#### Wisconsin Land use Megatrends: Land Open to Recreation Bayfield. Federal Resource Lands 467,727 Douglas State Resource Lands 323,648 County Forests Iron Private Forests Open to Recreation 257,451 Ashland Vilas 272.807 251,600 Burnett Florence Washburn Sawyer 178,748 135,677 84,484 156,213 Oneida Price 202.292 Forest 273,993 378,921 Polk\* Marinette Rusk Barron 43,668 109,861 23.230 Lincoln 265,514 Langlade 115,865 Taylor 🚜 180,897 150,848 Chippewa St. Croix 44,330 Menominee 19.165 Oconto Dunn 193.732 Marathon 16,412 Shawano Dooi 61.110 Pierce Clark Eau Claire 260,372 17,797 4.429 58,511 134,460 5,199 Pepin Kewaunee Portage Outagamie Trempealeau Waupaca Brown 3,217 Wood 33,533 Buffalo 11,241 10,735 11,209 **1**3.377 78.015 23,429 Jackson Map 1: 200,285 Wisconsin Manitowoo Winnebago 🧨 Waushara Recreational 14,212 Calumet, 11,881 20,390 14,996 Lands Monroe 13,275 Adams Marquette Crosse 28,256 13,085 [Green] Fond Sheboygan 24,665 Juneau du Lac 29,252 106,649 19,201 22,379 Vernon Dodge 14,069 Columbia Ozaukee Sauk 46,565 24,948 5,542 Richland Crawford Washington **1**29.925 8,087 15,081 28.929 Waukesha

Dane

4.0

Green

5,799

35,021

Rock

14,269

lowa

Lafayette

6,066

Grant

25.895

20,026

Milwaukee

18,181

Racine

10,734

Kenosha

<u>11,689</u>

Jefferson 33,453

Walworth

15,756

20,075

This map displays public and private lands in Wisconsin open to public recreation. Map layers are from various WIDNR data sources. Acreage statistics are from the 2005-2010 Statewide Comprehensive Outdoor Recreation Plan (SCORP), Appendix D and are not derived from map layers. SCORP statistics do not include private forests open to recreation under the Managed Forest Law Program because public access to these lands may change over time.

## Introduction

The goal of this brochure is to illustrate state-wide land use trends related to recreation. The first two sections of the report discuss many of the historic, demographic, and geographic forces that have shaped Wisconsin's recreational landscape. Trends related to three types of recreational resources are highlighted in subsequent sections: nature-based land recreation, water-based recreation, and developed land recreation. This brochure is intended to help local communities, government officials, planning professionals and individual landowners think about ways to plan for and better manage local and regional recreational resources.

# Public Recreation Lands: History and Trends

Wisconsin's current landscape of scattered recreation sites was not how early settlers originally envisioned the state's future. In the mid-1800s, large areas suited to farming or forest harvesting encouraged settlement throughout the state. Land that could not be put to immediate economic use was of little value.

In 1900, the first Wisconsin state park was established at the Dalles of the St. Croix River. In 1909, famed planner John Nolen completed a plan for future parks in the state, including sites at Devil's Lake, Door County, Grant County, and the Wisconsin Dells. In 1907, Frederick Weyerhauser deeded the lands that would become the

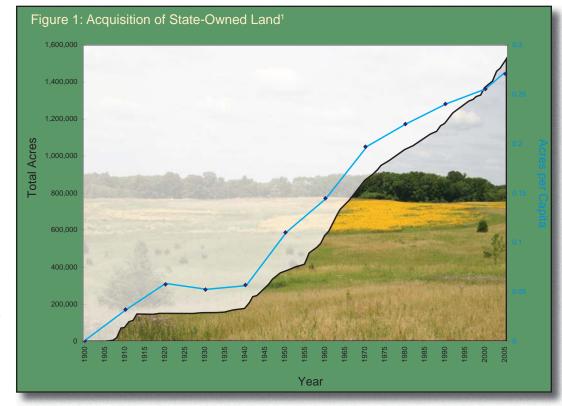
Brule River State Forest, an area prized for its recreation assets.

As farms in northern Wisconsin began to fail in the 1920s and 1930s, an increasing amount of land was abandoned by settlers and industrial forest owners. These lands provided the basis for today's county forest system. The federal and state government also increased their holdings at this time, acquiring lands near lakes and rivers.

