got away from life's usual demands	72
	Rested mentally	63
	Felt healthier	61
<b>Enjoyed outdoors sensually</b>		
	Enjoyed smells and sounds of nature	84
	Experienced fresh clean air	83
	Got/kept physically fit	75
<b>Found adventure</b>		
	Experienced a sense of adventure	65
	Took some risks	47
<b>Connected with nature</b>		
	Felt connected to nature	63
	Experienced a feeling of wildness	58
	Experienced spiritual renewal	47
<b>Learned and explored</b>		
	Got a chance to use or test my equipment	57
	Viewed wildlife	48
	Explored and discovered new things and areas	46
	Learned more about nature	28
<b>Felt invigorated doing new things</b>		
	Felt exhilarated	57
	Felt more self-confident	44
	Enjoyed different experiences from home	42
	Talked to new and varied people	25
<b>Found solitude</b>		
	Experienced solitude	55
	Experienced dark night skies (no artificial lights)	24
<b>Socialized</b>		
	Was with members of my group	31
	Helped others develop their skills	27
	Spent leisure time with family	23
	Experienced a sense of history	15
	Did something creative	14

Social experiences and benefits are not frequently attained by kayakers, whether it is with family or members of another group. Some of these people-oriented benefits and experiences (especially spending leisure time with family) are key to other recreation offerings, such as state parks, and provide a major motivation for such outings.

Associated with the use of the Water Trail by Minnesota-registered sea kayakers is trip spending, which contributes to the local economy. Trip spending totals just over \$100,000 annually (Table 11). The typical kayaker spends \$34.53 per day. Most spending is on the essentials: food, transportation and lodging. Kayakers who spend the night away from home spend more each day than day users, mainly because of overnight accommodation costs. Kayakers who stay in campgrounds spend less than those who stay at resorts. A kayaker who overnights at a resort incurs trip expenses of \$63 per day, well above the average overnight cost of \$39 per day.

Table 11

Kayaker Trip Spending Associated With the Use of the Water Trail

**Total Trip Spending**

Total annual spending = \$106,282

*"Total annual spending" is the product of the following two factors:*

- Dollars spent per person per day = \$34.53
- Annual person-days of Water Trail use = 3078

**Profile of Trip Spending**

<u>Expense Item</u>	<u>All Users (percent)</u>	<u>Day Users (percent)</u>	<u>Overnight Users (percent)</u>
Overnight lodging/camping	24	0	28
Restaurant food/beverage/snacks	26	28	25
Groceries	17	18	17
Gasoline	21	32	19
Entertainment, tickets, festivals	1	0	2
Shopping, souvenirs	6	10	5
Equipment rental/repair	5	10	4
Other	1	2	1
Total percent	100	100	100

*Dollars spent per person per day*                      \$34.53                      \$21.68                      \$38.73

## CHARACTERISTICS OF SEA KAYAK OWNERS

Most sea kayak owners are in households with one or two kayaks; the mean number per household is 1.8 (Table 12). Single-kayak households make up nearly half (46%) of all households.

In addition to sea kayaks, owners possess and use a distinctive mix of household recreational equipment. The most common types of equipment are associated with non-motorized physical activity, just like sea-

kayaking. Over 60 percent of owners use their household's cross-country skiing equipment, backpacking equipment, mountain bike, fishing gear, and canoe (Figure 13). Rollerblades and downhill skiing equipment are also relatively commonly in the household and used by owners (40 to 50 percent of owners). The most common motorized equipment of a household that is used by owners is

