

# Research Summaries



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## Preferred Facilities and Services at Free Public Water Access Sites

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### Introduction

*Pleasure boating is big business in Minnesota. In 1989 there were 286,000 pleasure boat owners and nearly 700,000 boats registered in the state. How do these boat owners gain access to the state's many lakes and rivers? Do they make use of Minnesota's 2,200 free public water access sites? What kinds of facilities and services would they like to have available at these sites in order to make their boating experiences more enjoyable?*

*To obtain answers to these and other questions related to the quality of boating in Minnesota, a statewide survey of registered Minnesota boat owners was conducted in 1988 by the University of Minnesota and the Minnesota Department of Natural Resources (DNR), funded by the DNR. The research summarized in this report is based on a survey of 2,490 boat owners, projected to the entire population of Minnesota registered boat owners.*



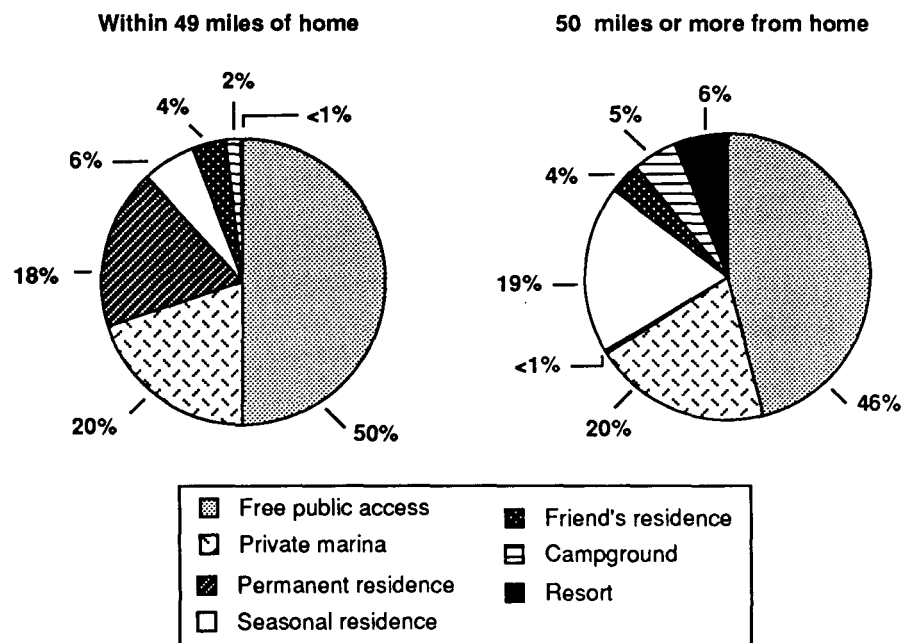
### Use of Water Access Sites

Almost three out of four Minnesota boat owners used a free public water access site at least once in 1987. On average, public access site users launch their boat six times a year at three different public access sites. Approximately half of Minnesota boat owners gained access to the water they used most frequently for boating in 1987 from a

free public water access (Figure 1). Twenty percent of all boaters gained access through private marinas. Eighteen percent of all outings within 49 miles of home involved water access from a permanent residence. Seasonal residences provided access for 19% of all outings occurring 50 or more miles from home.

**Regional variation.** Variation exists in the type of water access a boat owner is likely to use depending on where the owner lives.

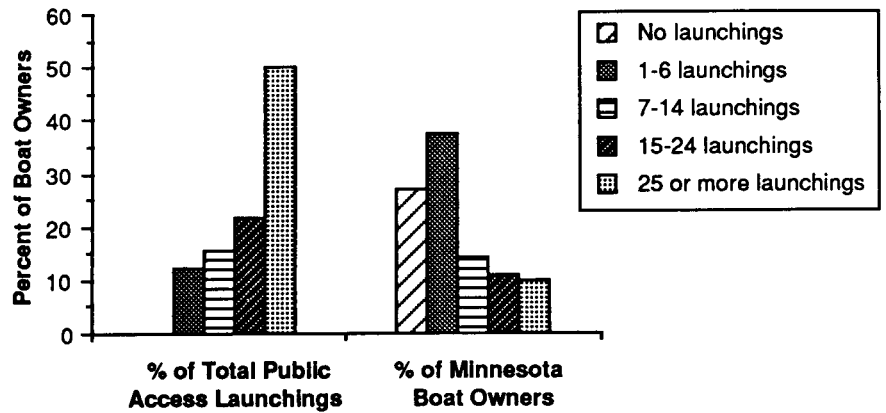
Figure 1. Percentage of Minnesota boat owners using various types of water access facilities on their most frequent boating outing



