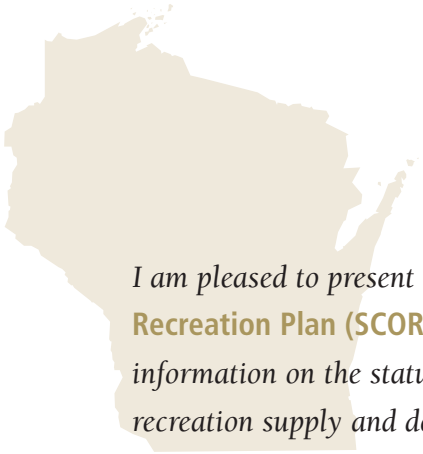
OUTDOOR RECREATION IN WISCONSIN

The 2005–2010 Wisconsin Statewide Comprehensive Outdoor Recreation Plan

SCORP

Wisconsin Department of Natural Resources



I am pleased to present to you **Wisconsin's 2005-2010 Statewide Comprehensive Outdoor Recreation Plan (SCORP)**. *This document will provide you with comprehensive, up-to-date information on the status of statewide and regional recreation, as well as information about recreation supply and demand, participation rates and trends, and a discussion of outdoor recreation goals and actions for their implementation.*

Parks and recreation areas provide people with the opportunity to be physically active and make communities livable and desirable for businesses and homeowners. But as our population grows, public and private recreation providers face challenges in providing the quality outdoor recreation experiences that people in Wisconsin and visitors seek. This plan will assist recreation managers and decision makers with meeting these challenges.

In Wisconsin, we can take pride in our strong and longtime tradition of public investment in preserving Wisconsin's special landscapes and providing quality outdoor recreation opportunities. Wisconsin's parks, recreation areas, open space, and natural areas play an important role in the health and well being of people in Wisconsin and our visitors. This plan will help us to continue our efforts to balance quality outdoor recreation experiences with the protection of our much loved natural and cultural resources.

In closing, protecting Wisconsin's great natural areas is a top priority for me—not only for our recreational enjoyment and the benefit of our tourism industry, but for the enjoyment of generations to come. Thank you to the numerous recreation providers, the general public, and recreation interest groups that participated in the creation of this plan for helping make Wisconsin a great place to live, work, and enjoy.

GOVERNOR JIM DOYLE

SCORP

The 2005–2010 Wisconsin Statewide Comprehensive Outdoor Recreation Plan

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SCORP

PREPARED BY:

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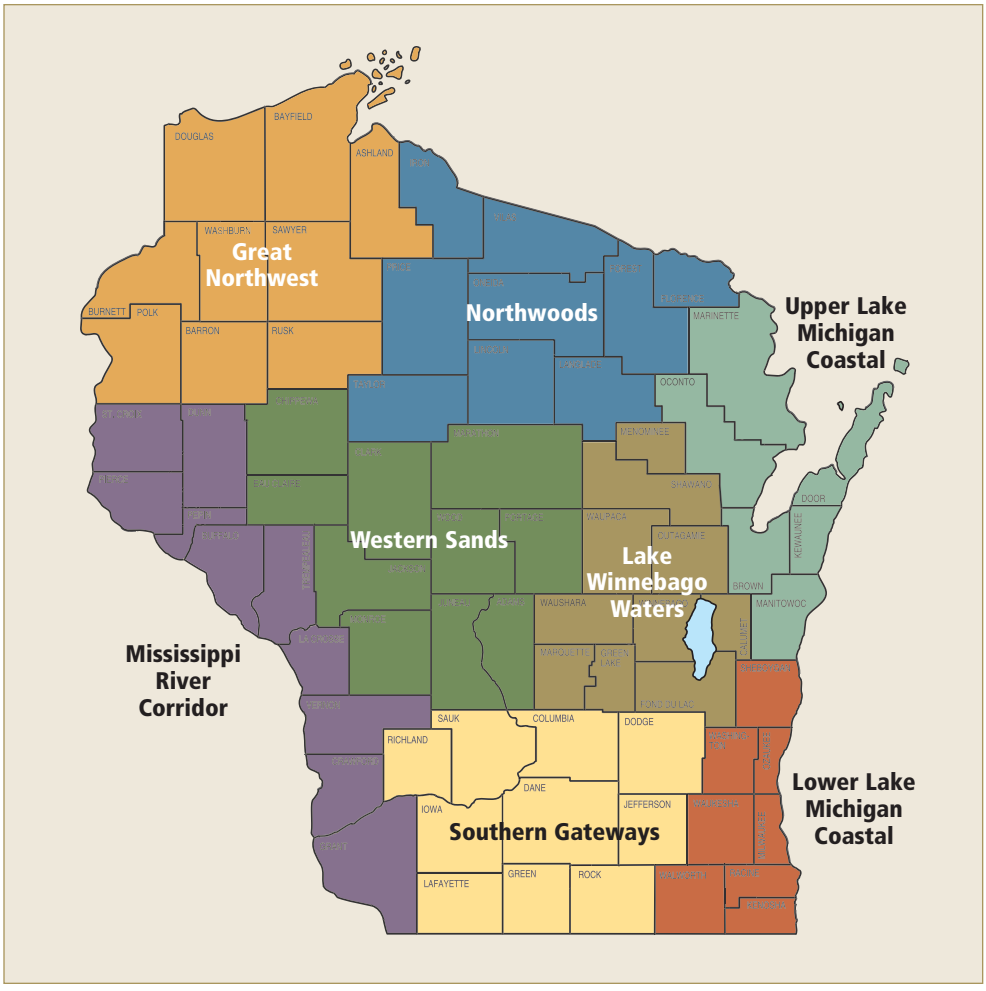
EXECUTIVE SUMMARY

MANY FACTORS AFFECT THE SUPPLY, DEMAND, AND PARTICIPATION RATES OF OUTDOOR RECREATION IN WISCONSIN. SINCE 1965 THE STATE HAS DEVELOPED AND MAINTAINED THE STATEWIDE COMPREHENSIVE OUTDOOR RECREATION PLAN (SCORP) IN AN ATTEMPT TO CLASSIFY, MEASURE, AND ULTIMATELY PROVIDE FOR THE PREFERENCES AND NEEDS OF A STATEWIDE RECREATING PUBLIC. RECREATION TRENDS AND PATTERNS, HOWEVER, ARE NOT EASY TO QUANTIFY OR PREDICT. MANY FACTORS, FROM CHANGING DEMOGRAPHICS AND LAND USES, TO RECREATIONAL SUPPLY, AND CONFLICT WITH OTHER RECREATION USES, AFFECT THE QUALITY, SUPPLY, AND DEMAND FOR OUTDOOR RECREATION.

This SCORP examines and assesses current and future recreational needs within the state. To aid in this process, Wisconsin was divided into a group of eight planning regions, each representing a loose collection of natural resource and tourism based assets (primary resources in each region are described in the table on the following page). Together, the SCORP regions represent a wide spectrum of outdoor recreation settings offered across the Wisconsin landscape. With its comprehensive statewide and regional focus, this plan will guide the allocation of limited recreation funds to acquire additional recreation and conservation lands and support the continued development of outdoor recreation opportunities.

Wisconsin SCORP Planning Regions



Wisconsin SCORP Regional Segmentation by Resource Type/Setting

SCORP Region	Primary Resource
Great Northwest	Nature-Based, Water-Based, Snow- and Ice-Based
Northwoods and Upper Lake Michigan Coastal	Nature-Based, Snow- and Ice-Based
Lower Lake Michigan Coastal	Developed Setting, Water-Based
Southern Gateways	Developed Setting, Viewing and Learning
Mississippi River Corridor	Nature-Based, Water-Based
Western Sands and Lake Winnebago Waters	Water-Based, Nature-Based, Developed Setting

Wisconsin has experienced a variety of changing demographic trends that have influenced outdoor recreation. In the years 1950-2000, the state gained 2,098,380 residents, an increase of 61%. Populations are projected to hit 5,751,470 by the year 2010 and 6,110,878 by the year 2020. Although most state land remains rural, the majority of state residents (68%) live in a relatively small number of concentrated urban and suburban areas, primarily in southern areas of the state. As housing development continues, urban and suburban areas have grown, while rural areas have experienced a decline in population.

It is important that recreation planners consider the diverse demands of varied user groups as they work to provide outdoor recreation across the state.

Demographic changes have affected different regions of the state in different ways. In addition to being more urban, southern counties generally have higher rates of college education, income, and property values. Northern counties are generally more rural, have older populations, and lower rates of college education, income, and property values. In certain areas of the state, abundant natural resources and undeveloped lands have led to high rates of tourism and seasonal housing. Counties described as Non-Metro Recreation Counties in this report, are located throughout Wisconsin, but are especially concentrated in natural resource-rich northern regions.

As demographic changes alter the ways in which people recreate, recreation demand has also shifted. Clearly, different people recreate in different ways; urban residents often prefer developed facilities such as dog parks and outdoor water parks, while rural populations prefer more open-space activities such as ATVing. As Wisconsin's population continues to age, certain activities once popular among baby boomers such as downhill skiing, personal water craft use, and mountain biking are declining in popularity while more passive recreation pursuits such as walking for pleasure, birdwatching, and gardening are becoming more popular. In contrast to older residents, younger generations are participating in several newer, more active forms of recreation. Geocaching, disc golf, kayaking, snowboarding, and paintball have all become more popular, a reflection of the younger Generation Y influence on state recreation trends. As the number of single-parent families increases, there has been a growing demand for family-friendly and group activities such as outdoor sporting events. In addition, out-of-state visitors have created demand for activities such as sightseeing, picnicking, viewing/photographing wildlife, and swimming in lakes and streams. It is important that recreation planners consider the diverse demands of these varied user groups as they work to provide outdoor recreation across the state.

Popular Outdoor Recreation Activities by Wisconsin Generations

Baby Boomers	Generation Y
Big Game Hunting	Outdoor Basketball
Drive for Pleasure	Disc Golf
Gardening	Football
Ice Fishing	Orienteering
Motorboating	Rock Climbing
Visit a Dog Park	Skateboarding

Several recreation barriers have also influenced the ways in which state residents recreate. Although many Wisconsinites enjoy outdoor recreation, competing factors such as family and job commitments, lack of time, and cost concerns have prevented many people from recreating as often as they would like. Accessibility of recreation lands and facilities—long travel times, lack of access to public lands, lack of bike trails, and other constraints—have also reduced the overall level of recreation in Wisconsin. These constraints are more pressing to certain groups than others. For example, many families feel they cannot afford to recreate because of the high cost of equipment, or long travel times to reach a recreation destination. For these groups, high-quality, low-cost, and local forms of recreation are ideal.

As recreation users encounter one another on the statewide landscape, they do not always do so without conflict. The figure below indicates the scale used to rate activity compatibility in this SCORP. Although some activities interact with few problems, many experience at least some level of conflict. Often these conflicts involve competition over available land or resources (for example, cross-country skiers and snowmobilers both wishing to use the same trail), or value disagreements (for example, birdwatchers objecting to hunters in parklands). The interaction of motorized uses such as snowmobiling and ATVing with non-motorized uses such as hiking is frequently the source of recreation conflict, whereas the interaction of non-motorized activities with other non-motorized activities and motorized activities with other motorized activities is generally more peaceful. Although the differences between conflicting activities seem to make them incompatible, most can be managed—through proper planning and enforcement—to coexist with other activities in the same recreation landscape.

Given the varied demographic profiles and recreational needs of citizens across the state, predicting recreation demand has become an increasing challenge for recreation providers. Because people who share an interest in one recreation activity often share interests in others, it is often useful to group activities into categories. This SCORP categorizes recreation activities according to three factors: recreation settings, recreation experiences, and geographic boundary. Using these categories, recreation providers may better predict and accommodate for the recreation demands of a diverse group of state users.

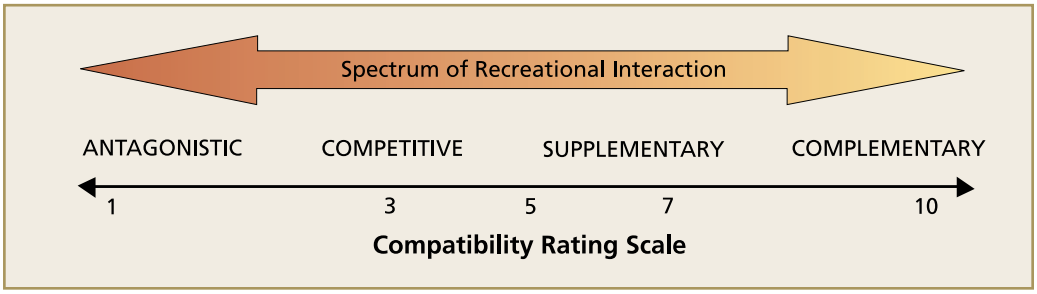
A variety of suppliers provide a diverse array of recreational lands and facilities within Wisconsin. These include both public providers—federally owned lands, state-owned lands, and locally owned lands—as well as private providers such as private park and camping facilities, land trusts, Boy Scouts, and others. Together, recreational suppliers provide land and facilities for nearly every recreational interest and desire. Still, shortages exist. Several facilities such as dog parks, ice skating rinks, boat launches, nature trails, biking trails, park shelters, and picnic areas, are in short supply statewide. Facility upgrades and maintenance to existing structures such as sporting fields, bathrooms, and signage are also needed throughout much of the state.

Wisconsin Public Recreational Lands

Ownership	Acres
County Lands	2,594,625
Federal Lands	1,795,030
State Lands	1,366,694
City, Village, Township Lands	62,004
Total	5,782,353

While the provision of outdoor recreation is an important component of this plan, recreation providers are also aware of the importance of environmental preservation. This SCORP identifies several Land Legacy Areas—areas thought to be critical in meeting the state's present and future conservation and recreation needs. Of the top 15 Land Legacy Areas statewide, 11 are located in the southern half of the state, an area heavily threatened by development pressures. Programs such as the Warren Knowles–Gaylord Nelson

Spectrum of Recreational Interaction and Compatibility Rating Scale



Stewardship 2000 Program and other environmental support agencies are in place to obtain and protect several of these areas of high ecological value. The Stewardship Program alone provides over $60 million annually to fund land acquisition, ecological restoration initiatives, and facility upgrades to a variety of parks, forests, and natural areas across the state.

Developing and improving the supply of recreation in Wisconsin will have several benefits. Easily accessible, nearby recreation lands may be expected to increase the health of Wisconsin residents. Data from the Centers for Disease Control (CDC) indicates that 61% of all Wisconsin adults are overweight or obese and 24% of Wisconsin high school students are overweight or at risk of becoming so. Physical activity is an important factor in controlling obesity. With their miles of easily accessible trails, rivers, and forest, Wisconsin parks and recreation areas play an integral role in promoting activity among state citizens. Recreational activities such as hiking, biking, swimming, and skiing are all fun, easy ways of achieving the regular exercise key to maintaining a healthy body. On a community-wide level, parks and recreation areas provide space for social events such as picnics and family outings, events that help forge strong communities and healthy families.

To aid recreation providers in developing an adequate supply of recreational lands and facilities, and to promote the conservation of important natural resources, this SCORP presents several goals and actions. These include the need to: protect, restore, and enhance Wisconsin's natural resources for outdoor recreation; to understand and manage the growing issue of Wisconsin outdoor recreation conflicts; to continue to provide Wisconsin outdoor recreation and educational programming; to continue to provide and enhance public access to Wisconsin recreational lands and waters; to understand the threats and opportunities of Wisconsin's developing urban areas and areas of rapid population growth; to maintain and enhance funding opportunities for Wisconsin outdoor recreation; and to promote Wisconsin outdoor recreation as a means to better health and wellness for state citizens. Though not comprehensive, it is hoped that these goals and actions make strides towards developing an improved supply of recreation within the state, while also protecting Wisconsin's beautiful natural environment for the enjoyment of residents and visitors for generations to come.

It is hoped that these goals and actions will make strides towards developing an improved supply of recreation within the state, while also protecting Wisconsin's beautiful natural environment for the enjoyment of residents and visitors for generations to come.