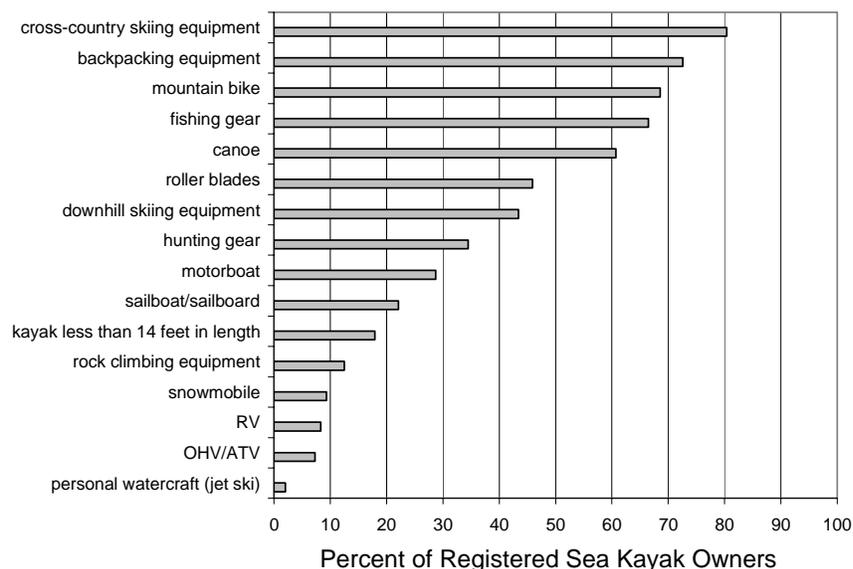
Table 12

Number of Sea Kayaks in Households of Registered Sea Kayak Owners

<u>Number in a Household</u>	<u>Percent of Households</u>
1	46
2	39
3	10
4 or more	5
Total percent	100

Figure 13

In addition to sea kayaks, what other types of recreational equipment do you use that are owned by you or other members of your household?



a motorboat (29 percent of owners). Other motorized equipment (snowmobile, OHV/ATV, and personal watercraft) are not commonly used by sea kayak owners, and are probably not part of the household's recreational equipment. Smaller kayaks (kayaks less than the 14 foot minimum length of a sea kayak) are not very prevalent.

The demographic characteristics of sea kayak owners include (Table 13):

Sea kayak owners are mostly middle-aged (see next page). Two-thirds are between 40 and 60, and just over one-third (35%) are 50 or older.

Males account for three-fourths of owners, females one-fourth. The extent to which this gender split is due to the common practice of putting "males" on owner-registration forms is not known, but the gender split is nearly the same in households with 1 or multiple sea kayaks (the most recent national recreation survey from 1994-95 has the nationwide gender split for all kayaking as two-thirds male, one-third female—see NSRE, 1998).

The educational attainment of sea kayakers is quite high: 78 percent have completed college, which includes 38 percent who have completed a post-graduate degree. Another 6 percent have completed vocational or technical school.

Nearly half of households (46%) are in middle income ranges of \$30,000 to \$80,000, while another 32 percent are over \$100,000. Overall, the incomes are high, with a median in the \$70,000 to \$80,000 range, well above the Minnesota household median which is probably near \$50,000 today (it was \$48,000 in 1998, up from \$43,000 in 1996, according to estimates from the U.S. Census Bureau).

Table 13

Age, Gender, Education and Income of Registered  
Sea Kayak Owners

<u>Age Class</u>	<u>Percent</u>
29 or less	7
30 to 39	16
40 to 49	41
50 to 59	25
60 to 69	8
70 or more	2
Total percent	100

<u>Gender</u>	<u>Percent</u>
Male	75
Female	25
Total percent	100

<u>Educational Attainment</u>	<u>Percent</u>
Some high school	1
Graduated from high school or GED	2
Some vocational or technical school	2
Graduated from vocational or technical school	6
Some college	11
Graduated from college	27
Some postgraduate study	13
Postgraduate degree(s)	38
Total percent	100

<u>Household Income (annual)</u>	<u>Percent</u>
Under \$20,000	3
\$20,000-\$29,999	6
\$30,000-\$39,999	7
\$40,000-\$49,999	11
\$50,000-\$59,999	11
\$60,000-\$69,999	10
\$70,000-\$79,999	8
\$80,000-\$89,999	6
\$90,000-\$99,999	7
Over \$100,000	32
Total percent	100

## REFERENCES

Bureau of the Census, U.S. Department of Commerce. 2000. Median household income for Minnesota in 1996 and 1998.

Fish and Wildlife Service, U.S. Department of the Interior (USFWS); and Bureau of the Census, U.S. Department of Commerce. 1998. 1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. Minnesota volume.

1994-95 National Survey on Recreation and the Environment (NSRE). 1998. USDA Forest Service and the University of Georgia, Athens, Georgia.