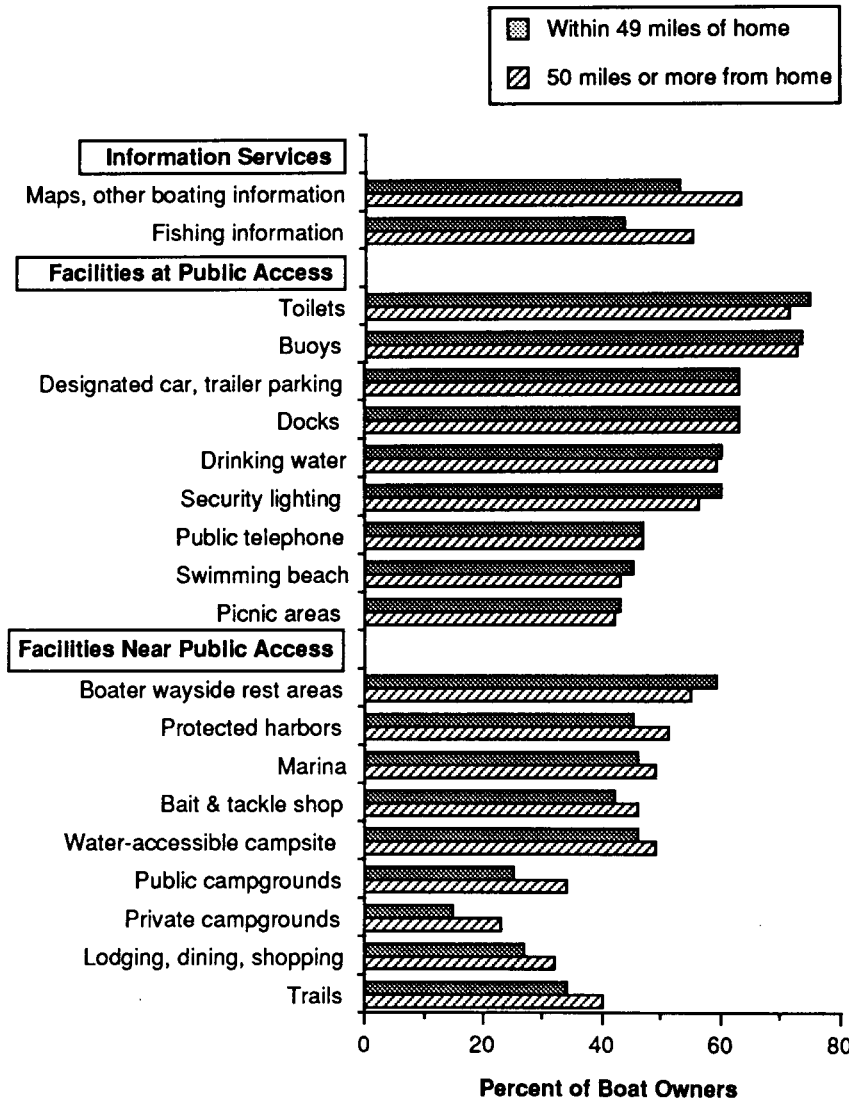
*Metro.* Compared to the pattern of free public water access use for all Minnesota boat owners (Figure 1), owners in the Twin Cities metro region are more likely to use a private marina for access on outings within 49 miles of home (25% of metro owners vs. 20% of state owners) and more likely to use a seasonal residence for access on outings beyond 50 miles from home (23% metro, 19% state).