INTRODUCTION

SINCE PASSAGE OF THE FEDERAL LAND AND WATER CONSERVATION FUND (LWCF) ACT OF 1965, PREPARATION OF A STATEWIDE COMPREHENSIVE OUTDOOR RECREATION PLAN (SCORP) HAS BEEN REQUIRED FOR STATES TO BE ELIGIBLE FOR LWCF ACQUISITION AND DEVELOPMENT ASSISTANCE. THE LWCF IS ADMINISTERED BY THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) AND PROVIDES GRANTS FOR OUTDOOR RECREATION PROJECTS BY BOTH STATE AND LOCAL GOVERNMENTS.

Since its inception, LWCF has provided over $70 million for over 1,750 recreation land purchases, facility developments, and facility rehabilitations throughout Wisconsin. The SCORP is the blueprint by which all LWCF funding decisions are made. In addition to its utility in LWCF funding decisions, this plan is also used by a number of federal and state outdoor recreation funding programs. Combined, 14 programs are available for funding of public outdoor recreation areas and facilities. See Appendix A for a complete list of programs.

LWCF

The WDNR is the state agency authorized by the Governor to represent and act for the state in administration of the LWCF Program, and has prepared this plan. SCORPs are typically carried out on a five year planning cycle. Plan contents and format are shaped by the planning guidelines set by the LWCF Act. The major requirements of the plan are: comprehensiveness, an evaluation of the demand and supply of outdoor recreation resources and facilities in the state, a wetlands priority component, a program for implementation of the plan, ample public participation in the planning process, and a description of the process and methodology used to create the plan. This SCORP has been prepared to meet the requirements for continuing LWCF eligibility, and to provide a meaningful evaluation of state and local public outdoor recreation projects for grant award selection purposes.

Description of Plan

This plan consists of seven chapters and five appendices, which are summarized below.

Chapter One explores the natural amenities of the state and examines the recreation and population changes that have occurred within Wisconsin over the past 50 years. With baby boomers reaching retirement age, housing development continuing, and more people vacationing in Wisconsin's natural environment, pressures on state recreational resources continue to grow. This chapter investigates the ways in which changing demographic trends have impacted recreation supply and demand within Wisconsin.

Chapter Two explores user demand for almost 100 popular Wisconsin outdoor recreational activities, examining which activities are most popular and which environments are the most desirable for outdoor recreation. This plan is the first SCORP to evaluate recreation demand from outside of the state, an evaluation that will prove useful in balancing the demands of in-state and out-of-state residents. In addition, this chapter explores several barriers that prevent people from participating in recreational activities as often as they would like. Finally, Chapter Two discusses the Americans with Disabilities Act (ADA) and the continuing challenge of addressing outdoor recreation conflicts for individuals with mobility disabilities.

Chapter Three explores the supply of recreation in Wisconsin, both in terms of built facilities and outdoor recreation environments. Because outdoor recreation supply comes in many forms, this chapter examines both landscape scale needs and local park and recreation needs. Together, these supply needs start to shape the picture of recreation shortfalls.

Chapter Four investigates the current status of Wisconsin's outdoor recreation conflicts and discusses the difficulties in developing permanent solutions to these issues. This chapter also explores several of the current innovative solutions for resolving recreation conflicts.

Chapter Five divides Wisconsin into eight SCORP planning regions and summarizes the unique characteristics that define each of them. Each region represents a collection of distinct recreation/tourism destinations. With such a broad and abundant supply of recreation opportunities in Wisconsin, Chapter Five offers insights into what makes each individual region unique and valuable to statewide recreation and also summarizes regional recreation needs.

Chapter Six describes several key indicators for outdoor recreation trends and offers insights for future recreation participation and demand.

Chapter Seven describes eight goals and actions intended to improve the supply of outdoor recreation within Wisconsin and encourage state residents to participate in more outdoor recreational activities. Goals and actions presented in this chapter were developed with the input of WDNR groups, the SCORP External Review Panel, and the citizens of Wisconsin.

The ***Appendices*** of this plan include a summary of outdoor recreation development and acquisition funding programs administered by the WDNR, a description of park and recreation design and development standards, a description of outdoor recreation supply and demand survey design, and a summary of the status of Wisconsin's wetlands.

Public Participation Process

Public participation has been an extensive component of this planning process. An External Review Panel comprised of 11 members participated in several phases of the planning process. Members, representing a broad range of recreational providers and experts, contributed their expertise to initiatives such as identifying and prioritizing significant statewide outdoor recreation issues and determining possible solutions.

Eight public meetings, one in each of the state's SCORP planning regions, were held to gather public input on current outdoor recreation issues. In addition, an online survey system developed specifically to gather public comments collected citizen responses over the summer of 2005. Together, these techniques gathered over 1,300 written comments about issues pertaining to outdoor recreation in the State of Wisconsin. In addition to these responses, over 3,000 surveys on outdoor recreation demand and over 800 surveys on recreation supply characteristics were collected from outdoor recreation providers. The draft plan had a 30 day review period in which 31 written responses were received. All responses were in support of the plan with the largest amount of comments associated with ATV usage within the state. These responses were evenly split for and against the need for more trails and facilities for ATV use. Other comments included the continuing water recreation conflict issue, landscape conflicts in conjunction with recreational uses, the need for more dog parks, and the need for better targeting of local park and recreation needs. The sum of these many and varied responses begins to indicate the complexity and challenge of providing high quality outdoor recreation for the numerous user groups who rely on Wisconsin lands and waters.

CHAPTER 1

Wisconsin Natural Amenities, Population Changes, and Recreation Destinations

Any study of recreation within the State of Wisconsin will necessarily involve an understanding of the state's changing demographic profile and shifting natural landscapes. People's lifestyles—where they live, their income, their age, their level of education, their cultural background—influence, at least to some extent, the types of recreation in which they participate. As environmental, social, and cultural factors differ across the state, so too does the supply and demand for different forms of recreation. This chapter explores how changes in urbanization, housing, and population affect recreation within Wisconsin.

Wisconsin is a state characterized by a wide variety of different landscapes. From the coastal shores of Lake Michigan and Lake Superior to the southern lowland prairies and marshes, and northern forests of pine and hardwoods, the Wisconsin landscape offers something for nearly every recreation interest and activity.

General Land Cover

Wisconsin is a state characterized by a wide variety of different landscapes. From the coastal shores of Lake Michigan and Lake Superior to the southern lowland prairies and marshes, and northern forests of pine and hardwoods, the Wisconsin landscape offers something for nearly every recreation interest and activity. Researchers Calvin Beale, and Ken Johnson, and researcher David McGranahan have found evidence that natural amenities—climate, topography, forests, lakes, and rivers—and recreational resources are associated with population growth in some rural areas. According to this research, the natural landscape of a particularly beautiful and recreation-rich area will attract a larger number of residents and visitors than other areas. Following this line of thought, one would expect amenity and recreation-rich areas to experience disproportionately high population and housing growth.

We can get an idea of what the capacity for such amenity-based growth might be in Wisconsin by looking at land cover. Table 1-1 shows land cover type by SCORP regions as it existed in 1992. Land cover of an area determines how that area may be used recreationally according to what types of recreation a particular environment supports. In this respect, urban environments generally support only developed, urban forms of recreation—basketball courts, sidewalks, city parks, etc. Less developed areas, on the other hand, may be used for a wider variety of recreation depending on the type of land cover present. Heavily forested or grassland regions, for example, support activities such as hiking, trail-riding, and cross-country skiing while regions with many lakes and rivers support more water sports such as speed boating, waterskiing, canoeing, swimming, etc.

Table 1-1: **Land Cover by SCORP Region, 1992**

SCORP Region	Urban	Agricultural	Grassland	Forest	Water	Wetland	Other
Great Northwest	0.4%	8.6%	11.1%	57.1%	4.0%	15.8%	3.0%
Northwoods	0.3%	5.6%	5.1%	58.4%	4.9%	22.9%	2.7%
Upper Lake Michigan Coastal	1.5%	40.9%	5.6%	31.2%	1.4%	17.8%	1.5%
Lower Lake Michigan Coastal	9.8%	46.3%	15.3%	11.8%	2.6%	10.4%	3.6%
Southern Gateways	2.1%	56.3%	12.2%	18.9%	2.0%	7.6%	1.0%
Mississippi River Corridor	0.9%	40.7%	14.6%	35.7%	2.8%	4.8%	0.6%
Western Sands	1.1%	29.9%	12.9%	37.2%	2.4%	14.2%	2.3%
Lake Winnebago Waters	1.7%	45.1%	9.5%	19.5%	6.0%	17.1%	1.1%
Wisconsin State Total	1.6%	30.8%	10.7%	37.5%	3.4%	14.1%	2.0%

Source: University of Wisconsin Applied Population Lab and the Wisconsin Department of Natural Resources

Table 1-2: **Wisconsin Population Projections**

	Estimate	Projected Population		Projected Increase		Average Annual % Increase	
SCORP Region	2004	2010	2020	2004–2010	2010–2020	2004–2010	2010–2020
Great Northwest	232,361	239,057	249,481	6,696	10,424	0.48%	0.44%
Northwoods	169,376	170,777	173,816	1,401	3,039	0.14%	0.18%
Upper Lake Michigan Coastal	453,962	470,518	501,198	16,556	30,680	0.61%	0.65%
Lower Lake Michigan Coastal	2,081,878	2,159,531	2,282,032	77,653	122,501	0.62%	0.57%
Southern Gateways	979,295	1,026,728	1,106,156	47,433	79,428	0.81%	0.77%
Mississippi River Corridor	408,837	427,977	459,717	19,140	31,740	0.78%	0.74%
Western Sands	573,665	595,455	630,246	21,790	34,791	0.63%	0.58%
Lake Winnebago Waters	633,581	661,427	708,232	27,846	46,805	0.73%	0.71%
Wisconsin State Total	5,532,955	5,751,470	6,110,878	218,515	359,408	0.66%	0.62%

Source: Wisconsin Dept. of Administration (2004)

Wetlands represent a particularly important ecosystem within the Wisconsin landscape. Beyond the important habitat they provide for many rare, endangered, and threatened plant and animal species, wetlands also serve many functional roles, acting as flooding buffers, as watershed filtration systems, and as important stopover points for migrating birds. Wetlands also provide important recreational opportunities such as wildlife viewing. Though many wetlands still exist within the state, these ecosystems are threatened by increasing urban and suburban development and pollution. Wisconsinites value their wetlands; wetland protection and restoration programs have become increasingly popular among state residents. As more citizens become involved, the state and the Wisconsin Department of Natural Resources hope to preserve and restore as many of these areas as possible. For more information on wetlands, please see Appendix E—Wetlands Summary.

As populations continue to grow and age, the recreational profile of a given region would also be expected to change.

Population Changes

Population Growth

Over the past several decades Wisconsin's population has increased dramatically. In the 50 years between 1950 and 2000, the state gained 2,098,380 residents, an increase of 61%. Population growth continues today, with populations projected to hit 5,751,470 by 2010 and 6,110,878 by 2020. Table 1-2 outlines the projected population changes within each SCORP region. As we can see, growth is not expected to occur uniformly across the state. Urban regions, particularly Southern Gateways and Lake Winnebago Waters, are expected to experience higher population growth than more rural regions. As populations continue to grow, the recreational profile of a given region would also be expected to change. Larger populations generally support a larger supply of recreational opportunities, more people participating in a more diverse range of activities. For this reason, a larger population will also require a larger pool of potential recreational activities and facilities.

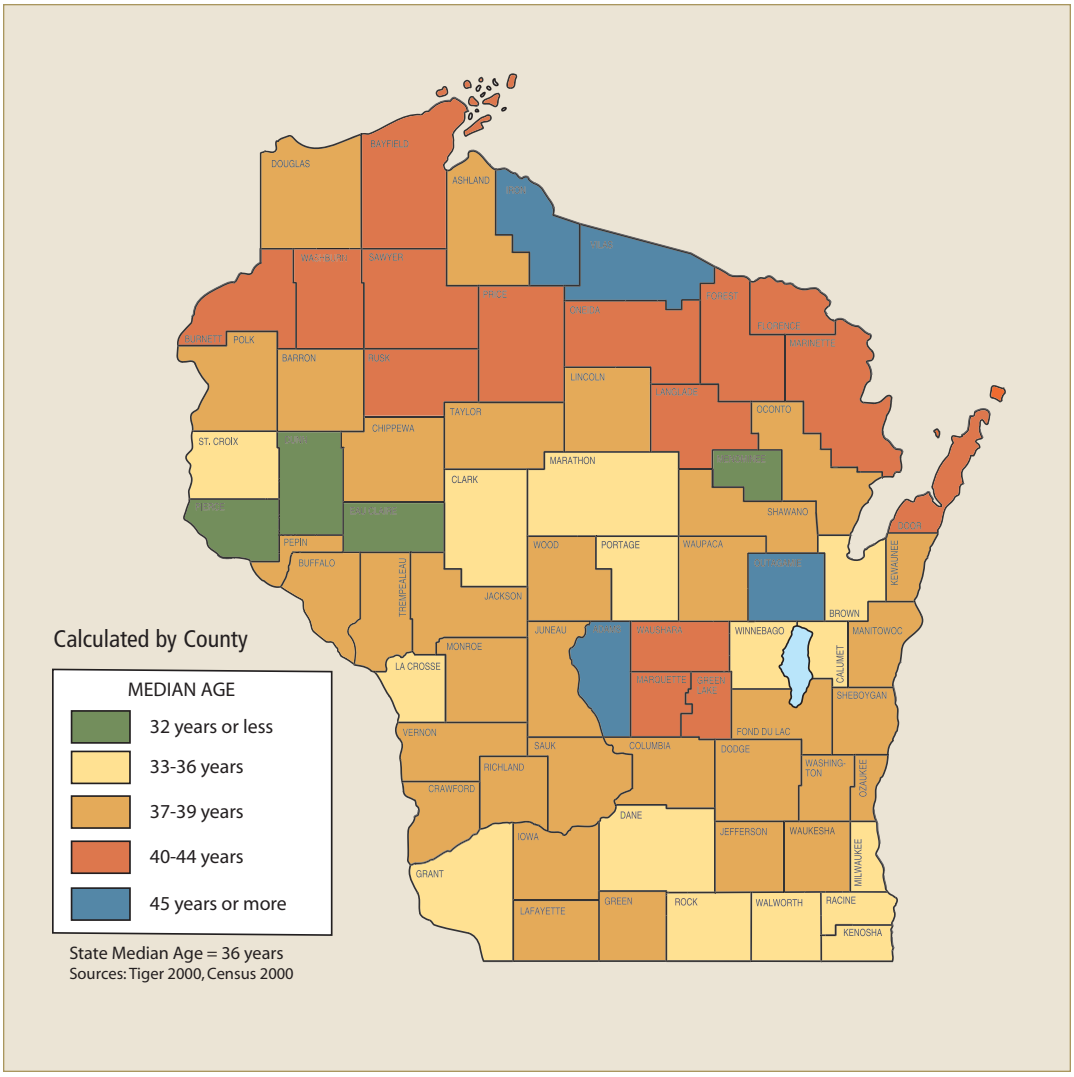
Age Structure

As Wisconsin's population is increasing, it is also aging. In a trend known as the demographic transition, average life expectancy has increased as birth rates have declined. As a result, populations within the state have become markedly older than in previous generations. Aging across the state, however, has not been uniform. Populations in northern regions of the state are becoming older as young people migrate out and leave behind a population of primarily older residents. These same northern regions are also popular locations for retirement and, as more retirees migrate into them, the population demographics of these regions are becoming increasingly older. Other regions of the state, particularly metropolitan areas and areas around universities have populations that are relatively younger, a reflection of the higher numbers of students, young professionals, and young families that choose to live in these regions.

As Figure 1-1 indicates, northern regions of the state have higher median ages than elsewhere in the state. Aging trends are expected to continue as certain regions age quickly and overall state population ages at a more gradual rate.

Because Wisconsinites of different ages enjoy different recreation activities, the age structure of a region affects the overall recreational demand of that region. Based on data from Chapter Two, older residents generally enjoy quieter, lower impact activities such as viewing birds, driving for pleasure, ice fishing, etc. Younger generations generally participate in more high impact activities such as running, jogging, inline skating, developed camping, disc golf, downhill skiing, kayaking, paintball, mountain biking, and riding ATVs.