# Survey of Owners of Sea Kayaks

(a “sea kayak” is a kayak 14 or more feet in length)



## **SECTION 1 — Use of your kayak by you and anyone else**

This section of the survey pertains **only** to the use of the sea kayak identified on this sticker. If you own more than one kayak, **only** respond for the kayak identified on the sticker.

1. In the last 12 months, how many days was the sea kayak on the sticker used by you or anyone else? \_\_\_\_\_ days (if zero, write “0” and skip to question 3)

STICKER DESCRIBING KAYAK

a. On about how many of these days was this sea kayak used within an hour’s drive of your home? \_\_\_\_\_ days (if zero, write “0”)

b. In what region did most of these sea kayaking days occur (see map at top of next page)? \_\_\_\_\_ region number from map

2. In the last 12 months, how many days was the sea kayak on the sticker used by you or anyone else . . .

a. . . on any Minnesota portion of the North Shore of Lake Superior (region 4 on map at the top of next page) \_\_\_\_\_ days (if zero, write “0”)

b. . . on the Water Trail section of the Minnesota portion of the North Shore of Lake Superior (see water trail map at bottom of next page) \_\_\_\_\_ days (if zero, write “0”)

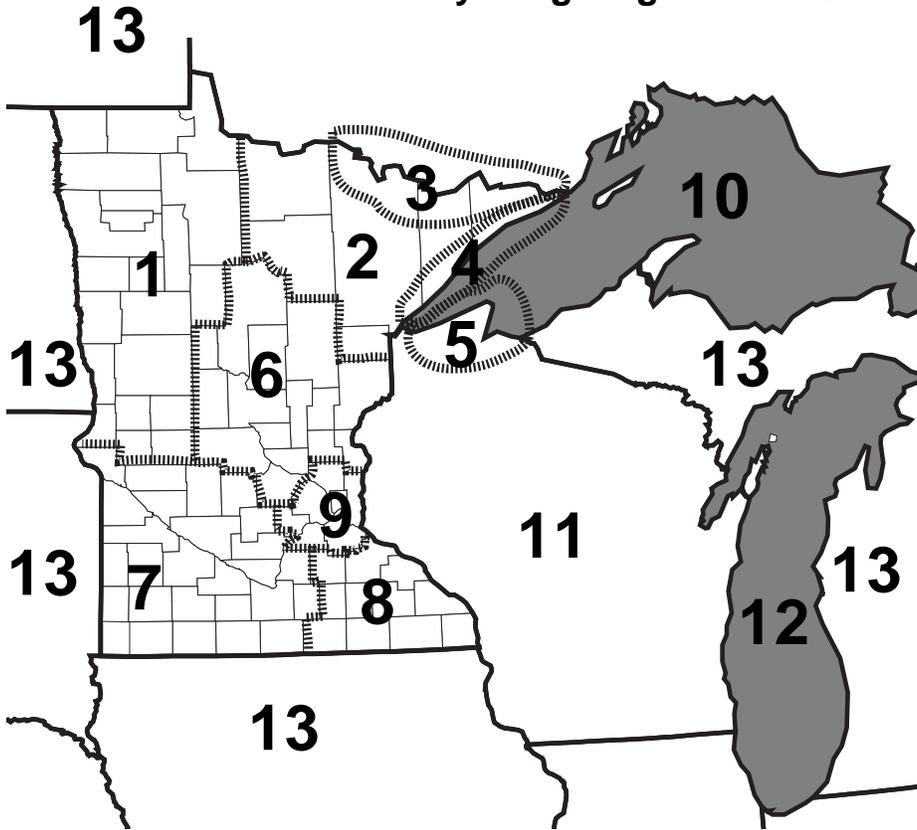
## **SECTION 2 — Your kayaking on the North Shore of Lake Superior in Minnesota**

This section—and all subsequent sections—ask about your use of **any** sea kayak, regardless of whether you own it or not. All questions from this point forward focus on your kayaking experiences and not on a particular kayak.