*North.* Whereas 20% of all Minnesota boat owners gain water access for their most frequent outing within 49 miles of home through private marinas, only 13% of owners in the north region use marinas for

**Figure 2. Selected characteristics of Minnesota boat owners based on frequency of free public water access use**



**Figure 3. Percentage of boat owners in favor of services and facilities at free public water access sites**



the same purpose. Compared to the average for the state, the outings of north region boat owners occurring beyond 50 miles from home are less likely to involve water access from a seasonal residence (12% north, 19% state) and more likely to involve access from a private marina (24% north, 20% state) or a public water access (50% north, 46% state).

*South.* Outings within 49 miles of home for boat owners in the south region are more likely than similar outings for owners throughout the state to involve public water access (59% south, 50% state) and less likely to involve access from a permanent residence (8% south, 18% state). Of all boat owners in the state, south region owners are most likely to use resorts as a means of water access for outings occurring more than 50 miles from home (10% south, 6% state).

**Frequent users.** A large percentage of public water access use involves a relatively small segment of boat owners who visit the sites frequently. Over 87% of all public water access launchings in 1987 involved people who launched a boat from a public access seven or more times (Figure 2). Of the state's boat owners, 35% launched their boats at a public access seven or more times in 1987. Over half of all public water access launchings in 1987 were attributable to the 10% of the state's boat owners who launched at a free public access more than 25 times.

## Preferred Facilities and Services Near Home

**Statewide perceptions.** In 1987, 77% of Minnesota boat owners engaged in boating outings occurring within 49 miles of their home. Almost 40% of those outings occurred within five miles of home, and over 75% were within 20 miles of home.

Over 70% of the state's boat owners believe that provision of toilets at public water access sites and buoys to mark depths and navigation hazards would enhance their boating outings within 49 miles of home (Figure 3). Between 60% and 70% of Minnesota's boat owners feel provision of designated car and trailer parking, docks, drinking water, and security lighting at public water access sites would enhance outings close to home. At least half of the state's boat owners also believe provision of maps and other boating information and boater wayside rest areas accessible only by water would enhance boating outings within 49 miles of home.

**Regional variation.** Regional variation exists in the percentage of boat owners who believe provision of a particular facility or service would enhance outings within 49 miles of home. The percentage of south region owners believing that a facility or service would enhance an outing close to home exceeds the statewide average by 7% on docks, bait and tackle shops, and public campgrounds. Otherwise, regional variation is within 5% of the statewide average.

**Variation based on boat type.** Boaters owning different types of boats have varying perceptions of whether provision of public water access facilities and services would enhance their most frequent boating outing within 49 miles of home (Table 1). As compared with other boat owners, sailboat owners are less likely to believe that providing fishing information or provision of nearby bait and tackle shops will enhance their experiences. Canoe and kayak owners are less likely than other owners to believe that provision of navigational buoys, docks, security lighting, and nearby lodging, bait and tackle shops, and marinas will enhance their close-to-home outings; but they are more likely to believe that provision of trails from a public water

access, maps and other boating information, and public campsites accessible only from water will enhance their outings. Compared to other boat owners, owners of sail or power boats longer than 20 feet are more likely to feel that their outings within 49 miles of home will be enhanced by provision of navigational buoys, marinas, protected harbors, and nearby lodging, but they are less likely to believe that provision of designated parking will enhance their close-to-home outings. Owners of sailboats under 20 feet in length and owners of all boats under 13 feet are less likely to view provision of water-accessible wayside rest areas and marinas as enhancing outings near home.

**Variation based on frequency of use.** The number of times boat owners use public water access sites is also a factor in how they view facilities and services at these sites (Table 2). The perceptions of frequent users are especially important since 70% of all public water access launchings involve boaters who launch 15 or more times a year and 50% of all launchings involve boaters with 25 or more annual public access launches.

Among boat owners launching 15 to 24 times a year at a public access within 49 miles of home, 85% support provision of toilets, and 74% or more support provision of buoys, designated parking, and docks.