Figure 1-1: **Wisconsin Median Age**



College Education

Education levels differ across the state. Northern and central regions generally have fewer residents with a college degree, while southern and eastern regions generally have more residents with a college degree. Education levels are also generally higher in more urban areas—Dane, Ozaukee, Milwaukee, St. Croix, Pierce, Eau Claire, Portage, and La Crosse Counties—than in more rural areas—Forest, Langlade, Taylor, and Jackson Counties, among others.

Education level influences the types of recreation in which people participate.

Figure 1-2: **Wisconsin Population with a Four-Year College Degree**

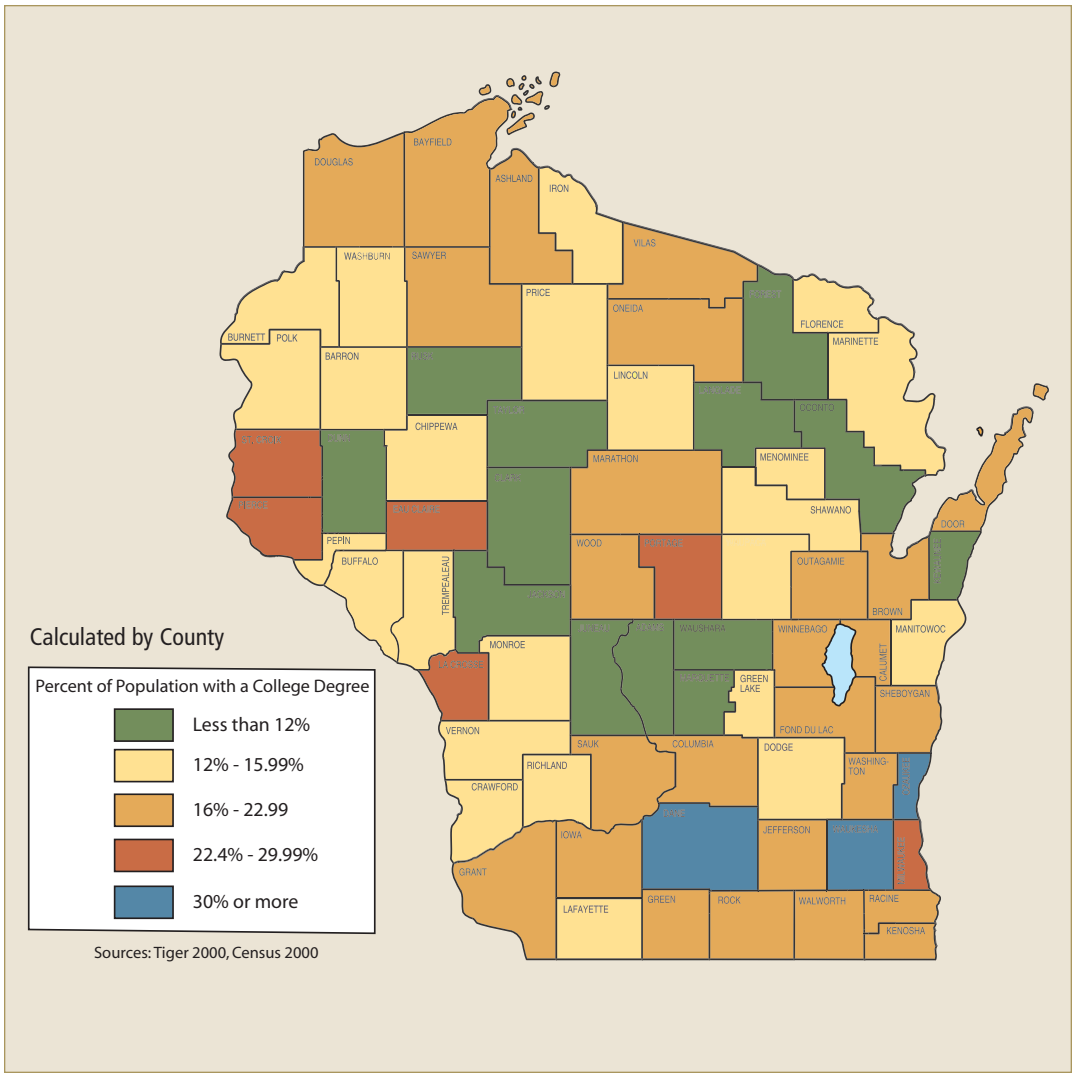


Table 1-3: **Selected Wisconsin Outdoor Recreation Participation by Education (%)**

	< High School	High School	Some College	College Degree	Post-Graduate Degree
Inline Skating	42	3	24	22	9
Ice Hockey Outdoors	27	32	21	17	3
Motorcycling off-road	25	31	30	10	4
Small Game Hunting	18	40	24	13	5
Sailing	12	15	29	24	20
Scuba Diving	7	17	28	33	15

Source: National Survey on Recreation and the Environment (NSRE): Wisconsin and the Wisconsin Markets (2005)

Education level influences the types of recreation people participate in. Wisconsinites with relatively high levels of education disproportionately enjoy visiting wilderness areas, hiking, nature-based education, viewing nature and wildlife, snowshoeing, cross-country skiing, sailing, canoeing, bicycling, walking for pleasure, backpacking, and swimming in lakes/streams.

Table 1-3 lists participation in selected outdoor recreation activities according to percentages of participants with different levels of education. Activities which are popular among college graduates—inline skating, sailing, scuba diving, etc.—will likely be popular in those regions of the state with a higher percentage of college graduates. Conversely, activities popular among those with a high school education—outdoor ice hockey, off-road motorcycling, small game hunting, etc.—will likely be popular in those regions of the state with fewer college graduates.

Income also affects recreation demand, particularly with regard to more expensive activities.

Income

Income also affects recreation demand, particularly with regard to more expensive activities. Middle income Wisconsinites often participate in developed camping, snowmobiling, fishing, picnicking, driving for pleasure, and ATV riding. People with high incomes, on the other hand, often participate in golfing, hiking, running or jogging, visiting historic sites, viewing nature and wildlife, downhill and cross-country skiing, motor-boating, sailing, waterskiing, and riding personal watercraft. Table 1-4 indicates the median household income by SCORP region across Wisconsin. Incomes are generally highest in the southern portions of the state—the Lower Lake Michigan Coastal and Southern Gateways Regions. Incomes are generally lower in more northern and central portions of the state with the lowest incomes found in the Great Northwest and Northwoods Regions.

Table 1-4: **Median Household Income by Region**

SCORP Region	Median Household Income
Great Northwest	$35,648
Northwoods	$35,888
Upper Lake Michigan Coastal	$43,619
Lower Lake Michigan Coastal	$46,651
Southern Gateways	$46,588
Mississippi River Corridor	$41,406
Western Sands	$40,553
Lake Winnebago Waters	$44,983
Wisconsin Statewide Average	$43,791

Source: U.S. Census Bureau (1999)

Ethnicity

Wisconsin's population is predominantly White/non-Hispanic (87% in 2000). However, minority populations within the state are increasing. The number of Hispanic residents in Wisconsin has grown steadily, increasing over 100% in the years 1990-2000. As Table 1-5 indicates, this growth was especially notable in the Lake Winnebago Waters, Lower Lake Michigan Coastal, Southern Gateways, and Upper Lake Michigan Coastal Regions.

Asian populations have also grown, with a statewide increase of 69% in the years 1990-2000. This growth occurred especially in the Lower Lake Michigan Coastal, Western Sands, Lake Winnebago Waters, and Upper Lake Michigan Coastal Regions.

African Americans are the largest minority group in the state with 5.6% of the overall state population. Populations of African Americans are largest in the Lower Lake Michigan Coastal Region where almost 13% of residents are of this ethnicity.

American Indians make up 3.7% of the population in the Great Northwest Region and 2.2% of the population in the Northwoods Region.

Wisconsin's population is predominantly White/non-Hispanic. However, minority populations are steadily increasing.

Table 1-5: **Ethnicities by Region**

SCORP Region	Total Population 2000	Hispanic		Asian		African American		American Indian	
		Percent of Total 2000	Percent Increase 1990-2000	Percent of Total 2000	Percent Increase 1990-2000	Percent of Total 2000	Percent Increase 1990-2000	Percent of Total 2000	Percent Increase 1990-2000
Great Northwest	224,701	0.8%	105.1%	0.3%	28.5%	0.3%	70.9%	3.7%	18.8%
Northwoods	165,665	0.8%	140.5%	0.3%	74.7%	0.3%	58.4%	2.2%	27.2%
Upper Lake Michigan Coastal	436,831	2.5%	327.9%	1.6%	85.9%	0.7%	158.5%	1.4%	31.3%
Lower Lake Michigan Coastal	2,045,554	6.4%	87.0%	1.9%	69.0%	12.9%	20.0%	0.5%	3.8%
Southern Gateways	936,932	3.0%	169.2%	1.8%	65.8%	2.9%	44.6%	0.3%	29.1%
Mississippi River Corridor	389,860	0.8%	84.4%	1.3%	30.6%	0.5%	122.4%	0.3%	23.7%
Western Sands	554,700	1.1%	98.4%	2.1%	76.4%	0.4%	72.8%	0.7%	25.6%
Lake Winnebago Waters	609,432	1.9%	156.2%	1.4%	87.6%	0.7%	232.8%	1.8%	24.6%
State of Wisconsin Average	5,363,675	3.6%	107.0%	1.6%	68.7%	5.6%	24.5%	0.8%	19.9%

Source: University of Wisconsin Applied Population Lab and the Wisconsin Department of Natural Resources (2005)

Table 1-6: **Selected Wisconsin Outdoor Recreation Participation by Race (%)**

	White	African American	Hispanic	American Indian	Asian
Motorboating	97	<1	2	<1	<1
Horseback Riding	96	1	2	<1	<1
Golf	95	3	2	<1	<1
Family Gatherings	90	5	4	<1	<1
Disc Golf	90	4	3	1	2
Nature-Based Educational Programs	88	7	4	<1	<1

Source: National Survey on Recreation and the Environment (NSRE): Wisconsin and the Wisconsin Markets (2005)

Certain activities—hunting, paintball, and ice fishing, among others—are far more popular among men than among women.

Relative populations of minority individuals are important when considering the recreational demand of a given region. As Table 1-6 indicates, people of different ethnicities often enjoy different recreational activities. While the greatest majority of participants in most outdoor recreation activities are White, nature-based educational programs are popular among minority groups. Family gatherings and disc golf are also relatively popular among minorities. Given these statistics, regions with higher levels of ethnicities may be expected to show a higher demand for certain activities and facilities such as picnic shelters, disc golf courses, and nature centers.

Gender

Though gender ratios have not changed significantly within the state, gender is a consideration when determining recreational supply and demand. Table 1-7 lists participation in selected outdoor recreation activities according to the percentage of participants who are male or female. As this table indicates, certain activities—hunting, paintball, and ice fishing, among others—are far more popular among men than among women. Other activities—visiting a dog park and swimming in an outdoor pool, among others—are more popular among women than among men.

Table 1-7: **Selected Wisconsin Outdoor Recreation Participation by Gender (%)**

	Male	Female
Hunting	86	14
Paintball	80	20
Ice Fishing	60	40
Hiking	51	49
Cross-Country Skiing	49	51
Swimming in an Outdoor Pool	44	56
Visit a Dog Park to Walk Pet	38	62

Source: National Survey on Recreation and the Environment (NSRE): Wisconsin and the Wisconsin Markets (2005)

Wisconsin is becoming increasingly urbanized—68% of the state population now lives in urban areas, a 10% increase over the last 50 years.

Urbanization

As Table 1-8 indicates, Wisconsin is becoming increasingly urbanized. 68% of the state population now lives in urban areas, a 10% increase over the last 50 years. Urban areas generally require different recreational facilities and activities than rural areas; urbanites often participate in activities requiring more developed facilities—visiting dog parks, swimming in an outdoor pool, playing basketball, picnicking in a city shelter. Rural residents, on the other hand, are more likely to participate in activities requiring less developed environments—snowmobiling, ice fishing, hunting, or riding an ATV. Similarly, urbanization also affects the supply of recreation within an area. More development generally means less land available for recreating. Highly urban areas, therefore, cannot support the kinds of wide-open recreating—ATV trails, backpacking, undeveloped camping, hunting, snowmobiling—that a more rural area would be able to support.

There are many different ways of evaluating urbanization trends in Wisconsin. This chapter will examine three of them: the shift from rural to urban population, the total number of housing units, and the number of houses classified as seasonal properties.

Urban/Rural Population

In 1900, Wisconsin was predominantly rural with only 38% of the population living in urban areas. By 2000, however, the majority of the population (68%) was living in urban areas, mostly in the metropolitan Southern Gateways and Lower Lake Michigan Coastal Regions. Meanwhile, the more northern regions of the Northwoods and Great Northwest had only 7% of overall state populations.

Table 1-8: **Urbanization in Wisconsin SCORP Regions, 1950–2000**

	Percent Living in Urban Areas					
SCORP Region	1950	1960	1970	1980	1990	2000
Great Northwest	31.7%	31.0%	30.0%	26.7%	26.4%	25.1%
Northwoods	30.5%	32.2%	28.8%	24.8%	24.2%	23.1%
Upper Lake Michigan Coastal	52.8%	59.8%	63.1%	61.6%	63.4%	63.5%
Lower Lake Michigan Coastal	81.6%	86.2%	86.6%	84.9%	85.6%	89.4%
Southern Gateways	50.8%	56.3%	60.4%	61.6%	63.7%	67.6%
Mississippi River Corridor	31.5%	33.6%	37.1%	38.0%	42.1%	44.8%
Western Sands	39.1%	42.1%	44.2%	45.2%	47.9%	51.5%
Lake Winnebago Waters	48.2%	52.7%	56.6%	56.2%	58.3%	60.5%
State of Wisconsin	57.9%	63.8%	65.9%	64.2%	65.7%	68.3%

Source: University of Wisconsin Applied Population Lab and the Wisconsin Department of Natural Resources (2005)

Table 1-9: **Selected Wisconsin Outdoor Recreation Participation by Urban/Suburban/Rural Populations (%)**

	Urban	Suburban	Rural
Swimming in an Outdoor Pool	41	35	23
Running or Jogging	32	26	17
Driving ATVs Off-Road	20	32	29
Target Shooting	17	27	22

Source: National Survey on Recreation and the Environment (NSRE): Wisconsin and the Wisconsin Markets (2005)

As populations become increasingly urban, one would expect a higher demand for more urban-based activities—developed parks, ice rinks, outdoor pools, etc. Larger, more concentrated urban populations may also support a wider range of recreation activities as a larger population participates in a greater diversity of activities. Table 1-9 lists participation in several selected activities according to percentages of participants who live in urban, suburban, and rural areas. Swimming in an outdoor pool and running/jogging are more popular among urban residents than they are among suburban or rural residents. Driving ATVs off-road and target shooting—both activities requiring large areas of undeveloped land—are more popular among suburban and rural residents than urban residents.

Housing Units

As Wisconsin's population has grown, so too has its housing market. The rate of housing growth—growing at a rate of 133% over the past 54 years—has far eclipsed the rate of population growth. As Table 1-10 illustrates, the number of housing units within Wisconsin has increased from 1,055,843 in 1950 to 2,462,735 in 2004. This rapid increase reflects the rising numbers of single-person and small-family households as well as the increased popularity of seasonal housing. Housing development, particularly in the Northwoods and Great Northwest Regions, was highest during the 1970s and has since leveled off. More recently, development has occurred most rapidly in the Southern Gateways, Mississippi River Corridor, and Lake Winnebago Waters Regions, a reflection of the higher rates of suburban development within these regions.