3. In the last 12 months, how many days have you kayaked (using your or anyone else’s kayak) on the Minnesota portion of the North Shore of Lake Superior (region 4 on map at top of next page)? \_\_\_\_\_ days (if zero, write “0”)

(page 2 of survey—beginning of questions)

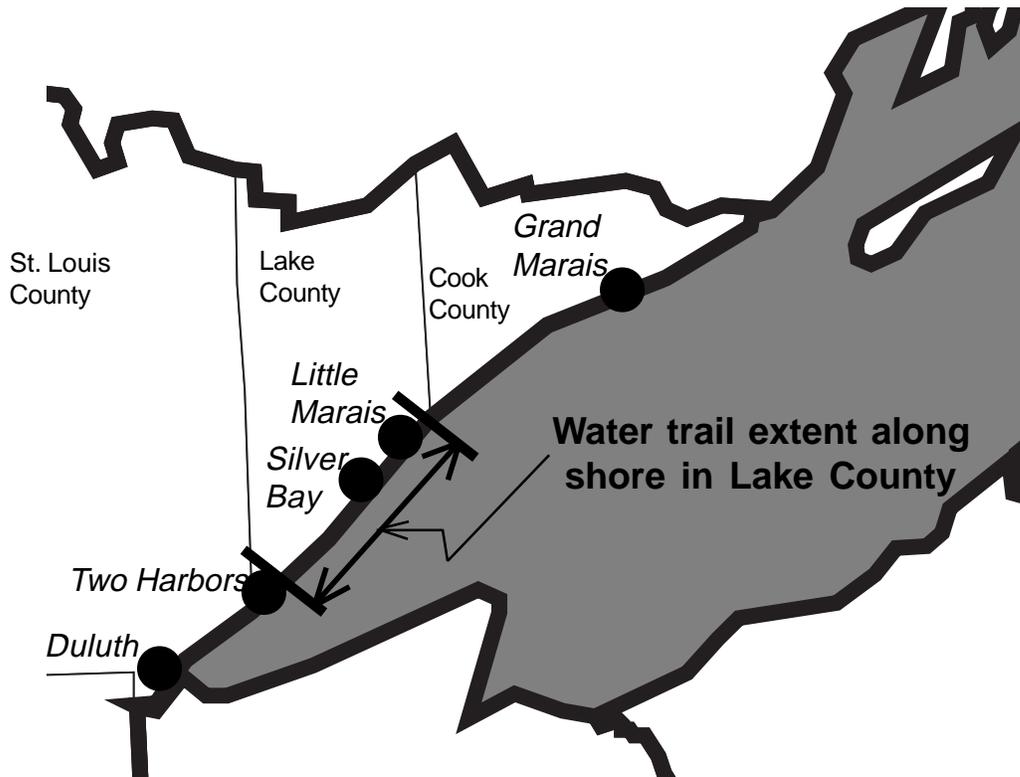
## Kayaking Regions for Survey



### Regions

1. NW Minnesota
2. NE Minnesota
3. Border Lakes in US and Canada (including BWCA)
4. North Shore of Lake Superior in Minnesota
5. South Shore of Lake Superior in Wisconsin (includes Apostle Islands)
6. Central Minnesota
7. SW Minnesota
8. SE Minnesota
9. Twin City Metro Area
10. Remaining waters of Lake Superior
11. Remaining parts of Wisconsin
12. Lake Michigan
13. Any where else in the world

## Water Trail Location Along North Shore of Lake Superior in Minnesota



4. Think about kayaking on the Minnesota portion of the North Shore of Lake Superior, and tell us how much you agree or disagree with the following statement:

*I haven't kayaked (or kayaked more often) on Minnesota waters of Lake Superior because . . .*  
*(circle one for each)*