**Table 1. Percentage of owners of various boat types who favor facilities and services at access sites within 49 miles of home**

Facility or service	Canoe or kayak	Boat under 13 ft.	Boat 14 to 20 ft.		Boat over 20 ft.	
			Sail	Power	Sail	Power
<i>percent of boat owners</i>						
<b>Information services</b>						
Maps and other boating information	60	46	47	54	44	46
Fishing information	40	45	30	50	29	40
<b>Facilities at public access</b>						
Toilets	73	71	72	70	62	66
Buoys	48	46	72	70	85	83
Designated car and trailer parking	63	63	62	72	53	58
Docks	49	61	59	70	60	62
Drinking water	69	54	70	59	62	58
Security lighting	47	52	58	65	55	63
Public telephones	36	43	58	42	54	57
Swimming beaches	44	48	50	41	54	46
Picnic areas	48	40	44	42	41	42
<b>Facilities near public access</b>						
Boater wayside rest areas accessible only by water	63	44	50	59	64	63
Protected harbors	30	28	42	40	64	57
Marina	21	29	26	42	54	69
Bait and tackle shop	33	40	26	48	27	45
Public campsites accessible only by water	57	34	36	40	50	53
Public campgrounds	32	26	27	32	13	16
Private campgrounds	17	12	16	18	10	12
Lodging, dining, shopping	12	35	36	28	30	34
Trails	50	35	36	28	30	34

At least 60% of the owners with 15 to 24 annual public access launchings support on-site provision of maps and other boating information, drinking water, security lighting, and nearby provision of water-accessible boater wayside rest areas; and at least one half of these owners believe provision of fishing information and swimming beaches at water access sites would enhance their outings. Boat owners launching more than 25 times a year at a public water access exhibit response patterns similar to those launching 15 to 24 times. However, over half of the most frequent public water access users also believe that provision of nearby bait and tackle shops and public campsites accessible only by water would enhance their boating outings within 49 miles of home.

## Preferred Facilities and Services Away from Home

**Statewide perceptions.** In 1987, 56% of Minnesota's boat owners engaged in boating outings occurring 50 or more miles from home. Among boat owners in the north region, approximately three out of four of these longer distance outings occurred within 150 miles of home. Metro region boat owners, and especially south region owners, were much more likely to travel distances of up to 500 miles when pursuing boating outings away from home.

More than two out of three Minnesota boat owners believe that their boating outings occurring more than 50 miles from home would be enhanced by providing toilets and navigational and water hazard buoys at public water access sites (Figure 3). Over 60% of the state's boat owners believe that provision of maps and other boating information, designated car and trailer parking, and docks would enhance their away-from-home outings. At least half of the state's owners also support provision of fishing information, drinking water, security lighting, water-accessible boater wayside rest areas, and protected harbors. Between 45% and 50% of Minnesota boat owners also believe their outings would be enhanced by provision near public water access sites of water-accessible public campsites, marinas, and bait and tackle shops.

**Table 2. Percentage of owners with varying frequencies of boat launching who favor facilities and services at access sites within 49 miles of home**

Facility or service	Number of 1987 boat launchings at public water access				
	0	1-6	7-14	15-24	25 or more
	<i>percent of boat owners</i>				
<u>Information services</u>					
Maps and other boating information	39	51	57	60	57
Fishing information	30	38	49	55	53
<u>Facilities at public access</u>					
Toilets	52	71	83	85	82
Buoys	71	71	68	74	68
Designated car and trailer parking	40	65	75	75	76
Docks	42	63	76	74	73
Drinking water	47	63	63	68	65
Security lighting	44	60	66	69	70
Public telephones	41	51	49	43	47
Swimming beaches	45	44	45	52	41
Picnic areas	38	42	48	49	41
<u>Facilities near public access</u>					
Boater wayside rest areas accessible only by water	53	61	62	61	66
Protected harbors	50	43	43	45	46
Marina	53	16	7	5	5
Bait and tackle shop	31	40	46	47	53
Public campsites accessible only by water	42	45	45	47	52
Public campgrounds	9	14	16	20	22
Lodging, dining, shopping	32	28	25	22	24
Trails	32	36	35	34	26