Table 1-10: **Wisconsin Housing Units, 1950–2004**

SCORP Region	1950	1960	1970	1980	1990	2000	2004*
Great Northwest	68,648	74,119	79,021	108,267	120,325	127,704	135,797
Northwoods	48,392	57,768	64,544	95,224	102,462	111,328	116,860
Upper Lake Michigan Coastal	82,193	100,082	114,710	154,268	176,646	198,730	213,376
Lower Lake Michigan Coastal	402,104	528,825	597,965	702,285	757,870	842,681	877,455
Southern Gateways	154,026	188,944	229,586	296,803	330,772	391,626	423,288
Mississippi River Corridor	80,940	87,278	95,159	123,659	136,743	157,966	170,990
Western Sands	106,801	119,783	137,457	186,136	207,794	233,660	249,055
Lake Winnebago Waters	112,739	131,821	153,878	197,215	223,162	257,449	275,914
State of Wisconsin Average	1,055,843	1,288,620	1,472,320	1,863,857	2,055,774	2,321,144	2,462,735

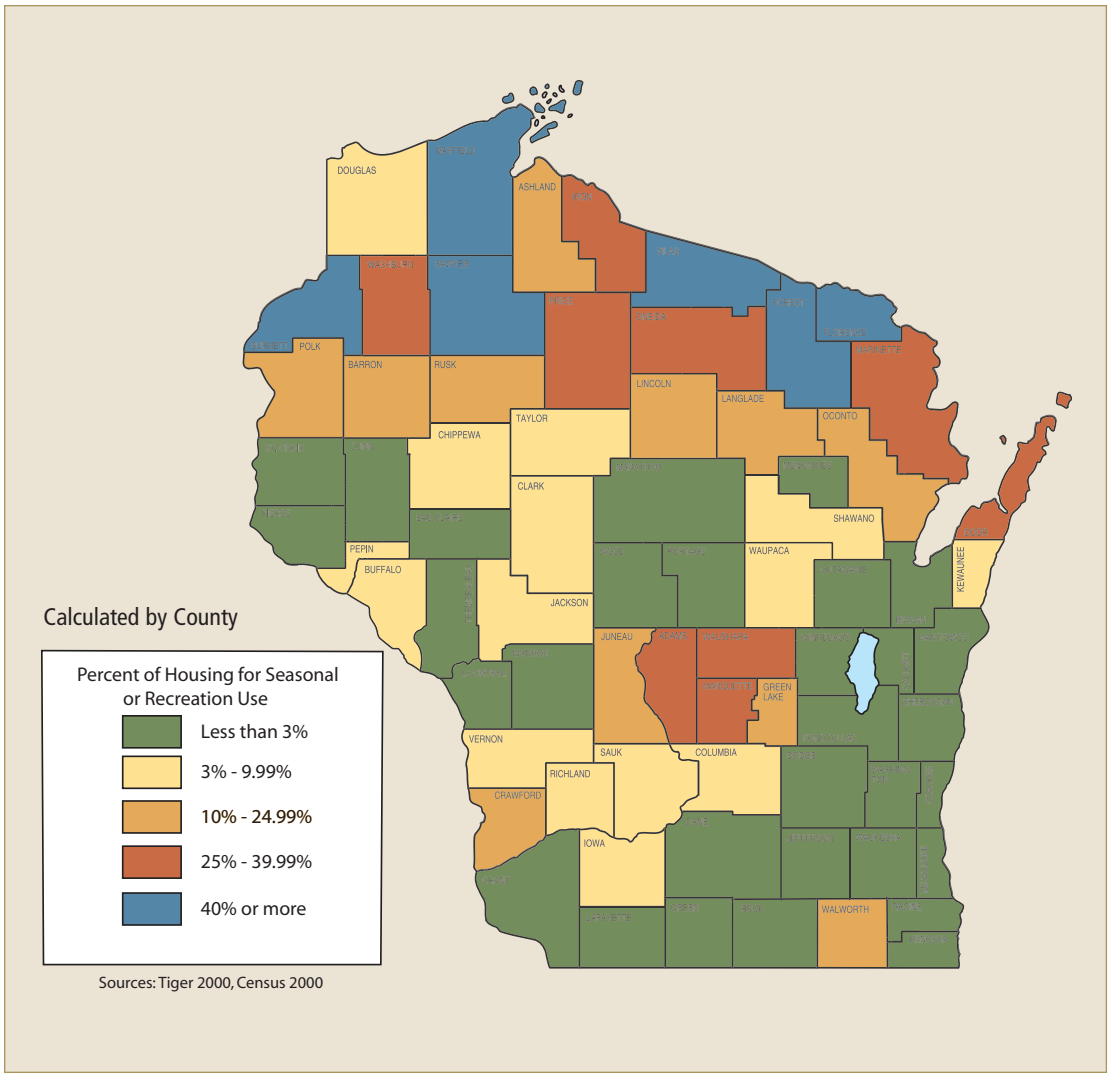
*estimate from Wisconsin Dept. of Administration
Sources: Census (1950-2000), Wisconsin Dept. of Administration (2004)

Seasonal Housing

Seasonal housing has long been an important factor in Wisconsin outdoor recreation. In general, a region with a larger number of seasonal units has higher levels of participation in recreation activities as seasonal residents flock to these regions for vacations. Not only does seasonal housing increase the number of visitors to a region, it also affects recreational supply by decreasing the amount of land available for recreation.

In Wisconsin, the number of seasonal housing units has increased dramatically from a relatively low 56,964 units in 1950 to 150,601 in 1990, a growth rate of 164%. Figure 1-3 depicts seasonal housing as it exists across the state. Although present in each region, seasonal housing is especially prevalent in more northern regions of the state. In Burnett, Bayfield, Sawyer, Vilas, Florence, and Forest Counties—all northern counties—over 40% of all housing is seasonal housing. Continued seasonal housing development in these and other regions of Wisconsin will generate a higher demand for recreation while at the same time limiting the supply of recreation in once undeveloped areas.

Figure 1-3: **Wisconsin Seasonal Housing**

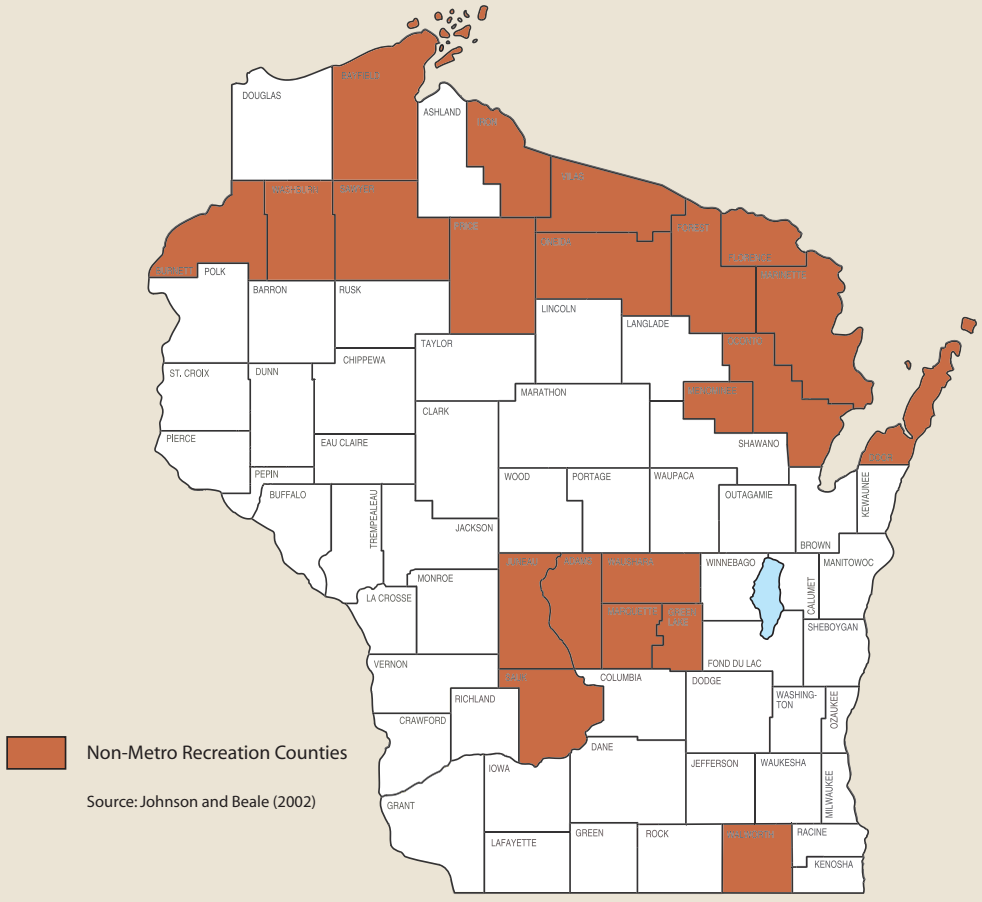


Non-Metro Recreation Counties

A recent research study (Johnson and Beale, 2002) classified Wisconsin counties according to their dominant characteristics. One type of county they identified is the so-called "Non-Metro Recreation County." This type of county is characterized by high levels of tourism, recreation, entertainment, and seasonal housing. These counties are, by definition, rural with large amounts of undeveloped land available for recreational use and/or development. In addition, natural amenities such as clean lakes, large forested areas, and recreational facilities (campgrounds for example) play to this idea of Non-Metro Recreation Counties. Figure 1-4 illustrates the location of Non-Metro Recreation Counties across the state. Because of their proximity to Lake Michigan and their abundance of seasonal housing, most Non-Metro Recreation Counties in Wisconsin are located in the northern part of the state with a smaller portion located in central Wisconsin.

Non-Metro Recreation Counties are generally considered to be vacation destinations and are therefore important to the overall state economy. Yet these counties have value beyond what they provide in tourist dollars. As natural amenity-rich areas they provide large areas of land for outdoor recreating, land that is important in an ever-developing statewide landscape.

Figure 1-4: **Non-Metro Recreation Counties**



Wisconsin Non-Metro Recreation Counties:

Adams
Bayfield
Burnett
Door
Florence
Forest
Green Lake
Juneau
Iron
Marinette
Menominee
Marquette
Oconto
Oneida
Price
Sauk
Sawyer
Vilas
Walworth
Washburn
Waushara

Counties defined as "Non-Metro Recreation Counties" by Johnson and Beale (2002) are shown in red.

Non-Metro Recreation Counties have value beyond what they provide in tourist dollars. As natural amenity-rich areas they provide large areas of land for outdoor recreating, land that is important in an ever-developing statewide landscape.

Non-Metro Recreation Counties have experienced especially high net migration rates and higher population growth rates than either Metro Counties or other Non-Metro Counties (Johnson and Beale, 2002). In Wisconsin the population of Non-Metro Recreation Counties has grown at a rate of 1.9% per year, as compared to a Metro growth rate of 1.7% per year. The rate of housing development in Non-Metro Recreation Counties is also higher than in either other Non-Metro Counties or Metro Counties. In the period from 2000-2004, Non-Metro Recreation Counties experienced a 7% increase in the number of housing units. During this same period, other Non-Metro Counties experienced a 5.6% growth in housing units and Metro Counties experienced a 6.1% growth in housing units (see Table 1-11).

Table 1-11: **Housing and Population Changes in Non-Metro Recreation and Non-Recreation Counties**

	Number of Counties	Population Change			Housing Change		
		1970-1990	1990-2000	2000-2004	1970-1990	1990-2000	2000-2004
Non-Metro Recreation Counties	21	23.7%	15.3%	4.3%	64.3%	9.9%	7.0%
Other Non-Metro Counties	31	10.1%	8.5%	2.8%	37.0%	11.9%	5.6%
Metro Counties	20	9.4%	9.3%	3.1%	36.0%	13.9%	6.1%

Sources: Census (1950-2000), Wisconsin Dept. of Administration (2004)

Summary

Wisconsin's SCORP Regions are diverse ecologically, demographically, and socio-economically. The majority of the state's population is concentrated in a small number of metropolitan areas, areas which also have the highest levels of income, education, and property values. While its population may live predominantly in a select few areas, the majority of the state's land remains mostly rural and sparsely populated. In general, the southern and eastern parts of the state, especially the Lower Lake Michigan Coastal Region, are highly urbanized and have relatively high levels of income, education, and property values. Other SCORP regions (except for the Great Northwest and the Northwoods which remain rural without large population centers) have at least one highly populated, and urban county surrounded by more rural counties.

The northern part of the state can be characterized as being heavily impacted by seasonal housing and tourism and as having a rapidly aging resident population. Seasonal housing and tourism are also important considerations in many rural areas of the state where full-time residents may represent a small portion of overall recreation demand. This is especially true in the Northwoods, Great Northwest, and Upper Lake Michigan Coastal Regions.

Population growth and housing development have occurred relatively quickly in several areas of the state, particularly suburban counties and Non-Metro Recreation Counties. This growth is expected to continue as population growth and housing development continue to occur rapidly.

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CHAPTER 2

Wisconsin Outdoor Recreation Demand and Uses

THE AVERAGE AMERICAN HAS 5.11 HOURS OF LEISURE TIME PER DAY. ABOUT THREE-QUARTERS OF THAT TIME IS SPENT IN FRONT OF A TV WITH THE REMAINDER—1.70 HOURS—SPENT ON SPORTS, EXERCISE, AND RECREATION (BRADLEY, 2005). GIVEN THE SMALL AMOUNT OF TIME MOST AMERICANS DEVOTE TO RECREATION, IT IS IMPORTANT THAT RECREATION PLANNERS UNDERSTAND RECREATION DEMAND—THE FACTORS THAT CAUSE A PERSON TO PARTICIPATE IN A PARTICULAR RECREATIONAL USE.

Overview

Through previous research in the field of recreation, it has become evident that people who share an interest in one recreation activity or setting often share interests in others. For example, individuals who participate in one form of water-based outdoor recreation are also likely to participate in other types of water-based outdoor recreation. This chapter explores several of the factors that influence a person's recreation preferences—recreation settings, recreation experiences, and geographic location—and classifies recreational activities and users according to these groupings.

While important, recreation preferences are only one component of recreation participation. Barriers to recreation are another important consideration in determining how often and to what extent people recreate. This chapter explores three primary recreation barriers—personal, environmental, and disabled accessibility—to determine to what extent these barriers influence and shape recreation within the state.

Recreation participation rates within Wisconsin are higher than most other regions of the country. This may be attributed to the combination of Wisconsin's abundant recreation resources and the state's four season climate.

Recreation Demand Survey Methods

Recreation demand survey methods for this SCORP relied on four survey sources: 1) The 1999-2004 National Survey on Recreation and the Environment (NSRE) and version 18 of the NSRE (called the Wisconsin Survey), which was conducted September to November, 2004; 2) The Outdoor Industry Foundation (OIF) 2002 Outdoor Recreation Participation & Spending Study, A State-by-State Perspective; 3) The Department of Tourism 2004 Wisconsin Advertising Awareness and Competitive Analysis Wave VIII Study (WAVE VIII) ; and 4) comments (both written, internet, and mail) from a series of eight public meetings held in 2005 discussing barriers for increased outdoor use. Total sample sizes for each survey ranged from approximately 300-2,900 completed surveys. Results from each survey focus on Wisconsin residents or visitors who have recreated in Wisconsin. Further discussion of methods and techniques used in these studies can be found in Appendix C–Outdoor Recreation Demand Survey Methodology.

The Mass Markets in Wisconsin Outdoor Recreation

Wisconsinites are active participants in most forms of outdoor recreation. Recreation participation rates within Wisconsin are higher than most other regions of the country. This may be attributed to the combination of Wisconsin's abundant recreation resources as well as the state's four season climate, a resource that allows for recreating in every season. Table 2-1 lists all Wisconsin resident outdoor recreation activities surveyed for this SCORP. In total, 95 activities are presented from the NSRE and OIF studies—more than have been used in any previous Wisconsin SCORP.