	Strongly disagree	Mildly disagree	Neither agree nor disagree	Mildly agree	Strongly agree	Don't Know
I already kayak enough on the Minnesota portion of Lake Superior	SD	MD	N	MA	SA	DK
I don't have enough time to kayak there as much as I would like	SD	MD	N	MA	SA	DK
It's too dangerous	SD	MD	N	MA	SA	DK
There are not enough things to do other than kayaking	SD	MD	N	MA	SA	DK
Suitable kayak camping sites that are accessible only by water are lacking	SD	MD	N	MA	SA	DK
A good way to get on the water is lacking	SD	MD	N	MA	SA	DK
It is too difficult to find in-door lodging in this part of Minnesota.	SD	MD	N	MA	SA	DK
It is too difficult to find any camping in this part of Minnesota.	SD	MD	N	MA	SA	DK
There are not enough safe places to land in case of bad weather	SD	MD	N	MA	SA	DK
The waves are too large	SD	MD	N	MA	SA	DK
I can't find others to go with me	SD	MD	N	MA	SA	DK
The Lake Superior shoreline is too developed	SD	MD	N	MA	SA	DK
I expect motorized watercraft will interfere with the enjoyment of my kayaking	SD	MD	N	MA	SA	DK
I expect I will encounter too many other people	SD	MD	N	MA	SA	DK
It's too expensive to kayak there	SD	MD	N	MA	SA	DK
There are other good places to kayak closer to home	SD	MD	N	MA	SA	DK
The weather is unpleasant	SD	MD	N	MA	SA	DK
The water is too cold	SD	MD	N	MA	SA	DK
I lack the skills needed to kayak there	SD	MD	N	MA	SA	DK
The fishing is poor	SD	MD	N	MA	SA	DK
I don't know enough about kayaking on the Minnesota portion of Lake Superior	SD	MD	N	MA	SA	DK
Other (please describe _____)	SD	MD	N	MA	SA	DK

5. Do you have any plans in the next 12 months to kayak (or kayak more often) on the Minnesota waters of Lake Superior? (check one)  yes  no  not sure/don't know
6. Would you like to kayak (or kayak more often) on the Minnesota waters of Lake Superior? (check one)  yes  no  not sure/don't know
7. In the last 12 months, how many nights did you kayak-camp (that is, enter a camping site from the water) using your or anyone else's kayak on the Minnesota portion of Lake Superior?  nights camped (if zero, write "0")
8. Think about kayak-camping on the Minnesota portion of Lake Superior, and tell us how much you agree or disagree with the following statement:

*I haven't kayak-camped (or kayak-camped more often) on Minnesota waters of Lake Superior because . . .*  
*(circle one for each)*

	Strongly disagree	Mildly disagree	Neither agree nor disagree	Mildly agree	Strongly agree	Don't Know
I already kayak-camp enough on the MN portion of Lake Superior	SD	MD	N	MA	SA	DK
I don't like camping of any kind	SD	MD	N	MA	SA	DK
I don't like kayak-camping	SD	MD	N	MA	SA	DK
The kayak campgrounds are not remote enough (that is, there is too much human development around)	SD	MD	N	MA	SA	DK
I don't want to get stranded by bad weather	SD	MD	N	MA	SA	DK
Water-accessible campgrounds are too few in number	SD	MD	N	MA	SA	DK
Existing water-accessible campgrounds are too full	SD	MD	N	MA	SA	DK
There is no way to guarantee (such as through a reservation) that a water-accessible campsite will be available for my use	SD	MD	N	MA	SA	DK
The facilities in kayak-campgrounds are too rustic (that is, no running water or toilets)	SD	MD	N	MA	SA	DK
I don't feel safe in the kayak-campgrounds	SD	MD	N	MA	SA	DK
I don't know enough about kayak-camping on the MN portion of Lake Superior	SD	MD	N	MA	SA	DK
Other (please describe _____)	SD	MD	N	MA	SA	DK

9. Do you have any plans in the next 12 months to kayak-camp (or kayak-camp more often) on the MN shoreline of Lake Superior? (check one)  yes  no  not sure/don't know
10. Would you like to kayak-camp (or kayak-camp more often) on the MN shoreline of Lake Superior? (check one)  yes  no  not sure/don't know

**SECTION 3 — Your kayaking on the Water Trail on Lake Superior**

A few years ago (1994), a Water Trail was opened on the Minnesota portion of Lake Superior, primarily for use by sea kayakers (see map at bottom of page 3). The Water Trail extends along the shoreline of Lake County from Two Harbors to just north of Little Marais, a distance of approximately 40 miles.