In 1939, the State Planning Board produced a significant update to Nolen's plan, proposing numerous new parks and parkways. Growth and prosperity following World War II generated unprecedented demand for recreation land. In 1961, then-Governor Nelson began the Wisconsin Outdoor Recreation Action Program (ORAP), funded by a one-cent-per-pack cigarette tax. The tax yielded over \$400,000 each month, 90% of which was directed to land acquisition.

In 1969, Governor Knowles signed into law ORAP 200, the successor to Nelson's recreation plan, heralding what would become Wisconsin's environmental decade. Governor Thompson's Stewardship Program followed in 1989, authorizing \$250 million for public land acquisition over ten years. The legislature reauthorized the Knowles-Nelson Stewardship Fund in 2000 to cover acquisitions through 2010 with \$60 million per year. Presently, Governor Doyle is proposing that the program be reauthorized before 2010 to permit state bonding at a level of \$105 million per year.

In a way, Wisconsin is a victim of its own success in promoting outdoor recreation. Early efforts to provide recreation to Wisconsinites instilled a widespread appreciation of the outdoors, which in turn, has fostered high demand to "own a slice of heaven." Increasing rural land values are making it harder and harder for the state to expand upon its holdings. The growing role of easements and similar "partial" ownership of recreation land is likely to increase as concerns over access to recreation land grows and agencies look to get the most public access for each dollar.



# **Demographic Trends**

## **Geographic Distribution**

The state's long legacy of natural resource protection and public land acquisition ensures that there is an ample supply of public land available for recreation in Wisconsin. However, there is a growing divide between the location of public lands and population. Whereas the greatest concentrations of public land are located in northern Wisconsin, the majority of the state's residents are located in the southern and eastern parts of the state, with recent growth near Minneapolis-St. Paul, Minnesota. As illustrated in Map 2, these urbanized areas contain relatively less land open to public recreation per capita.

More rural parts of the state are also experiencing change. Areas rich in natural resources, ever popular as tourist destinations, are experiencing steady levels of development as well as conversion of seasonal homes to year-round living. "Privatization" and parcelization of shorelands, forests and other natural resource areas serves to reduce the amount of land available for recreation, and also limits access.

## **Participation Trends**

The demographic structure of a region affects demand for recreation. Among older generations, quiet, low-impact activities such as bird-watching, gardening, walking and driving for pleasure are popular. Older generations, particularly members of the baby boom generation (born between 1946 and 1964), are expected to participate in a broader range of recreational activities later in life due to improved levels of health and fitness and higher

levels of disposable income. Among children, participation in outdoor activities has declined dramatically. In a typical week, only six percent of children, ages nine to thirteen play outside on their own. Studies have found that getting kids outdoors more—and especially experiencing nature directly—provides many benefits.

Specifically, outdoor activity reduces childhood obesity and increases motivation to learn, self-esteem, problem solving.

and attention spans.2

According to a report by the Wisconsin
Department of Natural Resources, a much
higher proportion of Wisconsinites participate
in outdoor recreation activities than the average
American.<sup>3</sup> Table 1 shows participation rates
for selected outdoor recreational activities in
Wisconsin. Many popular outdoor activities such
as driving for pleasure, picnicking, sightseeing, and
attending outdoor sporting events are not shown
on this table. These activities are accessible to

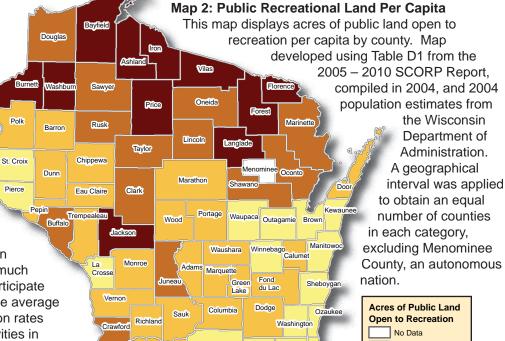
Table 1: Participation in select outdoor recreation activities (age 16+)<sup>3</sup>

Activity	Percent Participating	1,000s of Participants
Walking for pleasure	86%	3,567
Viewing/photographing nature	68%	2,806
Gardening/landscaping	65%	2715
Bicycling	49%	2,049
Swimming	46%	1,904
Fishing	41%	1,692
Day hiking	35%	1,455
Camping	32%	1,343
Running or jogging	29%	1,222
Canoeing	21%	852
Hunting	19%	798

multiple generations, making them some of the most popular recreational activities in the state.