Table 2-1: **Wisconsin Outdoor Recreation Participants by Activity (Age 16+)**

Activity	Percent Participating	Number of Participants (1,000s)
Walk for pleasure	85.8	3,567
Family gathering	78.9	3,280
View/photograph natural scenery	67.5	2,806
Gardening or landscaping for pleasure	65.3	2,715
Visit nature centers, etc.	65.3	2,715
Driving for pleasure	60.3	2,507
View/photograph other wildlife	57.0	2,369
Attend outdoor sports events	56.9	2,365
Picnicking	56.6	2,353
Sightseeing	55.3	2,299
View/photograph wildflowers, trees, etc.	50.0	2,079
Bicycling	49.3	2,049
Visit a beach	47.3	1,966
Swimming in lakes, streams, etc.	45.8	1,904
Visit historic sites	45.2	1,879
Yard games, e.g., horseshoes	44.8	1,862
View/photograph birds	40.9	1,700
Fishing – freshwater	40.7	1,692
Gather mushrooms, berries, etc.	39.5	1,642
Attend outdoor concerts, plays, etc.	38.5	1,600
Visit a wilderness or primitive area	38.3	1,592
Swimming in an outdoor pool	38.3	1,592
Visit outdoor theme/water park	37.6	1,563
Fishing – warmwater	37.0	1,538
Motorboating	36.4	1,513
Day hiking	35.0	1,455
Camping – developed	32.3	1,343
Visit a farm or agricultural setting	31.8	1,322
Running or jogging	29.4	1,222
Sledding	29.3	1,218
View/photograph fish	28.1	1,168
Visit other waterside (besides beach)	26.4	1,097
Golf	25.9	1,077
Off-road driving with an ATV	23.4	973
Canoeing	20.5	852
Mountain biking (off-road)	20.4	848
Target shooting	20.2	840
Inline skating	20.0	831
Visit prehistoric/archeological sites	19.4	806
Hunting – big game	19.2	798
Trail running	18.6	773
Snowmobiling	18.3	761
Mountain biking (single track)	18.0	748
Off-road 4-wheel driving (SUV)	17.7	736
Ice skating outdoors	16.6	690
Nature-based educational programs	16.3	678
Camping – primitive	16.0	665
Volleyball outdoors	14.8	615

Activity	Percent Participating	Number of Participants (1,000s)
Hunting – small game	14.5	603
Rafting	14.4	599
Fishing – coldwater	13.9	578
Visit a dog park to walk a pet	12.4	515
Tennis outdoors	12.3	511
Waterskiing	12.2	507
Basketball outdoors	11.6	482
Boat tours or excursions	11.5	478
Skiing – cross-country	11.4	474
Fishing – ice	11.4	474
Fishing – Great Lakes	11.0	457
Hunting – upland birds	10.5	436
Rowing	10.1	420
Softball	10.1	420
Horseback riding (any type)	9.8	407
Soccer outdoors	9.8	407
Use personal watercraft	9.7	403
Skiing – downhill	9.7	403
Disc golf	8.8	366
Horseback riding on trails	8.1	337
Snowshoeing	8.0	333
Snorkeling	7.7	320
Baseball	7.0	291
Football	7.0	291
Backpacking	6.9	287
Paintball games	6.6	274
Rock climbing	5.9	245
Off-road motorcycling	5.9	245
Hunting – migratory bird	5.0	208
Handball or racquetball outdoors	5.0	208
Sailing	4.9	204
Fishing – fly	4.8	199
Snowboarding	4.7	195
Ice hockey outdoors	4.0	166
Mountain climbing	3.4	141
Orienteering	2.7	112
Skateboarding	2.6	108
Kayaking – recreation/sit-on-top	2.4	99
Skiing – telemark	2.4	99
Geocaching	2.0	83
Kayaking – whitewater	1.8	75
Caving	1.6	67
Scuba diving	1.3	54
Dog sledding	1.1	46
Windsurfing	0.7	29
Surfing	0.3	12
Kayaking – touring/sea	0.2	8

Wisconsin Demand Use Highlights

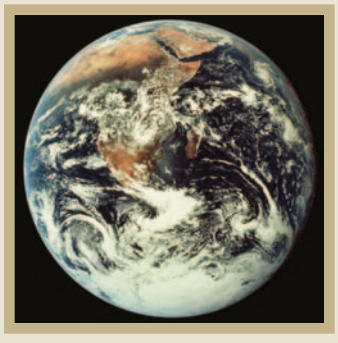
ATVing

Within Wisconsin, ATVing has been one of the fastest growing recreation activites. What started in the 1970s as a small sport has now grown into a multimillion dollar industry with devoted participants across the country. With its abundance of undeveloped land, Wisconsin has proved an ideal location for ATVing; over 23% of Wisconsinites currently participate in ATV recreation and more are riding every year. For many ATV enthusiasts their sport is a social activity—they ride with their friends and families, stopping to shop and eat at different towns along the way. A number of ATV clubs and their members are active in group outings, performing trail maintenance, and promoting vehicle safety and advocacy. For other riders, ATVing is a nature-based activity. These users value the time the time they spend outside while on their ATVs, the fresh air and peaceful atmosphere they experience riding on a rural trail.

Though increasingly popular, the rise in ATV usage has not been without growing pains. Those objecting to ATVs have continually raised complaints about the noise and displacement of other recreational uses caused by the vehicles. Though the motorsports industry and a number of ATV clubs have addressed these issues with some limited successes in the state, there is still much work to be done to ensure ATVs interact peacefully with other motorized and non-motorized recreational activities.

Geocaching

Most Wisconsinites have probably never heard of geocaching. For those that participate in the sport, though, it represents a new and exciting form of ultra-modern, technologically advanced recreation. Geocaching may be described as a modern day treasure hunt. The sport relies on Global Positioning System (GPS) units, small devices that are able to determine, within 6-20 feet, the location of any spot on the planet. With these devices in hand, geocachers set out to find caches—small treasures set up and maintained by a worldwide network of individuals and organizations. The location of a cache is posted on the internet so geocachers need only record the location (in latitude and longitude) of their treasure and set out to find it. Though the sport sounds simple, it often involves a good deal of trekking and searching as geocachers make their way over hills and rocks, forests and streams to find their treasure. The location of a cache is up to the individual who establishes it, thus they are often placed somewhere the hider deems special—a scenic vista, a rocky cliff-face, even the bottom of a shallow lake. Upon arriving at a cache—generally a small bag containing trinkets and a logbook—the visitor takes a treasure, leaves a treasure, and records his visit in the book. He then replaces the cache and returns home, ready to start his next quest. Geocaching has become popular not only for its sense of adventure, but also its flexibility. Caches can be hidden anywhere—city streets, remote wilderness areas, suburban front yards. The rules, like the treasures in the caches themselves, are loose and adaptable, allowing geocachers to create traveling caches, group treasure hunts, and many other variations. As the sport gains more exposure from associations like the Wisconsin Geocaching Association (http://www.wi-geocaching.com/), it is expected to continue to increase in popularity.



Walking for Pleasure

Of all recreational activities offered in Wisconsin, walking for pleasure is by far the most popular, with over 85% of state residents (3.5 million people) participating. The reasons are obvious; walking is an easy, accessible activity requiring only your own two feet and a good pair of shoes (sometimes those are even negotiable!). Walking can be done nearly anywhere, whether in the heart of downtown Milwaukee or in the most remote portion of northern Wisconsin. Walking is also a multitasker's dream, allowing us to sightsee, chat with friends, or simply enjoy the scenery as we stroll. As exercise becomes an increasing concern for the Wisconsin population, walking can provide a good source of activity during a hectic workday just as easily as during a leisurely weekend outing.

Motorboating

In a state that is nearly surrounded by water—Lake Superior to the north, Lake Michigan to the east, the Mississippi River to the west, and thousands of smaller lakes and rivers in between—it is not surprising that watersports are popular among Wisconsinites. With 1,513,000 people (36% of the population) participating, motorboating is a favorite pastime of many state residents, and with good reason: Every one of our 72 counties has at least 4 lakes with the most—1,327 lakes—occurring in Vilas County. Our boat-to-resident ratio is the second in the nation with one boat for every nine residents (Minnesota is number one, with one boat for every six residents). Our state ranks 6th in the nation for boat registrations and 9th in the nation for money spent on boating and accessories. The many varieties of lakes within Wisconsin accommodate nearly every form of motorboat, from small runabouts to large Great Lake vessels. Because of its tremendous popularity, motorboating has sometimes been associated with issues of

Wisconsin Demand Use Highlights

overcrowding and safety. In reaction to these concerns, certain lakes have placed restrictions on the sport. As the powerboat industry continues to push for more affordable boating, the sport is expected to become increasingly popular, cementing its status as a favorite outdoor pursuit.

Outdoor Ice Skating

Although cold and sometimes dreary, Wisconsin's winter does provide state residents with a wide variety of winter recreation. With 16.6% of state residents participating, outdoor ice skating is an especially popular winter activity. Skating is available in nearly all parts of the state, whether in the highly developed outdoor rinks of urban areas or the crystalline surfaces of frozen northern lakes. While ice skating appeals to all ages, the physical demands involved in the sport tend to attract a younger crowd. Among this demographic skating is done recreationally and competitively, ice skating being a popular activity, especially among girls. The cost of participation for ice skating is generally low, a quality that has made the activity popular among families looking for an economical form of recreation. In recent years there has been a push to develop more outdoor ice skating rinks at the local level, a move that would make the activity accessible and popular to an even wider range of state residents.

Viewing/Photographing Birds

Viewing/photographing birds is an activity popular across all age groups and state regions—over 40% of Wisconsinites (1,700,000 people) participate in the activity. Unlike other forms of more active recreation, birdwatching is a uniquely serene pursuit—quiet, non-destructive, and based in a natural setting. Many birdwatchers value this natural aspect, enjoying the opportunity to be in the fields or woods, away from the noise and sometimes hectic pace of the city. Interestingly, most birdwatchers don't need to go far from home to find this peaceful atmosphere—85% birdwatch within 1 mile of where they live. Other birdwatchers value the educational aspect of the activity, taking the time to search for new species and learn the different behaviors, calls, and appearances of different birds. Birdwatching is often done as a family activity, making the sport a uniquely social way to spend time in nature. As the activity has become more popular, the state has begun to develop birdwatching trails. These trails often feature driving routes with stopping points to observe birds and other wildlife. These new trails are expected to further increase the popularity of birdwatching.

Disc Golf

Begun as a sport in the 1970s, disc golf has exploded in popularity. What started with a single course in Pasadena, California in 1975 has now expanded to a global phenomenon with courses on all continents but Africa, passionate players across the globe, and a professional sporting association, the Professional Disc Golf Association (PDGA). The rules of disk golf are much like traditional golf: get the disc to the target—an above ground, metal, net-like structure—in as few throws as possible. The course is also very similar, with a fairway, terrain changes, and obstacles (trees, shrubs, water traps) all dotting the landscape of the typically 9 or 18 hole course. 8.8% of Wisconsinites (366,000 people) now participate in disc golf, with more joining these ranks every year. The sport is popular for a variety of reasons, not the least of which is the ease in which it is played. A beginner at the sport needs only 3 discs (a driver, a mid-range, and a putter) and access to a course. Courses are found in most cities and entrance fees are generally low-cost or free. The sport itself is very friendly towards beginners as all players move from hole to hole at their own pace. Many participants play in groups and the sport provides a moderate amount of exercise and an opportunity to be outside.

Attending an Outdoor Sporting Event

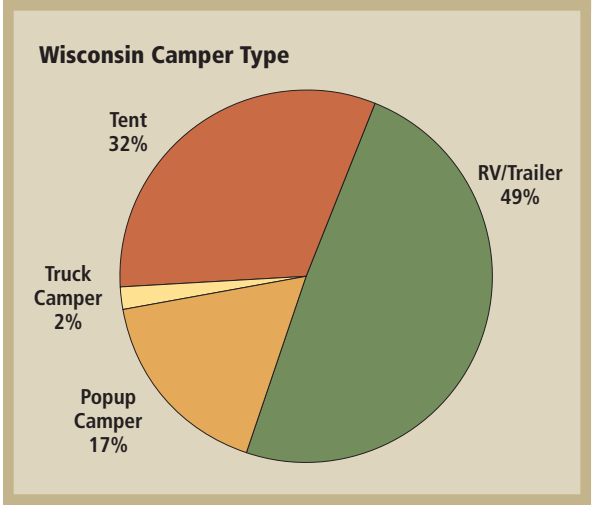
You need not look further than your nearest cheesehead-stocked general store to know that sports are big in Wisconsin. Although only 20% of Wisconsinites participate in sports themselves, nearly 57% (2,365,000 people) watch or attend outdoor sporting events. Large events such as University of Wisconsin–Madison football games have ranked among the nation's top 20 in game attendance for each of the team's last nine seasons. Other events—football, soccer, and baseball games—are also popular year-round activities. Because they generally require developed facilities and large crowds, sporting events usually take place in larger cities, making them one of the few forms of recreation best suited for urban environments. While some skeptics may frown at the idea of classifying sporting event attendance as outdoor recreation, there are many side benefits from this activity. Those attending these events walk to the stadium and often tailgate—an outdoor activity and a chance to socialize with family, friends, and neighbors.

Outdoor Recreation Setting Segmentation

While the rankings shown in Table 2-1 are useful in determining which outdoor recreation activities are popular among Wisconsinites, it is also useful to understand what causes an activity to be popular. One method of examining outdoor recreation participation is by recreation setting—the environment in which people recreate. For the purpose of this plan, the NSRE and OIF recreational activities were divided into seven groupings describing different activity and setting trends. These groupings, listed below, suggest that people in different recreation setting segments seek different kinds of experiences from outdoor recreation. By understanding recreation use in terms of these segments, we may begin to see how individual recreational activities fit within a broader spectrum of recreational settings.

Segmentation of Outdoor Recreation Uses by Outdoor Resource Type / Setting:

- Nature-Based Land
- Developed Land
- Water-Based
- Snow- and Ice-Based
- Viewing and Learning
- Sports – Individual
- Sports – Team



Nature-Based Land Activities

Nature-based land activities are those outdoor recreation activities that occur in undeveloped settings. While limited developed facilities may be used in conjunction with these activities, the typical nature-based land activity participant wants to experience natural surroundings. Visiting wilderness areas is the most popular nature-based land activity in Wisconsin with 38.3% of Wisconsinites participating. Hiking and camping are also popular with approximately one third of state residents participating in each. Other less popular nature-based land activities include rock climbing and geocaching. These activities involve more specialized, technical equipment and therefore appeal to a smaller demographic than other uses in this category.

Table 2-2: **Percent State Residents Participating in Wisconsin Nature-Based Land Activities (Age 16+)**

Activity	Percent Participating	Number of Participants (1,000s)
Visit a wilderness or primitive area	38.3	1,592
Day hiking	35.0	1,455
Camping – developed	32.3	1,343
Visit a farm or agricultural setting	31.8	1,322
Off-road driving with an ATV	23.4	973
Mountain biking (off-road)	20.4	848
Hunting – big game	19.2	798
Trail running	18.6	773
Mountain biking (single track)	18.0	748
Off-road 4-wheel driving (SUV)	17.7	736
Camping – primitive	16.0	665
Hunting – small game	14.5	603
Hunting – upland birds	10.5	436
Horseback riding on trails	8.1	337
Backpacking	6.9	287
Rock climbing	5.9	245
Off-road motorcycling	5.9	245
Hunting – migratory bird	5.0	208
Mountain climbing	3.4	141
Orienteering	2.7	112
Geocaching	2.0	83

Developed Land Setting Activities

Outdoor recreation in developed settings includes a wide mix of recreational activities, all of which use some form of manmade development (such as roads or sidewalks) or involve a high level of social interaction. Developed land setting outdoor recreation is by far the most popular form of recreation in Wisconsin. More Wisconsin residents participate in two developed land recreation activities—walking for pleasure (85.8% participating) and outdoor family gatherings (78.9% participating)—than any other Wisconsin activities. Other activities in this category such as bicycling and picnicking are also favorites among Wisconsinites. Table 2-3 lists the percentage of Wisconsin residents participating in several popular developed land setting activities.

One of the more unique developed outdoor recreation uses is visiting an outdoor theme or water park. This use ranks in the top third of outdoor recreation activities in the state with over 37% of Wisconsinites participating. In Wisconsin, most of this use occurs in the Wisconsin Dells, a region containing some of the nation's top rated water parks. While summer usage has continued to grow, the water park season has also extended into the winter months with over 1 million visitors now flocking to the Dells to use its indoor water parks.