11. Prior to receiving this survey, how much did you know about this Water Trail along the Minnesota portion of Lake Superior? (check one)

a lot    a few things    not very much    never heard of it before

12. If you had heard of the water trail prior to this survey, from whom did you first hear about it? (check one)

<input type="checkbox"/> Lake Superior Water Trail Association	<input type="checkbox"/> Family or friend
<input type="checkbox"/> Newspaper	<input type="checkbox"/> Highway or tourist information center
<input type="checkbox"/> Minnesota DNR	<input type="checkbox"/> Travel publication or brochure
<input type="checkbox"/> Resort or campground owner/manager	<input type="checkbox"/> Magazine
<input type="checkbox"/> Radio or TV	<input type="checkbox"/> Kayak seller
<input type="checkbox"/> Outfitter	<input type="checkbox"/> Special events, such as fairs and shows
<input type="checkbox"/> Can't remember	<input type="checkbox"/> Other (please describe) _____

13. In the last 12 months, how many days did you kayak (using your or anyone else's kayak) on the Water Trail (trail is mapped at the bottom of page 3)? \_\_\_\_\_ days (if zero, write "0")

14. Would you kayak more on the Water Trail if the Trail was longer than the current 40 miles? (check one)

yes    no    not sure/don't know

15. Have you ever used the Water Trail map published by the Minnesota DNR? (check one)

yes    no    not sure

If YES, how would you rate the usefulness of this map? (check one)

excellent    good    fair    poor    don't know

16. When was the last year you used the water trail for kayaking? (check one)

2000    1999    1998    1997    1996    1995 or before

Have never used the water trail for kayaking (if you checked this, skip to question 29)

**Now, think back to the last time you used a kayak on the Water Trail in Minnesota, and answer the following questions for that outing.**

17. Where did the outing begin? \_\_\_\_\_ describe launch place

18. Did the outing end where it began? (check one)  Yes    No

If NO, where did it end? \_\_\_\_\_ describe landing place

19. Including your kayak, how many kayaks were part of this outing? \_\_\_\_\_ number of kayaks

20. Including yourself, how many adults, teens and children were in your party on this outing?

Adults (over 18)    Teens (13-18)    Children (12 or under)

21. For the entire outing, how many miles did you travel in your kayak? \_\_\_\_\_ miles

(page 6 of survey)

22. In addition to kayaking, what recreational activities did you participate in on this outing? (check all that apply)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Camping       | <input type="checkbox"/> Picnicking    | <input type="checkbox"/> Visiting historic sites   |
| <input type="checkbox"/> Hiking        | <input type="checkbox"/> Swimming      | <input type="checkbox"/> Nature observation        |
| <input type="checkbox"/> Bird watching | <input type="checkbox"/> Rock climbing | <input type="checkbox"/> A self-guided nature walk |
| <input type="checkbox"/> Fishing       | <input type="checkbox"/> Sight seeing  | <input type="checkbox"/> A naturalist-led program  |
| <input type="checkbox"/> Photography   | <input type="checkbox"/> Rock hounding | <input type="checkbox"/> Did nothing/relaxed       |

23. What were the most important experiences and benefits that you attained on this outing? (check all that apply)

- |  |  |
|--|--|
| <input type="checkbox"/> Got/kept physically fit             | <input type="checkbox"/> Helped others develop their skills                  |
| <input type="checkbox"/> Enjoyed natural scenery             | <input type="checkbox"/> Talked to new and varied people                     |
| <input type="checkbox"/> Spent leisure time with family      | <input type="checkbox"/> Did something creative                              |
| <input type="checkbox"/> Got away from life's usual demands  | <input type="checkbox"/> Was with members of my group                        |
| <input type="checkbox"/> Enjoyed smells and sounds of nature | <input type="checkbox"/> Experienced solitude                                |
| <input type="checkbox"/> Got away from crowds                | <input type="checkbox"/> Felt exhilarated                                    |
| <input type="checkbox"/> Felt healthier                      | <input type="checkbox"/> Felt more self-confident                            |
| <input type="checkbox"/> Learned more about nature           | <input type="checkbox"/> Rested mentally                                     |
| <input type="checkbox"/> Experienced a sense of history      | <input type="checkbox"/> Enjoyed different experiences from home             |
| <input type="checkbox"/> Experienced a feeling of wildness   | <input type="checkbox"/> Viewed wildlife                                     |
| <input type="checkbox"/> Experienced silence and quiet       | <input type="checkbox"/> Got a chance to use or test my equipment            |
| <input type="checkbox"/> Experienced fresh clean air         | <input type="checkbox"/> Experienced dark night skies (no artificial lights) |
| <input type="checkbox"/> Experienced spiritual renewal       | <input type="checkbox"/> Felt connected to nature                            |
| <input type="checkbox"/> Experienced a sense of adventure    | <input type="checkbox"/> Explored and discovered new things and areas        |
| <input type="checkbox"/> Took some risks                     |  |