**Regional variation.** Regional variation in the percentage of boat owners who believe various facilities and services would enhance their outings greater than 50 miles from home is minimal. In the metro region, the percentage of owners who believe provision of security lighting at public water access sites would enhance outings greater than 50 miles from home is 22% lower than the statewide average. Provision of docks is supported by 7% more boat owners in the south region than by owners statewide. In the north region, the percentage of boaters favoring provision of public campgrounds exceeds the statewide average by 7%. Otherwise, regional variation is within 5% of the statewide average.

**Variation based on boat type.** Variation among owners of different boat types on whether certain public water access facilities and services would enhance their away-from-home outings (Table 3) is similar to the variations found when asked about outings close to home. Sailboat owners seem less interested than other boat owners in fishing information and bait and tackle shops. Canoe and kayak owners are less convinced than other boat owners that providing navigational buoys, docks, security lighting, bait and tackle shops, marinas, protected harbors, and nearby lodging will enhance their experiences, but they are more interested than other owners in trails at an access and water-accessible camp-

sites. Owners of boats over 20 feet in length are more inclined than other boaters to feel that providing navigational buoys, marinas, protected harbors, and nearby lodging will enhance outings occurring over 50 miles from home.

**Variation based on frequency of use.** Differences in the percentage of boat owners who believe facilities and services will enhance outings greater than 50 miles from home increases dramatically among boaters with varying frequencies of public water access use (Table 4). As noted earlier, boaters with 15 or more public water access launches account for 70% of all 1987 public access launchings.

Approximately three fourths of the boat owners with 15 or more public access launchings in 1987 believe that their outings greater than 50 miles from home would be enhanced by provision of toilets, buoys, designated car and trailer parking, and docks. Two thirds of the most frequent public access users believe that provision of maps and other boating information, fishing information, drinking water, and security lighting would enhance their outings over 50 miles from home. Half of the most frequent users also support provision of public telephones, water-accessible boater wayside rest areas, protected harbors, marinas, bait and tackle shops, and water-accessible public campsites.

## Facilities and Services that Detract from Boating

The percentage of Minnesota boat owners who believe that provision of various facilities and services at free public water access sites will detract from their boating outings is minimal (Figure 4).

Less than 10% believe that provision of maps and other boating information, fishing information, toilets, water and navigational hazard buoys, designated car and trailer parking, drinking water, or trails from a free public water access will adversely affect any of their boating outings.

Between 10% and 15% of Minnesota boat owners believe that provision of docks, security lighting, swimming beaches, picnic areas, boater wayside rest areas accessible only by water, protected harbors, marina, bait and tackle shops, or public campsites accessible only by water at or near public water access sites will detract from their boating outings.

At least 25% of Minnesota boat owners feel that the provision of public campgrounds, private campgrounds, and lodging, dining, or shopping services near free public water access sites will detract from their boating outings. Less than one third of the state's boat owners feel that the provision of these three types of facilities and services will enhance their boating experiences (Figure 3). These findings suggest that boaters are ambivalent about the provision of public or private campgrounds and lodging, dining, or shopping services at or near free public access sites.

**Table 3. Percentage of owners of various boat types who favor facilities and services at access sites 50 miles or more from home**