Water-Based Activities

Water-based outdoor activities are among the most popular recreational activities in Wisconsin. Abundant water resources across the state offer a wide variety of recreation options from high speed motorboating to lazy lounging at the beach. Just under half of Wisconsin residents participate in motorboating, visiting a beach, or swimming in a lake or stream. Residents of northwestern Wisconsin have the highest rates of participation in water-based activities, the clean and abundant waters of this region providing ample opportunities for water-based recreation. The Lake Michigan Coastal Regions and the Missisippi River Corridor Region, all of which provide many miles of shoreline for water-based participants, are also popular areas for water recreation.

Table 2-3: **Percent State Residents Participating in Wisconsin Developed Land Setting Activities (Age 16+)**

Activity	Percent Participating	Number of Participants (1,000s)
Walk for pleasure	85.8	3,567
Family gathering	78.9	3,280
Gardening or landscaping for pleasure	65.3	2,715
Driving for pleasure	60.3	2,507
Picnicking	56.6	2,353
Bicycling	49.3	2,049
Yard games, e.g., horseshoes	44.8	1,862
Attend outdoor concerts, plays, etc.	38.5	1,600
Visit outdoor theme/water park	37.6	1,563
Target shooting	20.2	840
Visit a dog park to walk a pet	12.4	515
Horseback riding (any type)	9.8	407
Paintball games	6.6	274

Table 2-4: **Percent State Residents Participating in Wisconsin Water-Based Activities (Age 16+)**

Activity	Percent Participating	Number of Participants (1,000s)
Visit a beach	47.3	1,966
Swimming in lakes, streams, etc.	45.8	1,904
Fishing – freshwater	40.7	1,692
Swimming in an outdoor pool	38.3	1,592
Fishing – warmwater	37.0	1,538
Motorboating	36.4	1,513
Visit other waterside (besides beach)	26.4	1,097
Canoeing	20.5	852
Rafting	14.4	599
Fishing – coldwater	13.9	578
Waterskiing	12.2	507
Fishing – Great Lakes	11.0	457
Rowing	10.1	420
Use personal watercraft	9.7	403
Snorkeling	7.7	320
Sailing	4.9	204
Fishing – fly	4.8	199
Kayaking – recreation/sit-on-top	2.4	99
Kayaking – whitewater	1.8	75
Scuba diving	1.3	54
Windsurfing	0.7	29
Surfing	0.3	12
Kayaking – touring/sea	0.2	8

Snow- and Ice-Based Activities

Snow- and ice-based activities are those that involve some form of frozen water. These activities are very popular among Wisconsinites with just over 44% of state residents participating. Sledding is the most popular of these activities, with just over a quarter (29.3%) of the state participating. Ice related activities are also very popular in the state, with almost 700,000 Wisconsinites participating in ice skating and nearly 500,000 participating in ice fishing.

Viewing and Learning Activities

The primary focus of viewing and learning activities is the study of nature. Physical activity is not generally a primary component of these activities, although it is often a complementary component. Statewide, the most popular viewing and learning activity is viewing or photographing natural scenery, an activity in which 67% of Wisconsinites participate. The second most popular viewing and learning activity is visiting outdoor nature centers or zoos, with 65.3% of residents participating. Over half of all state residents have gone sightseeing within the last year, while just under half have visited historic sites. In general, rates of participation in viewing and learning activities are higher in Wisconsin than they are in other states. This may be a reflection of Wisconsin's strong educational system and history of environmental awareness.

Table 2-5: **Percent State Residents Participating in Wisconsin Snow- and Ice-Based Activities (Age 16+)**

Activity	Percent Participating	Number of Participants (1,000s)
Sledding	29.3	1,218
Snowmobiling	18.3	761
Ice skating outdoors	16.6	690
Skiing – cross-country	11.4	474
Fishing – ice	11.4	474
Skiing – downhill	9.7	403
Snowshoeing	8.0	333
Snowboarding	4.7	195
Ice hockey outdoors	4.0	166
Skiing – telemark	2.4	99
Dog sledding	1.1	46

Table 2-6: **Percent State Residents Participating in Wisconsin Viewing and Learning Activities (Age 16+)**

Activity	Percent Participating	Number of Participants (1,000s)
View/photograph natural scenery	67.5	2,806
Visit nature centers, etc.	65.3	2,715
View/photograph other wildlife	57.0	2,369
Sightseeing	55.3	2,299
View/photograph wildflowers, trees, etc.	50.0	2,079
Visit historic sites	45.2	1,879
View/photograph birds	40.9	1,700
Gather mushrooms, berries, etc.	39.5	1,642
View/photograph fish	28.1	1,168
Visit prehistoric/archeological sites	19.4	806
Nature-based educational programs	16.3	678
Boat tours or excursions	11.5	478
Caving	1.6	67

Winter activities are very popular among Wisconsinites. Around 30% of state residents participate in snow sledding.

Individual Outdoor Sports Activities

Individual outdoor sports activities are those that involve some form of competition or require a built setting. Individual outdoor sports continue to be popular among Wisconsin residents, with nearly 30% running/jogging and over 25% playing golf. Urban residents are generally more likely to participate in individual outdoor sport activities than residents from suburban or rural regions. A notable exception to this trend is the significant number (29.8%) of suburban residents who inline skate.

Team Sports Activities

Team sports activities are those that involve some form of group competition and require a built setting. Participation in team sports has declined in recent years: less than 20% of Wisconsin residents indicate that they have participated in an outdoor team sports activity within the last year. While participation in team sports may be low, watching outdoor sporting events is very popular, with well over half of Wisconsin residents indicating that they have attended a sporting event within the past year.

Table 2-7: **Percent State Residents Participating in Wisconsin Individual Sports Activities (Age 16+)**

Activity	Percent Participating	Number of Participants (1,000s)
Running or jogging	29.4	1,222
Golf	25.9	1,077
Inline skating	20.0	831
Tennis outdoors	12.3	511
Disc golf	8.8	366
Handball or racquetball outdoors	5.0	208
Skateboarding	2.6	108

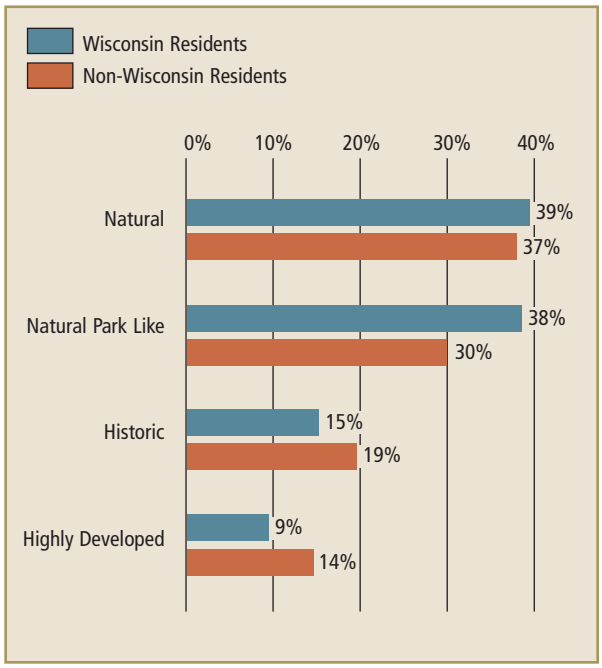
Table 2-8: **Percent State Residents Participating in Wisconsin Team Sports Activities (Age 16+)**

Activity	Percent Participating	Number of Participants (1,000s)
Attend outdoor sports events	56.9	2,365
Volleyball outdoors	14.8	615
Basketball outdoors	11.6	482
Softball	10.1	420
Soccer outdoors	9.8	407
Baseball	7.0	291
Football	7.0	291

Preferences in Outdoor Recreation Settings

Outdoor recreation settings play a large role in understanding recreational activity preferences. Understanding both setting and activity preferences can help recreation managers and planners provide for a wide range of recreational opportunities within a given setting. In order to understand which Wisconsin environments are preferred for recreation, researchers used the NSRE and WAVE VIII studies. The NSRE study polled Wisconsin residents, asking which of four distinct environments they preferred as a recreational setting. The WAVE VIII study asked the same questions from non-residents. As Figure 2-1 illustrates, both Wisconsin and non-Wisconsin residents prefer natural and park-like settings over more developed settings. Though they prefer natural and park-like settings, non-Wisconsin residents show a higher preference for more developed settings than Wisconsin residents do.

Figure 2-1: **Outdoor Recreation Setting Preferences**



Outdoor Recreation Segmentation by Experiences

Another way of understanding recreation activity preferences is by understanding recreation experience preferences—the type of experience a person seeks from participating in a given recreational activity. As a population, Americans are a diverse group. People of different ages, genders, ethnicities, and backgrounds all combine to form a population with highly varied interests and activity preferences. When segmenting this population according to recreation participation, it becomes clear that the diversity of American society carries through to a diversity of recreational preferences. While some people enjoy high risk, adventure activities, others prefer more leisurely, safe activities like walking for pleasure and viewing natural scenery. In developing this plan, the WDNR and the NSRE developed a method of dividing the Wisconsin (and the United States) population into groups—called recreation experiences—with similar outdoor recreation interests.

The following recreation experience analysis identifies higher-than-average and lower-than-average participation rates across several different recreation activities. From this analysis it is clear that certain recreation activities and user groups are associated with other activities and user groups; people who participate in one type of recreation activity often participate in other related or similar activities. Each recreation experience, composed of many thousands of people, represents a very distinctive pattern of recreation participation. These patterns suggest that people in different segments seek different kinds of experiences. Because different experiences require different marketing approaches, segments may need individualized marketing strategies to attract the maximum number of potential participants. Individuals may, however, be members of more than one segment, indicating that recreation participation is determined by a complex interaction of multiple interests and motivations.

NSRE survey data was used to examine people's preferences and participation in a range of outdoor recreational activities. From this data, several outdoor recreation participation segments were identified. The analysis for Wisconsin and the northern tier of states revealed eight segments named (although you may interpret and name them differently):

- Inactives
- Passives
- Non-Consumptive Moderates
- Nature Lovers
- Active Nature Watchers
- Water Bugs
- Motorized Consumptives (Hunt and Fish)
- Enthusiasts

The diversity of American society carries through to a diversity of recreational preferences. While some people enjoy high risk, adventure activities, others prefer more leisurely, safe activities.

Inactives

About 17% of Wisconsinites 16 years and older (about 750,000 people) are characterized as "Inactives." This is the largest and also the most sedentary group of all market segments. Members of this group participate in very few activities, especially those requiring physical exertion. Although members of this group do enjoy walking for pleasure and family gatherings, they participate in these activities far less often than the average person. Members may participate in some hunting and fishing, but participate in virtually no water sports.

Primary Inactives Activities:

- Walk for Pleasure
- Attend Family Gathering

Passives

About 14% of Wisconsinites 16 years and older (about 618,000 people) are characterized as "Passives." This group is one of the most sedentary market segments with members participating in very few recreational activities, particularly those requiring physical exertion. Unlike most other segments, Passives do not often participate in viewing and photographing activities. Passives do enjoy moderate amounts of hiking and camping and also participate in family gatherings, visit nature centers, and visit historic centers.

Primary Passives Activities:

- Attend Family Gathering
- Visit a Nature Center
- Picnicking
- Visit a Historic Center
- Visit a Beach

Non Consumptive Moderates

About 14% of Wisconsinites 16 years and older (about 618,000 people) are characterized as "Non Consumptive Moderates." This group represents the average person that is somewhat more involved in recreation than either the Inactives or Passives. Some members of this group participate in physically demanding activities such as mountain biking and snorkeling. Activities not favored by this group include hunting, fishing, and off-road driving.

Primary Non Consumptive Moderates Activities:

- Visit a Beach
- Swimming
- Downhill Skiing
- Visit a Nature Center
- Mountain Biking
- Picnicking
- Day Hiking
- Camping

Nature Lovers

About 16% of Wisconsinites 16 years and older (about 716,000 people) are characterized as "Nature Lovers." This group enjoys viewing and photographing nature—whether it is wildlife, flowers, birds, or natural scenery—and are almost twice as likely as the average person to participate in these activities. This group also enjoys visiting nature centers and historic sites. They are generally more of a passive group, choosing to drive for pleasure rather than hike or backpack into a natural setting. Nature Lovers participate in limited amounts of hunting, fishing, active sports, and muscle powered activities, but these activities are not their primary passion.

Primary Nature Lovers Activities:

- Viewing/Photographing Nature
- Drive for Pleasure
- Learning/Visiting a nature center
- Walk for Pleasure
- Sightseeing
- Attend a Family Gathering

Active Nature Watchers

About 16% of Wisconsinites 16 years and older (about 716,000 people) are characterized as "Active Nature Watchers." Members of this group enjoy viewing and photographing nature and are twice as likely to participate in these activities than the average person. Though very similar to the Nature Lovers group, Active Nature Watchers are generally more active as they hike or backpack into natural settings and areas to view wildlife or natural scenery. Members of this group also enjoy water-based activities but prefer to arrive at their viewing destination by human power.

Primary Active Nature Watchers Activities:

- Viewing/Photographing Nature
- Learning/Visiting a Nature Center
- Walking
- Day Hiking
- Cross-Country Skiing
- Swimming
- Kayaking
- Visit a Historic Site

Water Bug

About 8% of Wisconsinites 16 years and older (about 362,000 people) are characterized as "Water Bugs." This group is one of the most energetic of market segments, participating in many water sports and some snow activities. Members of this group participate in water-based activities twice as often as the average person.

Primary Water Bug Activities:

- Visit a Beach
- Visit a Water Park
- Swimming
- Boating (all types)
- Drive for Pleasure
- Picnicking
- Learning/Visiting a Nature Center
- Downhill Skiing

Motorized Consumptives (Hunt and Fish)

About 7% of Wisconsinites 16 years and older (about 304,000 people) are characterized as "Motorized Consumptives." Across all market segments, this group has the highest participation rates for hunting and fishing with members four times more likely to hunt and three times more likely to fish than the average person. Rates of participation in physically demanding activities, however, are relatively low among members of this group with members preferring consumptive activities (hunting and fishing) and motorized activities to human-powered activities.

Primary Motorized Consumptives (Hunt and Fish) Activities:

- Hunting
- Motorboating
- Snowmobiling
- Fishing
- Driving Off-Road
- Horseback Riding
- Camping
- Gathering Mushrooms, Berries, etc.

Enthusiasts

About 8% of Wisconsinites 16 years and older (about 362,000 people) are what we choose to call "Enthusiasts." Of all market segments, enthusiasts are the most active and participate in the broadest array of activities. Members of this group are two to six times more likely to participate in certain activities than most other Americans. Enthusiasts also enjoy activities that are physically challenging and require high levels of skill and endurance.

Primary Enthusiasts Activities:

- Cross-Country Skiing
- Kayaking
- Snowboarding
- Mountain Biking
- Camping
- Canoeing
- Sailing
- Rowing

Wisconsin SCORP Regions

Another way to understand recreational uses and preferences is by geographical boundary. For this plan, Wisconsin has been divided into eight SCORP planning regions. These regions reflect a somewhat loose correlation to tourism and recreation markets, but also indicate a division in the landscapes and environments which lend themselves to different types of outdoor recreation experiences. Recreation participation rates for these regions are presented in Chapter Five.

Regional differences in outdoor recreation demand do exist within Wisconsin. These differences can be attributed to three common themes: supply of an available recreation resource, urban vs. rural populations, and access to an available recreation resource. A difference in any one of these categories will result in a different recreation demand for a given area.

For example, off-road driving with an ATV is very popular in regions of the state where there is an abundant supply of ATV trails, undeveloped land, and a predominantly rural population. As Figure 2-2 illustrates, the more northerly, predominantly rural regions (Great Northwest, Northwoods, Upper Lake Michigan Coastal, Mississippi River Corridor, Western Sands, and Lake Winnebago Waters) do, in fact, have the highest participation rates for ATVing. In regions that are more urban—the Lower Lake Michigan Coastal and Southern Gateways Regions—there is less undeveloped land, less available ATV trails, and therefore less participation in ATVing.

Dog parks, by contrast, are often popular in more developed urban settings. As Figure 2-3 illustrates, dog parks are most popular in the Lower Lake Michigan Coastal and Southern Gateways Regions (the most urban regions of the state) and least popular in the Great Northwest and Northwoods Regions (the most rural of all Wisconsin regions).