24. Did this outing involve staying overnight away from home? (check one)

- Yes  No (if NO, please skip to question 27)

25. How many nights away from home did this outing involve? \_\_\_\_\_ nights

26. What type of overnight accommodations were used on this outing? (check all that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> resort   | <input type="checkbox"/> friend's or relative's home                         |
| <input type="checkbox"/> my cabin   | <input type="checkbox"/> water-accessible kayak campground along Water Trail |
| <input type="checkbox"/> other campground (not a water-accessible kayak campground) |  |
| <input type="checkbox"/> other (please describe) _____                              |  |

27. Approximately how much did your party spend on this outing? (please fill in the approximate dollar amount for each category)

- \$ \_\_\_\_\_ overnight lodging/camping  
\$ \_\_\_\_\_ restaurant food/beverage/snacks  
\$ \_\_\_\_\_ groceries  
\$ \_\_\_\_\_ gasoline  
\$ \_\_\_\_\_ entertainment, tickets, festivals  
\$ \_\_\_\_\_ shopping, souvenirs  
\$ \_\_\_\_\_ equipment rental/repair  
\$ \_\_\_\_\_ other

28. How many people were covered by these expenditures? \_\_\_\_\_ people

(page 7 of survey)

**SECTION 4 — Information about you and your household**

29. How many sea kayaks are owned by your household? \_\_\_\_\_ number of kayaks 14 feet or longer

30. In addition to sea kayaks, what other types of recreational equipment do you use that are owned by you or other members of your household? (check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> kayak less than 14 feet in length | <input type="checkbox"/> canoe                          |
| <input type="checkbox"/> motorboat                         | <input type="checkbox"/> personal watercraft (jet ski)  |
| <input type="checkbox"/> snowmobile                        | <input type="checkbox"/> OHV/ATV                        |
| <input type="checkbox"/> downhill skiing equipment         | <input type="checkbox"/> cross-country skiing equipment |
| <input type="checkbox"/> rock climbing equipment           | <input type="checkbox"/> sailboat/sailboard             |
| <input type="checkbox"/> roller blades                     | <input type="checkbox"/> backpacking equipment          |
| <input type="checkbox"/> RV                                | <input type="checkbox"/> hunting gear                   |
| <input type="checkbox"/> mountain bike                     | <input type="checkbox"/> fishing gear                   |

31. Are you ( ) male or ( ) female? (check one)

32. How old are you? \_\_\_\_\_ years

33. What is the highest level of education you have completed? (check one)

- Some high school
- Graduated from high school or GED
- Some vocational or technical school
- Graduated from vocational or technical school
- Some college
- Graduated from college
- Some postgraduate study
- Postgraduate degree(s)

34. Please indicate below your total household income before taxes last year. (check one)

- |  |  |
|--|--|
| <input type="checkbox"/> Under \$20,000      | <input type="checkbox"/> \$60,000 - \$69,999 |
| <input type="checkbox"/> \$20,000 - \$29,999 | <input type="checkbox"/> \$70,000 - \$79,999 |
| <input type="checkbox"/> \$30,000 - \$39,999 | <input type="checkbox"/> \$80,000 - \$89,999 |
| <input type="checkbox"/> \$40,000 - \$49,999 | <input type="checkbox"/> \$90,000 - \$99,999 |
| <input type="checkbox"/> \$50,000 - \$59,999 | <input type="checkbox"/> \$ Over \$100,000   |

**THANK YOU FOR TAKING TIME TO FILL OUT THIS SURVEY.**