## **Barriers to Participation**

According to a nationwide study conducted by the Outdoor Industry Foundation, 60% of Americans feel they don't have enough time to participate in outdoor activities. An additional 39% of Americans feel the cost to participate in outdoor activities is a barrier. As time becomes more pressed between work, school, home life and other responsibilities, recreational activities that are located close to home and that do not require scheduling are expected to increase in popularity.



Waukesl

Walworth

Jefferson

Rock

lowa

Grant

0.01 - 0.27

0.28 - 1.57

1 58 - 7 76

7.77 - 37.16

## **Nature-Based Land Recreation**

Nature-based land recreation takes place throughout Wisconsin and has a significant impact on local economies. Key to this type of activity is the desire of participants to visit natural or undeveloped settings.

## **Participation Trends**

Table 2 provides participation rates for common nature-based land activities in Wisconsin. Visiting wilderness areas is the most popular nature-based land activity. Geocaching is a relatively new but rapidly growing sport that holds great appeal for those that want to combine the latest in technology with an outdoor activity. Other growing activities, not shown on this table, are wildlife viewing and bird watching, which often take place in natural settings.

Activity		Percent	1,000s d
(age 16-	+) <sup>3</sup>		
Table 2:	Participation in na	ature-based land	activities

Activity	Percent Participating	1,000s of Participants
Visit wilderness area	38%	1,592
Day hiking	35%	1,455
Camping, developed	32%	1,343
Off-road ATV use	23%	973
Mountain biking	20%	848
Hunting	19%	790
Snowmobiling	18%	761
Camping, primitive	16%	665
Skiing, cross country	11%	474
Horseback riding, trails	8%	337
Snowshoeing	8%	333
Backpacking	7%	287
Rock climbing	6%	245
Geocaching	2%	83

A big change in recreation participation from 1994 to 2004 has been the increase of snow and ice-based activities as a result of advancements in equipment technology. Reduced winter snow cover and an aging population could moderate this trend.

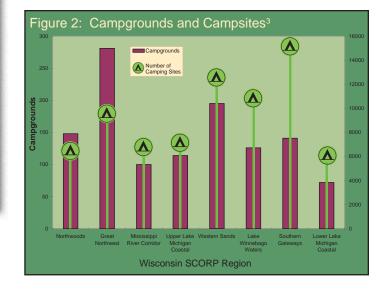
## Hunting

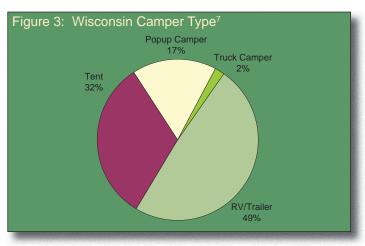
In Wisconsin, hunting occurs more often on non-industrial private land than on publicly-owned land.<sup>5</sup> Even though the number of Wisconsinites participating in hunting has remained steady, the overall participation rate has not kept pace with population growth. The average age of participants is increasing due to the fact that so few young people are taking up the sport.<sup>3</sup> Additional reasons for decline include: difficulty accessing lands open for hunting; urbanization and loss of habitat; increasing costs to participate; decreasing leisure time; and lack of mentors, a key component to hunting participation.<sup>6</sup>

## **Camping**

Statewide, an estimated 1,177 public and private campgrounds contain over 74,000 campsites.<sup>3</sup>
Occupancy rates for Wisconsin campgrounds have been increasing along with the number of campgrounds and campsites. State campgrounds are concentrated in the southern half of the state serving areas of higher population. Federal lands are located in the northern half of the state and provide more wilderness-type settings. Public campgrounds offer most of the tent camping opportunities while private campgrounds tend to focus on sites with increased amenities such as water and electrical hookups.

While the total number of campgrounds is highest in the northern half of the state, the largest campgrounds and greatest number of campsites are found in the southwestern and central parts of the state (see figure 2). These larger campgrounds have more of the amenities that RV campers are looking for. Currently, non-primitive camping is the preferred camping type (see figure 3). However, baby boomers have indicated a preference for RV camping.<sup>3</sup> This may lead to increased demand for these sites throughout the state as the population ages.