Facility or service	Canoe or kayak	Boat under 13 ft.	Boat 14 to 20 ft.		Boat over 20 ft.	
			Sail	Power	Sail	Power
<i>percent of boat owners</i>						
<b>Information services</b>						
Maps and other boating information	65	54	57	60	61	64
Fishing information	43	54	33	59	38	55
<b>Facilities at public access</b>						
Toilets	71	75	58	72	58	70
Buoys	32	69	64	76	91	85
Designated car and trailer parking	59	59	36	66	59	65
Docks	35	57	53	70	71	72
Drinking water	67	53	56	57	62	63
Security lighting	33	39	52	61	59	67
Public telephones	40	40	47	45	52	60
Swimming beaches	38	52	48	41	59	44
Picnic areas	38	50	36	41	46	43
<b>Facilities near public access</b>						
Boater wayside rest areas accessible only by water	51	46	53	55	59	65
Protected harbors	26	45	33	49	82	72
Marina	19	48	26	50	65	75
Bait and tackle shop	29	49	31	52	28	52
Public campsites accessible only by water	64	50	36	43	54	55
Public campgrounds	34	39	27	36	20	35
Private campgrounds	15	17	20	25	13	27
Lodging, dining, shopping	16	33	27	30	39	53
Trails	54	55	30	34	47	38

## Conclusions

The findings in this study suggest that provision of public water access in Minnesota would be enhanced by a continued focus on more than simply getting boats onto the water surface. Boater experiences will also be enhanced by: attending to basic health needs, safety requirements, and security considerations; providing boating and fishing information; locating public access facilities convenient to bait and tackle shops and marinas or providing bait, tackle and marina services; and providing

wayside areas, protected anchorages and water-accessible campsites where boaters may rest and pursue other activities associated with their boating outings.

Planning and design for future free public water access sites should provide a basic package of services and facilities that includes navigational buoys, docks, and boater wayside rest areas on the water surface.

Land-based facilities and services should include a swimming beach, toilets and drinking water, security lighting, and boating and fishing information in addition to a launch ramp and designated car and trailer parking areas.

Ideally, future access sites would be located near commercial or publicly provided bait and tackle services. In designing and planning free public water access sites on water bodies that are destinations for weekend or vacation trips, provision should be made for overnight boat anchorage facilities and water-accessible campsites. Locating public access sites near existing marinas, building new marinas at the time of access site development, or construction of protected anchorages are ways in which overnight anchorage facilities might be provided.

Results of the survey suggest that in planning for future free public water access sites, care should be exercised in providing public campgrounds, private campgrounds, or facilities for lodging, dining, or shopping services in order to avoid creating conflicts.

Many of the free public access site facilities and services desired by Minnesota boaters could be provided by local or state governments. Toilets, parking, navigational buoys, boater wayside rest areas, protected anchorages, and fishing and boating information are all examples of facilities and services that might be publicly provided.

Other facilities and services, such as marinas and bait and tackle shops, could be provided at public expense or they could be provided by commercial vendors serving the recreational boating industry.

While there are many ways in which the free public water access site facility and

**Table 4. Percentage of owners with varying frequencies of boat launching who favor facilities and services at access sites 50 miles or more from home**

Facility or service	Number of 1987 boat launchings at public water access				
	0	1-6	7-14	15-24	25 or more
<i>percent of boat owners</i>					
<b><u>Information services</u></b>					
Maps and other boating information	46	59	68	71	71
Fishing information	40	47	61	66	64
<b><u>Facilities at public access</u></b>					
Toilets	53	67	81	78	79
Buoys	67	68	72	72	75
Designated car and trailer parking	42	62	72	76	76
Docks	47	61	69	74	74
Drinking water	52	55	66	66	66
Security lighting	46	51	65	65	67
Public telephones	42	48	49	48	51
Swimming beaches	37	43	47	44	45
Picnic areas	31	40	49	47	47
<b><u>Facilities near public access</u></b>					
Boater wayside areas accessible only by water	51	53	61	60	60
Protected harbors	50	44	53	59	56
Marina	49	47	48	54	49
Bait and tackle shop	33	43	48	59	54
Public campsites accessible only by water	44	48	51	50	55
Public campgrounds	20	30	42	48	44
Private campgrounds	15	29	22	32	35
Lodging, dining, shopping	32	31	28	37	34
Trails	38	45	39	34	32