Figure 2-2: **Off-Road Driving with an ATV – Use Across SCORP Regions**

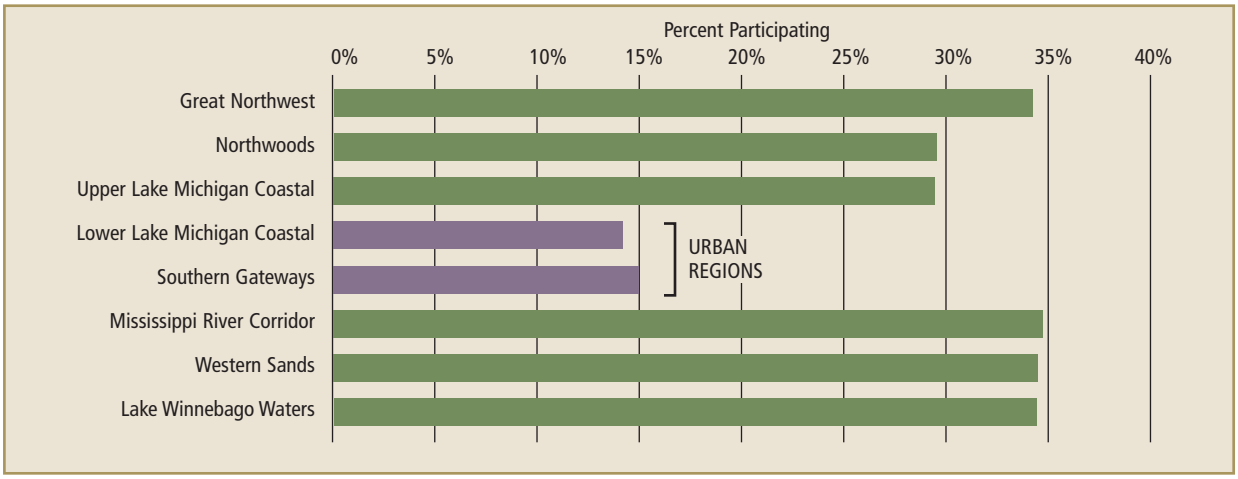
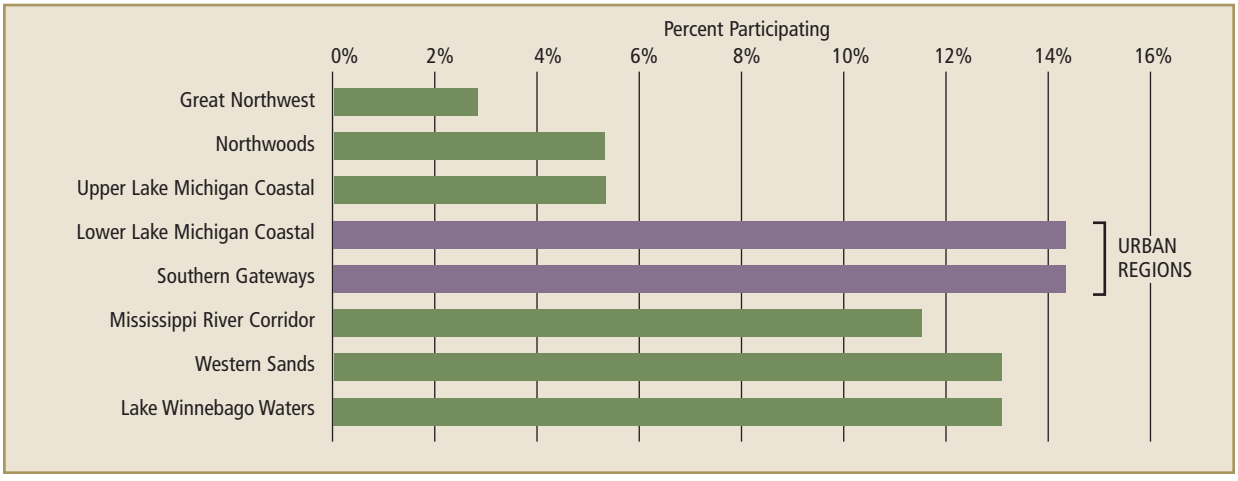


Figure 2-3: **Dog Park Usage Across SCORP Regions**

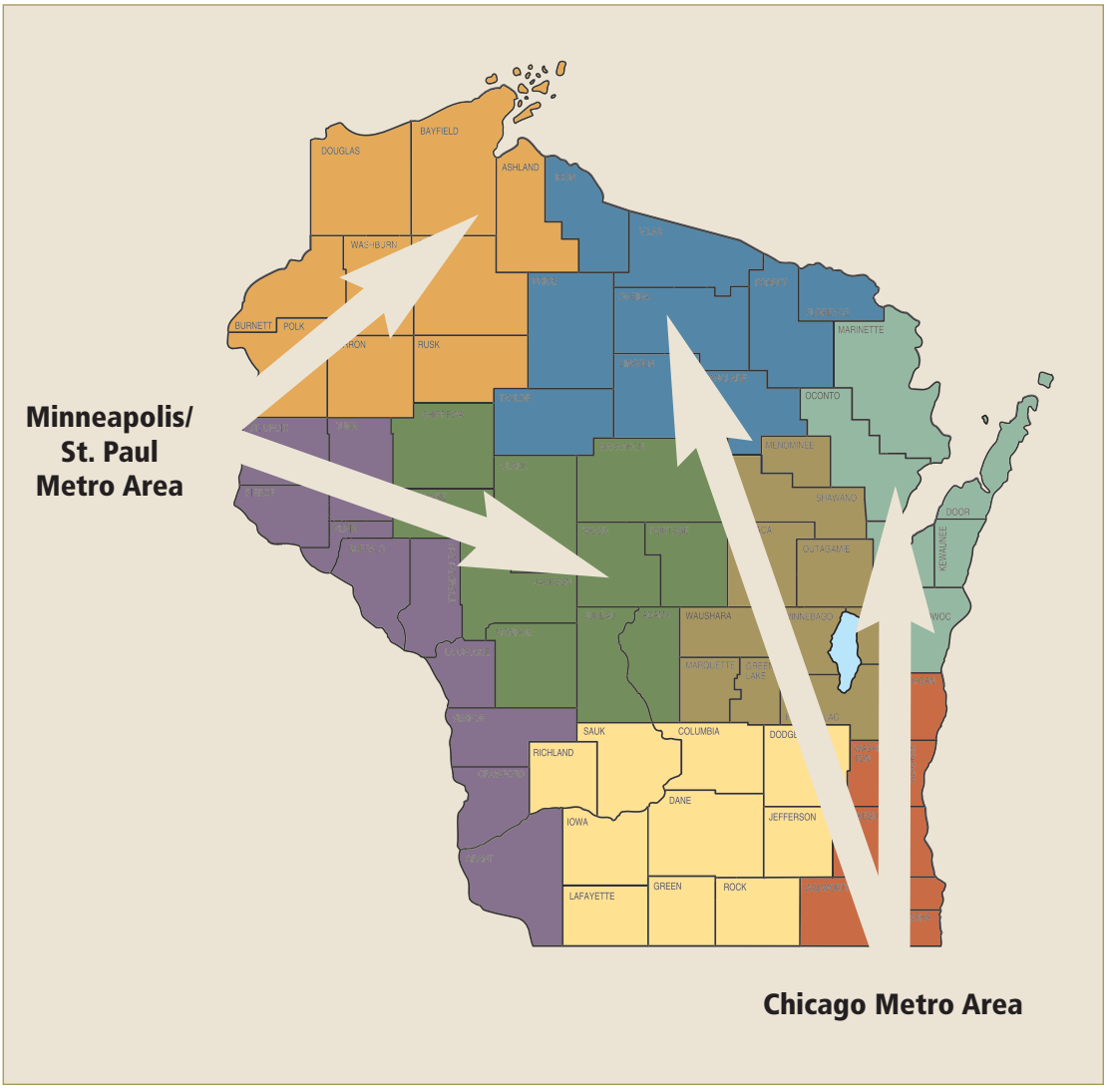


Recreation Demand from Outside of Wisconsin

Although recreation demand in Wisconsin is largely determined by the activities and preferences of Wisconsin residents, out-of-state visitors also influence it. While past SCORPs have not addressed this issue, this SCORP attempts to classify the recreational profile of out-of-state visitors by assessing the recreational preferences of non-Wisconsin residents. Understanding this demand will ultimately lead to a more comprehensive view of recreation across Wisconsin.

For this process, two Direct Marketing Areas (DMAs), Chicago, Illinois and Minneapolis/St. Paul, Minnesota, were examined. Two datasets were used for this analysis: The Department of Tourism Wave VIII Report (See Appendix C) and the NSRE Recreation Statistics Update Number 9, which looked at nature-based outdoor recreation activities. These two data sets were merged to estimate the number of non-resident recreational users that come to Wisconsin over the course of a year. This merging of datasets does have limitations. The NSRE data is based on recreation participation within the past year, while the Department of Tourism data is based on participation rates from the past three years. To account for these differences, this SCORP averaged the number of NRSE and WAVE VIII participants to give an approximate number of outside users on a yearly basis. Figure 2-4 shows the general migration pattern of DMA residents into the State of Wisconsin. It is no surprise that travel patterns show large portions of these DMAs traveling to the northern or eastern portions of the state—areas that are rich in

Figure 2-4: **Recreation Demand from Outside of Wisconsin**



It is no surprise that travel patterns show many out-of-state visitors travelling to the northern or eastern portions of the state—those areas that are rich in recreational resources and are geographically close to the Twin Cities or Chicago metropolitan areas.

recreational resources and are geographically close to the Twin Citites or Chicago metropolitan areas, respectively. It is surprising, however, that more visitors do not travel to the southwest corner of the state. This regional deficit may be due to the different types of landscapes (fewer lakes, more farmlands, etc.) and the possible lack of recreation supply resources within this region.

Table 2-9 lists the 21 nature-based activities used in the NSRE study and gives an estimate of participation in these activities for each DMA. Again, it must be stressed that DMA participation rates are estimates; more work is needed to understand the travel and recreation use patterns for out-of-state recreation demand.

Table 2-9: **Estimated Yearly Number of Chicago and Twin City DMA Users Participating in Selected Wisconsin Activities (Age 16+)**

	Number of Participants (1,000s)		
Activity	Chicago*	Twin Cities*	Total
Sightseeing	832	283	1,115
Picnicking	651	233	884
View/photograph wildlife	494	214	708
Swimming in lakes and streams	470	195	665
View photograph birds	386	164	550
Visit a wilderness or primitive area	370	153	523
Day hiking	374	149	523
Developed camping	300	120	420
Mountain biking	301	126	427
Canoeing	229	84	313
Backpacking	205	46	251
Rafting	199	42	241
Warmwater fishing	147	77	224
Drive off-road	145	76	221
Downhill skiing	133	57	190
Primitive camping	120	69	189
Horseback riding on trails	84	34	118
Cross-country skiing	48	61	109
Cold water fishing	19	13	32
Big game hunting	14	18	32
Small game hunting	4	3	7

* Combined, approximately 11.3 million total people reside in the Chicago and Twin Cities DMAs.

Status of Health Indicators

No matter what recreation experience, setting, or activity people prefer, one thing is clear: physical activity is important to overall health and wellbeing. Over the course of the past few decades, national overweight and obesity rates have increased dramatically. Today more than 60% of adults over the age of 20 are overweight or obese and over 30% of children ages 6-19 are overweight or at risk of becoming so. In Wisconsin we are not immune to this trend. Data from the Centers for Disease Control (CDC) indicates that 61% of all Wisconsin adults are overweight or obese while 24% of Wisconsin high school students are overweight or at risk of becoming so.

Table 2-10: **Average Wisconsin Statewide Health Indicators and Goals**

	Obese/ Overweight[1]	Physical Activity[2]	Heart Death[3]
Statewide Average	61%	13.80%	169.86
2010 CDC Goal	15%	30%	N/A
Outside of Target Goal	46%	16.20%	

[1] Obese/Overweight percent of adults who are obese and/or overweight based on body mass index (BMI)

[2] Adults 18+ who exercise 20 minutes or more at 50% of aerobic capacity 3 or more times per week

[3] Mortality due to coronary heart disease rates per 100,000 people. Age adjusted to year 2000 standard population.

The costs of this epidemic are immense both in terms of taxpayer money and personal health. Obesity is implicated in a number of diseases such as type 2 diabetes, coronary heart disease, high blood pressure, and stroke, all of which contribute to shortened life expectancies and higher costs of medical care. In addition to these direct costs, obesity also costs taxpayers indirectly in the form of increased Medicare and Medicaid costs. All factors considered, the obesity epidemic is expected to cost the American public over $117 billion by the year 2020.

Physical activity is one of the most important factors in controlling obesity, yet as many as 60% of adults and 30% of children do not get enough exercise. To combat this trend, the CDC has established 2010 health goals that aim to increase the percentage of children, adolescents, and adults who regularly engage in some form of physical activity. With their miles of easily accessible trails, rivers, and forest, Wisconsin state and local parks and recreation areas play an integral role in promoting activity among state citizens. Recreational activities such as hiking, biking, canoeing, and skiing are all fun, easy ways of achieving the regular exercise key to maintaining a healthy body.

With their miles of easily accessible trails, rivers, and forest, Wisconsin state and local parks and recreation areas play an integral role in promoting activity among state citizens. Recreational activities such as hiking, biking, canoeing, and skiing are all fun, easy ways of achieving the regular exercise key to maintaining a healthy body.

Recreation Barriers within Wisconsin

Given the health benefits of regular physical activity, the relative inactivity of the Wisconsin population is a troubling trend. In order to encourage increased physical activity among Wisconsinites, however, we must first understand the barriers that prevent Wisconsinites from being, or becoming, regularly physically active. Understanding these barriers and creating strategies to overcome them may help Wisconsinites make physical activity more a part of their daily lives. As part of this SCORP, approximately 1,300 residents were surveyed and asked which barriers caused them to not recreate as often as they would have liked. This question was open-ended, allowing respondents to provide up to three different barriers. Responses gathered were then divided into two categories: personal and environmental barriers. These barriers are discussed below.

The relative inactivity of the Wisconsin population is a troubling trend.

Personal Barriers

Aside from the many technological advances and conveniences that have made our lives less active, many personal variables, including physiological, behavioral, and psychological factors may affect our plans to become more physically active. Table 2-11 lists the most common personal barriers to increased activity/outdoor recreation. These responses reflect a society that is becoming increasingly busy with job and family commitments. Responses also reflect the constraint of age, a constraint that is becoming an increasing factor for Wisconsin's large baby boomer population.

Table 2-11: **Personal Barriers for Increased Physical Activity/Outdoor Recreation in Order of Importance**

1. Lack of time
2. Family commitments
3. Job/work
4. Crowding
5. Conflicts with motorized uses
6. Cost
7. Age
8. Fuel prices

Environmental Barriers

Social environments such as school, work, family, and friends can significantly influence an individual's level of physical activity. Characteristics of our communities, however, may play an even greater role. The relative accessibility and location of parks, trails, sidewalks, and recreational centers, as well as the design of streets, the density of housing, and the availability of public transit all act to promote or discourage an individual or family's level of physical activity. Significant environmental barriers such as water and air pollution, crime, and dangerous automobile traffic also impact physical activity within a region. Table 2-12 lists several environmental barriers to increased outdoor recreation. These responses indicate the constraints of distance, lack of developed facilities, and a lack of information on local recreation opportunities.

Table 2-12: **Environmental Barriers for Increased Physical Activity/Outdoor Recreation in Order of Importance**

1. Distance/travel time
2. Lack of access to public lands
3. Lack of information about where to go
4. Not enough campsites/electric sites
5. Noise from ATVs and other motorized uses
6. Lack of bike trails
7. Lack of public transportation
8. Lack of snow

Accessibility Recreation Considerations

This SCORP intends to assess and improve recreation for all recreational participants. One group that has often been overlooked in recreational planning has been those with mobility disabilities. Although accessibility to recreational resources has increased for disabled persons—a result of both continued lobbying by public interest groups and the passage of legislation such as the Americans with Disabilities Act (ADA)—there has been little research exploring the outdoor recreation participation patterns of people with disabilities. To establish a general understanding of the supply and demand of recreation for disabled persons, the WDNR evaluated several studies conducted by the NSRE. These studies, though not specific to Wisconsin, posed questions about disability and disabled constraints, information that may aid recreation planners and managers in determining what services and accommodations are needed to provide a better outdoor recreation experience for disabled participants.