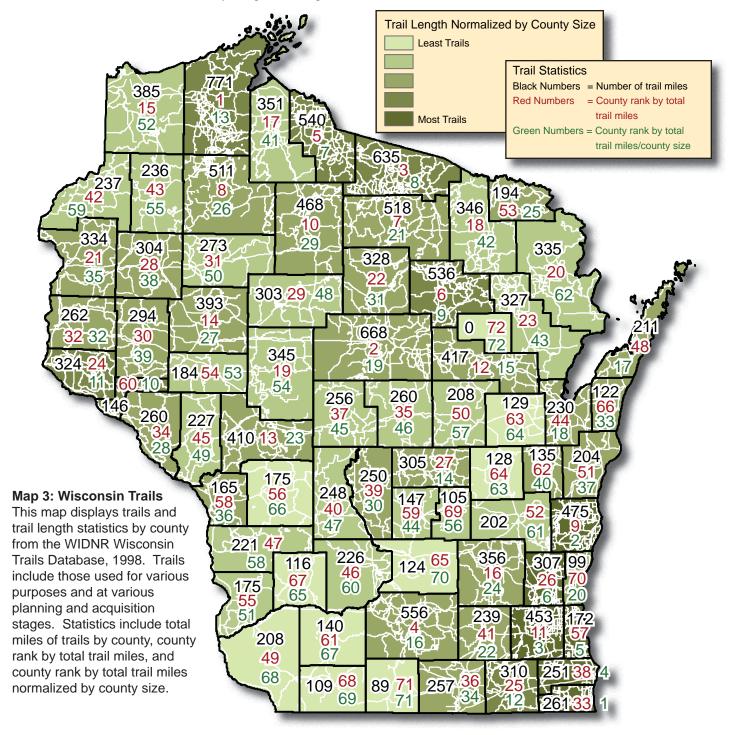
### **Trails**

Wisconsin state parks, forests, trails, wildlife areas, and other Department of Natural Resources lands provide more than 3,060 miles of recreational trails. They have a variety of surfaces suited for multiple activities such as walking, running, hiking, bicycling, in-line skating, horseback riding, all-terrain vehicles, snowmobiling, cross-country skiing, and snowshoeing. In addition, counties and municipalities have many miles of recreational trails. Trail networks are being established linking local and regional sites thereby increasing access to these facilities.

Statewide participation trends from 1994 to 2004 show a 50% or greater increase in activities that take place on trails or natural corridors such as kayaking, canoeing,

horseback riding, snowmobiling, day hiking, and running or jogging. The popularity of these activities, combined with the increasing pressure on leisure time, is expected to increase demand for trails closer to population centers. Maintaining snowmobile trails may become a challenge in the future due to development of rural areas and incompatibility of the sport with an urban setting.

Trail usage and the demand for more trails in urban areas should increase as a result of local and national obesity reduction efforts. Federal, state and private funding are being used to promote and build facilities for activities such as walking and biking that can be integrated into daily living habits. Walking for pleasure is already the most popular recreation activity and the easiest to participate in.



## Water-Based Recreation

Wisconsinites have a rich tradition of enjoying their time on and near the water. With more than 43,000 miles of rivers and 15,000 inland lakes, there should be plenty of room for everyone. However, the population of Wisconsin is increasing while nature isn't making any more lakes or streams. As a result, the growth in recreational use of our waters has increased to the point that we have started to feel "the squeeze." Wisconsin's waters are becoming more crowded leading to increasing user conflicts.

### **Demand for Water-Based Recreation**

Compared to the nation as a whole, a greater percentage of Wisconsinites participate in water-based activities.9 The most popular activities on Wisconsin's waters include boating, visiting a beach, swimming in a lake or stream, and fishing. Nearly half of all Wisconsinites participated in each of these activities over the last year. Despite already high levels of participation, the popularity of many water-based activities continues to rise.3

## **Quantity and Quality of Water Resources**

Acres of Lakes, Ponds, Flowages

98 - 2,838

2.839 - 11.174

11,175 - 31,265

31,266 - 93,889

93,890 - 169,755

Secchi Depth (in feet)

2 - 5

6 - 7

Map 4 shows the distribution of lakes in Wisconsin by county.3 While the majority of lake acres are found across northern Wisconsin, the majority of Wisconsin's residents live in the southern part of the state, with recent growth concentrated near the Twin Cities region. Northwest Wisconsin is where we find the greatest overlap between high numbers of lakes and people. Not surprisingly, residents from this part