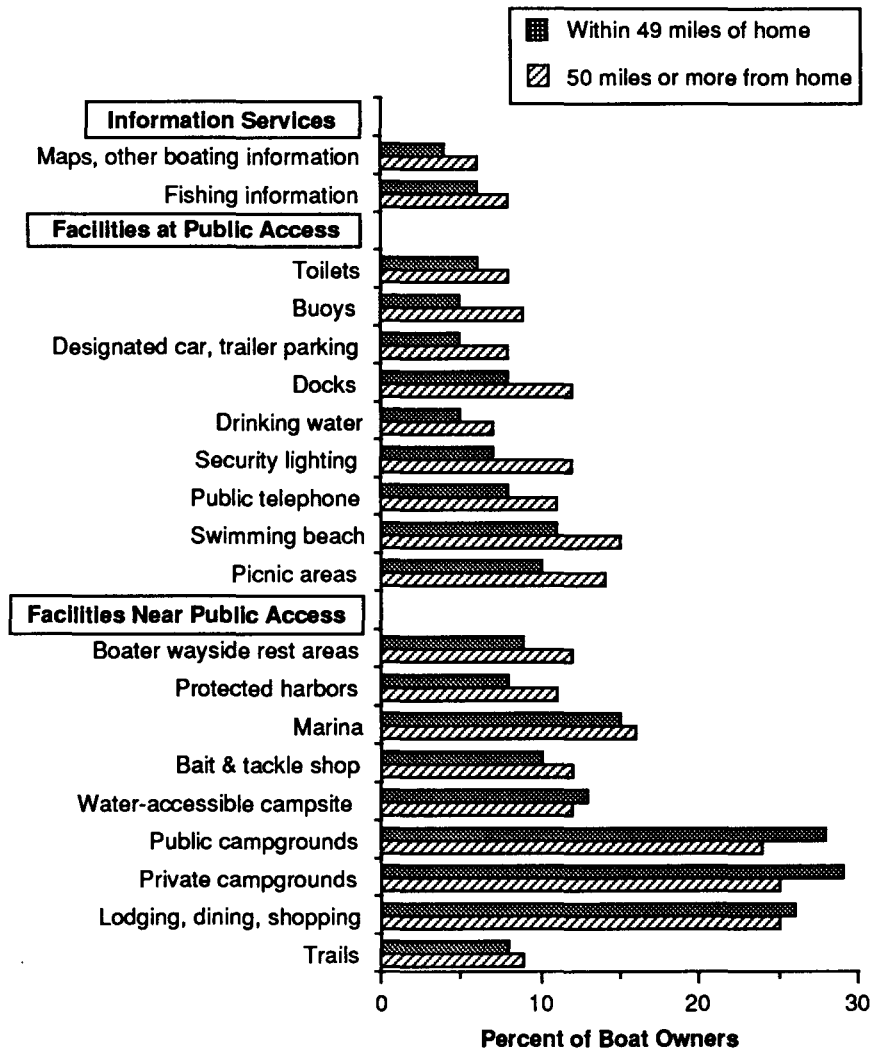
service needs of Minnesota boaters can be provided, all require careful coordination between the public and private sectors and among various levels of government.

Since over half of Minnesota boat owners use their boats at least once a year on water bodies that are more than 50 miles from home, recreational boating can be viewed as a form of tourism. Boaters traveling among Minnesota's various recreation regions spend money on food, gas, and fishing and boating-related services, and they thereby contribute to tourism-related economies. Thus, planning, design, and management of boating facilities and serv-

ices should be coordinated with regional tourism development efforts.

Development of basic public water access facilities and services in locations strategically coordinated with other tourism facilities could be a way of enhancing the attractiveness of a water body to boaters and visitors from other regions of Minnesota. In coordinating the provision of free public water access facilities with other tourism facilities, it will be important to exercise care in locating overnight facilities and services to avoid creating conflicts with the facilities and services that enhance boating outings.

**Figure 4. Percentage of boat owners who feel services and facilities at most frequently used free public water access site would detract from boating experience**



## Summary

Three out of four Minnesota boat owners launch their boats at a public water access at least once a year. Half of the state's boat owners use public access on their most frequent boating outings. While the percentage of boaters using public water access is high, seven out of 10 public access launchings are attributable to the 21% of the state's boat owners who launch from a public access site 15 or more times a year.

Boat owners in general, but especially those launching frequently at a public water access, believe their boating outings would be enhanced by provision at public access sites of a range of facilities and services in addition to a basic boat launch ramp.

Highest on the list of additional facilities and services that frequent public access users would like to see provided are toilets, navigational buoys, designated car and trailer parking, docks, and security lighting.

Provision of drinking water, maps and other boating information, fishing information, nearby bait and tackle shops, and nearby boater wayside rest areas and public campsites that are accessible only from the water is also endorsed by at least half of the most frequent public water access users.

On outings over 50 miles from home, at least half of the most frequent access users feel their boating experience would be further enhanced by provision of nearby marinas and protected harbors.

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## 1988 Survey of Minnesota Boat Owners—Study Design and Method

Access to Minnesota's lakes and streams is provided through many private and commercial facilities as well as through innumerable public canoe launches, beaches, and open stretches of shoreline. More than 2,200 free public water access sites are managed by federal, state, county, and local governments. Minnesota's Department of Natural Resources (DNR) manages nearly 1,200 of these sites.

Although a primary DNR activity is acquiring access to water bodies statewide, recent discussions have focused on managing these resources to better serve the boating public. What should the future direction be for managing the state's water resources to offer safe and rewarding boating opportunities?

In 1987, the authors, the University of Minnesota, and five units of the DNR (Boat and Water Safety, Fisheries, Planning, Trails and Waterways, and Waters) entered into a partnership to conduct a statewide survey of registered boat owners to determine how boaters use their pleasure boats on Minnesota waters and what they think about problems and issues related to boating. The study investigated these concerns for the state's waters as a whole and with specific reference to two of our largest water resources—the North Shore of Lake Superior and the

Mississippi River downstream from the Twin Cities.

In March and April, 1988, a mail-back questionnaire was sent to a representative sample of 3,200 registered boat owners drawn from the pool of 286,000 pleasure boat owners in the state licensed through the DNR. The survey sample was selected to enable comparisons to be made among the three regions of the state displayed in Figure 5, and among six major types of licensed pleasure boats: canoes and kayaks, other boats under 14 feet in length, sailboats 14 to 20 feet, sailboats more than 20 feet, other boats 14 to 20 feet, and other

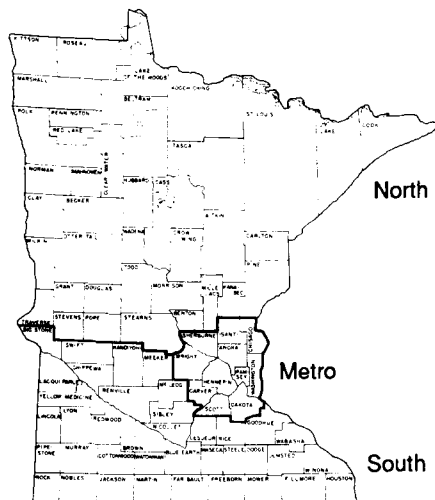
boats more than 20 feet in length. Other comparisons, such as those between boat owners who own or do not own riparian property, are also possible.

The questionnaire was comprised of 45 questions and took about 15 minutes to complete. The initial mailing and two follow-up reminders resulted in 2,490 owners returning the survey. About 100 surveys were eliminated from the original sample of 3,200, resulting in an overall adjusted response rate of 80 percent. This excellent response reflects Minnesota boat owners' strong interest in expressing their views, as well as the importance they place on the state's free public water accesses to achieve quality boating experiences.

Survey respondents may not be representative of the typical boat owner. The survey questionnaire requested the individual in the household "who goes boating most frequently" to respond to the survey. Therefore, the typical survey respondent may be somewhat older and a more experienced boater than the state's typical boat owner or boater.

Details about the study design and methods, the raw data, and the data summary tables are available from the authors and from the DNR's Office of Planning, 500 Lafayette Rd., St. Paul, MN 55155-4010 (612-296-0565).

Figure 5. Study regions



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