31,258

20,900

**(**)

2,111

22,629

11,004

7,854

20,027

29,368

15,129

 $\Diamond$ 

6,183

0

93,889

68,447

15,741

19,762

 $\odot$ 

2,309

6,245

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3,667

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685

565

45,950

12,203

5,736

3,095

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21,520

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22,531

4,044

56,183

7,169

17,120

9,122

13,735

11,053

98

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3,080

3,770 15,156 197

213

169,755

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13,246

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11,174 12,798 3,919

1,655

251

170

8,912

709

3,674

1,492

5,936

14,113

31,265

17,748

 $\bigcirc$ 

Effects of **Excessive Phosphorus** One pound of phosphorus can result in up to 500 pounds of algae growth.12

of the state participate most frequently in water based activities.3

Clear, clean water is important to swimmers, boaters and others who enjoy being on and near the water. The quality of water in lakes and streams is directly affected by the land surrounding it. Map 4 also shows Secchi disc depth—a measure of clarity—for lakes around Wisconsin.<sup>10</sup> Lakes in the northern part of the state where the watersheds are mainly forested are much clearer than those located in the southern part of the state where development and agriculture are more prevalent.

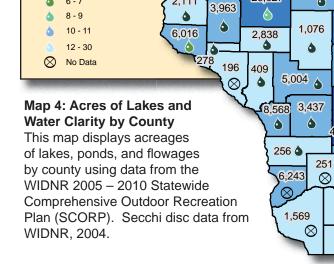
### **Land Use Affects Water Recreation**

If the amount of nutrients entering a lake from agriculture or development is excessive it can convert a clear lake into one with high concentrations of algae, thereby reducing the value and quality of lake water for all users. Over the last thirty years, point sources of water pollution which typically come from factories or wastewater treatment plants have been identified and largely controlled. County shoreland zoning ordinances have been adopted across the state and updated in

> the negative effects of waterfront development. In 2002, Wisconsin adopted new runoff rules for agriculture and development that bode well for the quality of lakes and streams but largely depend on future state funding. Our gains in controlling point sources are offset to some degree by continued inputs of excessive fertilizers, manure, and runoff from new impervious surfaces,

many counties in an attempt to reduce

such as roads, driveways and rooftops that are associated with land development.<sup>11</sup> A commitment to stewardship is critical if we are to sustain the numerous benefits that our waters provide, including recreation.



## **Developed Land Recreation**

Developed land for recreation includes a broad range of activities such as ATV parks, country clubs, dirt bike tracks, playground facilities, fairgrounds, golf ranges and resorts, miniature golf, paintball game areas, skateboard parks, softball diamonds, zoos and seasonal or second homes. Below we focus on a few areas that have had and will continue to have a significant impact on land use in this state.

## **Housing Growth**

Figure 4 shows residential growth over a 65 year period, divided between growth in non-vacation and vacation homes. Perhaps surprisingly, the number of vacation homes remains stable from about 1985 to the present. However, the number of non-vacation homes has increased steadily over this period in part due to conversion of vacation homes to full-time residences.

most of any other state. Minnesota and Michigan, ranked 2nd and 3rd, follow far behind with 9 and 7 resorts, respectively. The average size of an indoor waterpark in Wisconsin is 50,000 square feet. Michigan and Minnesota's resorts are on average half that size. The Wisconsin Dells claims the largest concentration of waterparks in one area. According to that city's visitor and convention bureau, there are 18 indoor waterparks and 3 outdoor waterparks within 18 square miles, with more than 200 waterslides using 16 million gallons of water.

#### Golf

Golf is the second most popular individual outdoor sport in Wisconsin with 26% of the population hitting the greens at 489 courses.<sup>3</sup> Golf courses in Wisconsin cover 54,000 acres.<sup>15</sup>



Both the number of golf courses and the number of golfers have seen steep increases in recent years. In the last 20 years, 120 new golf courses have been built covering 19.000 acres. Since 2001, the largest concentration of new courses has been in southeast Wisconsin.15 Along with more courses have come more golfers. From 1995-2004, the number of golfers in Wisconsin has increased more than 20% to over 1 million people. People living in urban areas are more likely to golf than those from other parts of

## **Indoor Waterparks**

Another significant trend is the construction of waterparks, particularly indoor waterparks. Prior to 1983, few indoor waterparks existed. In 1983 less than 50,000 square feet was dedicated to indoor waterparks; by 2004 almost 2 million square feet existed. Hotel rooms associated with indoor waterpark resorts increased from about 1,000 rooms in 1983 to over 15,000 in 2004. The trend continues with new indoor waterpark resorts planned and under construction throughout the United States. Wisconsin, with 30 indoor waterpark resorts, has the

the state,<sup>3</sup> so the increase in golfers may result in part from an increasing urban population.

## **Disc Golf**

Disc golf is a rapidly expanding sport in Wisconsin that is played with an advanced type of frisbee on open or wooded courses. Over 8% of residents currently play disc golf and over 75% of players are less than 35 years of age.<sup>3</sup> Wisconsin has 99 frisbee golf courses, located mainly in the central and southeast part of the state.<sup>16</sup> Disc golf courses are often incorporated into existing parks and may displace previous park uses.

## References

- <sup>1</sup> Unpublished figures provided by the Wisconsin Department of Natural Resources.
- <sup>2</sup> Louv, Richard. Leave No Child Inside. Testimony before the Interior and Environmental Subcommittee of the United States House of Representatives, February 28, 2007. Available online: www.cnaturenet.org/01\_news\_center/pdfs/ LouvTestimonv.pdf
- <sup>3</sup> Prey, Jeffrey and Kathleen Kiefaber. Wisconsin Statewide Comprehensive Outdoor Recreation Plan, 2005–2010. Wisconsin Department of Natural Resources. Available online: www.dnr.state.wi.us/planning/scorp/index.html
- <sup>4</sup> Outdoor Industry Foundation. Exploring the Active Lifestyle, 2004. Available online: www.outdoorindustryfoundation.org
- Marcouiller, Dave and Terry Mace. 2002. Forest and Regional Development. Wisconsin Department of Natural Resources. Available online: http://learningstore.uwex.edu/pdf/G3694.pdf
- <sup>6</sup> Eisele, Tim. "DNR puts its focus on the future; Plans begin to groom next" The Milwaukee Journal Sentinel, Oct 3, 2004. http://findarticles.com/p/articles/mi\_qn4196/is\_20041003/ai\_n10994932
- Wisconsin Department of Tourism. 2004 Profile of Wisconsin Campers. Wisconsin Department of Tourism Co-op Research Program. Available online: http://agency.travelwisconsin.com/Research/MarketResearch\_Active/2004\_ Campers.pdf
- <sup>8</sup> Dudiak, Tamara and Robert Korth. How's the Water? Planning for Recreational Use on Wisconsin Lakes & Rivers. Wisconsin Lakes Partnership, 2002.
- <sup>9</sup> Green, Gary T., Matthew Owens, Gary T. Betz, and Ken Cordell. Wisconsin and the Wisconsin Region. Outdoor Recreation and Wilderness Assessment Group, Southern Research Station, USDA Forest Service, June 2005. Available online: http://dnr.wi.gov/planning/scorp/reports/Wisconsin\_Final\_0605.pdf
- <sup>10</sup> Bode, Jeff. Self-Help Lake Monitoring Data. Wisconsin Department of Natural Resources, 2004.
- Wisconsin Academy of Sciences, Arts and Letters. Waters of Wisconsin: The Future of Our Aquatic Ecosystems and Resources. Madison, Wisconsin: Wisconsin Academy of Sciences, Arts and Letters, 2003. Available online: www. wisconsinacademy.org/wow/downloadreport.html
- <sup>12</sup> Henderson, Carrol L. et al. Lakescaping for Wildlife and Water Quality. Minnesota Department of Natural Resources.
- <sup>13</sup> US Census Bureau, Housing and household Economic Statistics Division. Historical Census of Housing Tables: Vacation Homes. Available online: www.census.gov/hhes/www/housing/census/historic/vacation.html
- <sup>14</sup> Sangree, D.J. "Indoor Waterparks and Hotels Year end 2005 Overview", Hotel Online. February 2006. Cleveland, Ohio. Available online: www.hotel-online.com/News/PR2006 1st/Feb06 SangreeWaterparkReport.html
- <sup>15</sup> Kass, Jim, Research Director, National Golf Foundation. Personal communication. December 6, 2006.
- 16 Professional Disc Golf Association website. Available online: www.pdga.org/course

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