As reported in the 2000 census, Wisconsin has 790,917 disabled persons, a number that represents 14% of the overall state population. Among residents 65 and older, 36.5% are classified as disabled. As Wisconsin's large baby boomer population continues to age, the demand for disabled recreation facilities is also expected to increase. Developing methods of estimating this demand will therefore become increasingly important in the planning and development of recreational facilities.

In the NRSE data, the characteristics of activities that influenced recreation participation rates of disabled people included: (a) the physical nature of activities, (b) the degree of adaptation needed for participation, (c) the social expectations, self perceptions, and social fears associated with certain activities, (d) the financial costs of activities, and (e) the accessibility of sites where activities took place.

From this work, 15 recreation uses were determined to have average or above average participation rates among mobility disabled individuals. These uses are listed in Table 2-13. For the most part, these activities are nature-based, requiring a more natural/undeveloped setting. Viewing and learning activities are also popular within this population segment.

Table 2-13: **Average or Above Average Participation Rates (Controlling for Age) for Those with Mobility Disabilities (in alphabetical order)**

Attend concerts
Backpacking
Birdwatching
Camping
Canoeing
Drive off-road
Fishing
Horseback riding
Nature study
Sightseeing
Sledding
View fish
Visiting historic/archeology sites
Visiting nature centers
Wildlife viewing

The demand for disabled recreation facilities is expected to increase with Wisconsin's aging population.

Given the barriers already limiting recreation participation, it is important that recreational facilities and services provide users with as high quality an experience as possible.

The NRSE data also examined the barriers preventing those with disabilities from recreating more often. Table 2-14 lists the top constraints to recreation participation among mobility disabled participants. For the most part, these barriers are no different than those for the general population. Like any outdoor recreation user, disabled participants face constraints of time, money, and outdoor pests. Disabled users, however, may also face constraints in a lack of companions.

Table 2-14: **Top Constraints to Participation in Favorite Outdoor Recreation Activities by Those with Mobility Disabilities**

1.	No companions
2.	Not enough money
3.	Not enough time
4.	Outdoor pests
5.	Personal health

Quality of Wisconsin Recreation Services and Facilities

Given the barriers already limiting recreation participation, it is important that recreational facilities and services provide users with as high quality an experience as possible. To evaluate the quality of these services and facilities in Wisconsin, this SCORP used a variety of survey methods and other sources. A Recreation Quality Index (RQI) was developed in a similar fashion to that used in the 2000-05 SCORP.

Recreational Quality Index

The RQI is a measure of three outdoor recreation components—opportunity, participation, and satisfaction. This index is derived by scoring survey questions numerically for each component, then summing these components into an overall score. A higher score indicates a more positive recreation experience while a lower score indicates a less positive recreation experience. Table 2-15 compares the 1998 RQI score with that from 2005. Over this seven year time period, the score has gained six points. The component which increased the most over this period was the satisfaction score, a gain which may be attributed to Wisconsin's stewardship programs. These programs have continued to acquire, develop, and improve the recreational facilities and lands that provide visitors with a positive park experience. Even though outdoor recreational opportunities have increased since the last SCORP, most users believe that this component can still improve. Unlike the other two components, participation has declined since the last SCORP. This decline may reflect the increasing difficulty of recreating in today's society. Barriers to recreation include lack of time, work obligations, and travel distance to a preferred recreation experience.

Table 2-15: **Recreation Quality Index Comparisons 1998 vs. 2005**

Year	Overall	Opportunity	Participation	Satisfaction
1998	94	30	30	34
2005	100	34	27	39

Summary

As society continues to change and evolve, so too does outdoor recreation participation. Recreational participation reflects many elements: recreation preferences, the diversity of the Wisconsin population, the variety of recreation landscapes available throughout the state, and the increasing barriers placed upon the average recreationalist. Taken as a whole, these factors contribute to a diverse range of recreational activity preferences and demands throughout the state. As recreation providers attempt to accommodate these various needs, proactive planning will become increasingly important to ensure that recreation in Wisconsin remains accessible and adapted to the needs of the state's population.

Proactive planning will become increasingly important to ensure that recreation in Wisconsin remains accessible and adapted to the needs of the state's population.

CHAPTER 3

The Supply of Outdoor Recreation in Wisconsin

Wisconsin's natural environment is diverse. From Great Lake beaches to vast forested lands, Wisconsinites enjoy a wealth of outdoor recreation opportunities available in state parks, public reservoirs and lakes, local parks, and a well-developed network of trails. However, although the state landscape itself presents many opportunities for recreation, the supply of recreation lands and facilities are not always adequate to meet recreation demand or to protect important natural resources. This chapter provides an inventory of existing recreation resources in Wisconsin, then assesses the needs of local park and recreation providers and discusses the methods used to identify Land Legacy areas of potentially high recreation demand. This chapter also discusses the Warren Knowles–Gaylord Nelson Stewardship 2000 Program Program, examining the supporting and expanded role this fund plays in the development and maintenance of recreation lands and facilities across the state.

Public Recreation Providers

Publicly owned lands are important components of Wisconsin's recreational supply. The three primary public providers of recreation lands include:

- THE FEDERAL GOVERNMENT
- THE STATE GOVERNMENT
- LOCAL UNITS OF GOVERNMENT *(counties, cities, villages, and towns)*

These publicly owned recreational facilities are discussed below.

Federally Owned Recreational Lands

Federal recreation providers in Wisconsin include the United States Department of Interior (the parent agency of the National Park Service and the Fish and Wildlife Service), the United States Department of Agriculture Forest Service, the Bureau of Land Management, and the U.S. Army Corps of Engineers. These providers offer opportunities for both active and passive recreation and are also actively involved in the conservation of forest, prairie, and water resources. Federally owned recreation lands in Wisconsin are therefore tied with the preservation of open space and natural resource management. Recreational activities provided in these areas are generally nature-based and non-destructive: hiking, camping, fishing, hunting, nature study, canoeing, boating, swimming, and similar activities.

State of Wisconsin Owned Recreational Lands

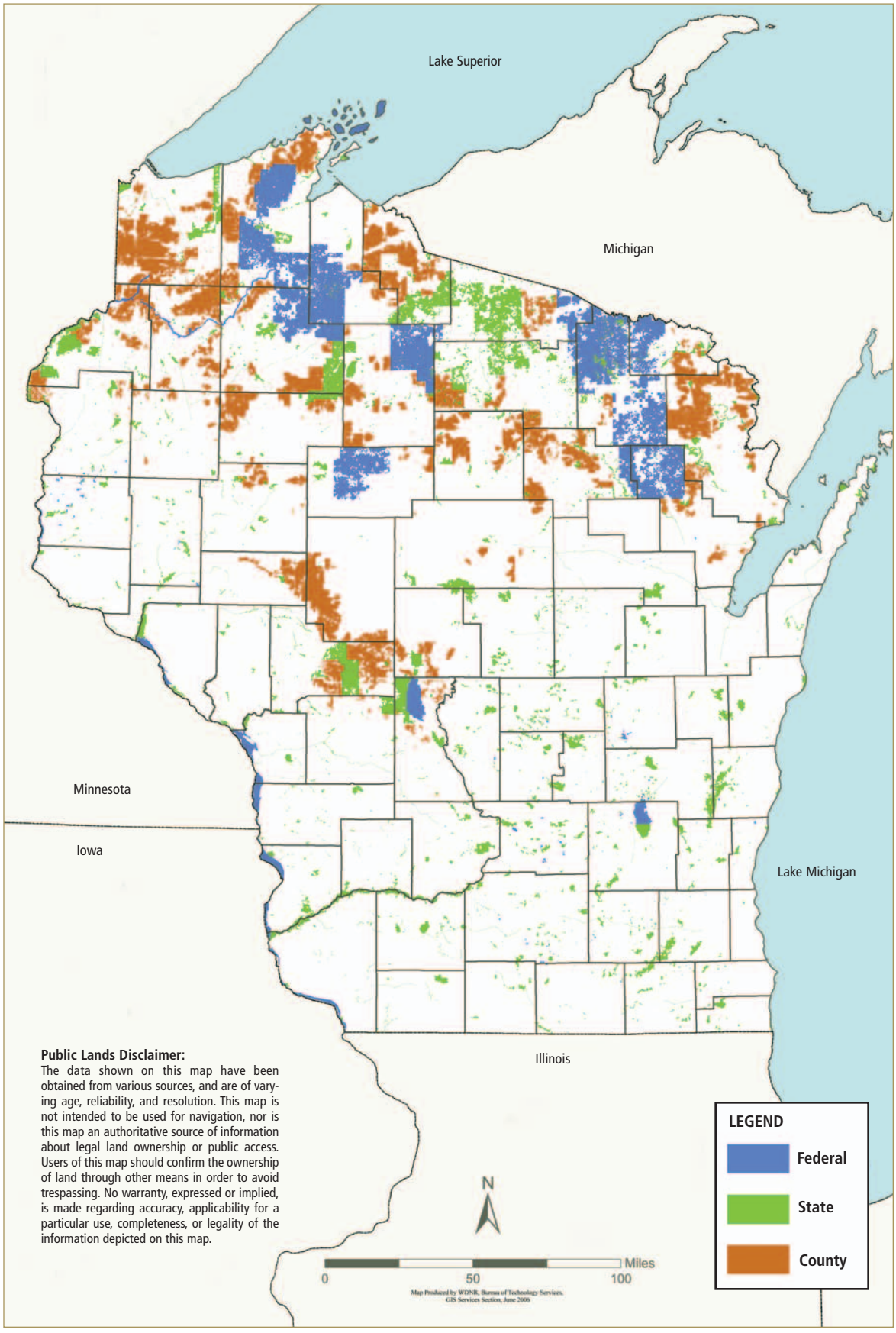
The Wisconsin Department of Natural Resources (WDNR) has two divisions, Lands and Forestry, which provide the majority of state-owned recreational lands and facilities. Through these divisions, the WDNR plays a significant role in identifying and conserving areas of unique and valuable natural resources across the state.

State WDNR lands that include park and natural areas provide a wide variety of outdoor recreation resources within Wisconsin. As shown in Figure 3-1, the distribution of state parks and wildlife areas affords excellent accessibility to users throughout the state. These lands offer a wide range of recreation such as camping, hunting, fishing, canoeing, birdwatching, horseback riding, and hiking. The WDNR Division of Forestry manages six state forests that offer diverse recreational opportunities including hunting, birding, swimming, and interpretive driving tours.

Recreation opportunities provided by the State of Wisconsin are similar in type to those provided by federal agencies. As on federal properties, the preservation of open space and conservation of natural resources are critical components of state-owned land management.

The preservation of open space and conservation of natural resources are critical components of state-owned land management.

Figure 3-1: **Public Lands in Wisconsin**



Locally Owned Public Lands

In addition to federal and state providers, there are many counties, cities, villages, and towns throughout Wisconsin that provide opportunities for both active and passive outdoor recreation. Many counties, particularly in the northern part of the state, manage extensive tracts of forest land for hunting, camping, and other forms of outdoor recreation. As Table 3-1 indicates, these county-owned forests and parks provide the largest amount of publicly owned acreage in the state. At the municipal level, the primary focus of outdoor recreation includes the provision of athletic fields, outdoor courts, playfields, playgrounds, and support facilities. Cities, villages, and townships manage the smallest amount of public acreage, together controlling just 1% of total public lands.

Many counties, particularly in northern Wisconsin, manage extensive tracts of forest land for hunting, camping, and other forms of outdoor recreation.

Table 3-1: **State and Federal Conservation and Recreation Lands in Wisconsin Acres by Ownership • 2004**

Public Ownership Type	Total Acreage	Percent of Total
Federal Government	1,795,030	31%
Wisconsin Department of Natural Resources		
Forests and Wild Rivers	624,470	10.4%
Park and Natural Areas	141,246	2.4%
Fisheries and Wildlife	600,978	10.2%
Total	1,366,694	23%
County Parks and Forests	2,594,625	45%
City, Village, and Township		
City	38,571	<1%
Village	12,677	<1%
Town	10,754	<1%
Total	62,004	1%
Total	5,782,353	100%

* See Appendix D for complete listing of publicly owned land by county

Private Recreation Providers

A host of additional Wisconsin outdoor recreation resources are controlled by private interests. Two specific types of privately owned resource groups include those classified as non-profit (sometimes referred to as quasi-public) and those who operate businesses for profit.

There are many non-profit providers of outdoor recreation in Wisconsin. These include land trusts, conservation organizations, YMCAs, Boys and Girls Clubs, and religious institutions, among others. Many of these organizations are active in conservation. Wisconsin land trusts, for example, have permanently protected over 125,000 acres of open space, wildlife habitat, native natural communities, lake, river and stream watersheds, and other special natural resources.

Other private recreation providers manage their lands for profit. These providers include individual businesses and public utilities such as electric and water companies. Resources in this category cover a wide diversity of facility types ranging from private forests to water parks. Private sector providers often cater to specialized "niche markets," groups that, because of their narrow range of interests, are not served by the public sector. The recent boom in new recreational activities such as paintball and using water parks, has been facilitated by these specialized private sector resources. In most cases, private sector facilities are used for a fee. In some cases, however, the recreational role the private sector plays is indirect. Selling equipment, for example, improves the quality of the outdoor recreation experience, but is not directly involved in recreation.

Private landowners also provide outdoor recreational resources for both consumptive and non-consumptive recreational uses. Typically these lands are not available to public use, although some owners provide access to select individuals such as members of their immediate family, friends, and acquaintances. Two programs funded by state and federal taxes—the Wisconsin Managed Forest Law and the National Conservation Reserve Program—provide ideal settings for outdoor recreation uses. However, as shown in Table 3-2, only 43% of lands managed in these programs are open to the general public.

Table 3-2: **Wisconsin Managed Forest Law and Conservation Reserve Program Lands**

Program Enrollment Type	Total Acreage	Percent Open to the General Public
Managed Forest Law Lands	2,846,280	53%
Conservation Reserve Program Lands	618,446	0%
Total	3,464,726	43%

The recent boom in new recreational activities such as paintball and using water parks, has been facilitated by specialized private sector resources who often cater to specialized "niche markets."

Elements of Wisconsin Outdoor Recreation Supply

The supply of outdoor recreational resources across Wisconsin is highly varied and includes the obvious land- and water-based activities as well as the less obvious but equally critical components of outdoor recreation including organized sports, specialty parks, water parks, and other private providers of facilities that cater to people's outdoor leisure pursuits.

For this SCORP, the University of Wisconsin-Madison, undertook a recreation supply data collection and interpretation process that adapted and extended a federal data collection effort known as the National Outdoor Recreation Supply Information System (NORSIS). This survey used a set of 190 Wisconsin-specific recreational types and a specification of basic ownership categories ranging from private (two categories) to public (fifteen categories).

This Wisconsin-specific inventory was completed for each of Wisconsin's 72 counties using a variety of primary and secondary data sources. Results reflect the presence of recreational supply present in 2004. Where available, standardized secondary datasets were used to compile county-level supply components. Unfortunately, many of these components are not represented by standardized secondary datasets. This is particularly true for those components owned and managed by municipal, village, and town units of government. To account for these unrepresented data elements, a comprehensive telephone and mail survey was completed for each of the roughly 1,800 individual units of government located in Wisconsin. With minor exception, the resulting dataset is complete and represents the many recreational opportunities available in town, village, and city parks departments. This entire recreation supply inventory represents a unique contribution to the field of outdoor recreation and, with regular updating, may become an important resource for data on recreational resources. Table 3-3 lists key findings of this entire recreation supply inventory. These findings show the diversity of recreational resources across the state.

Table 3-3: **Wisconsin Outdoor Recreation Supply Highlights**

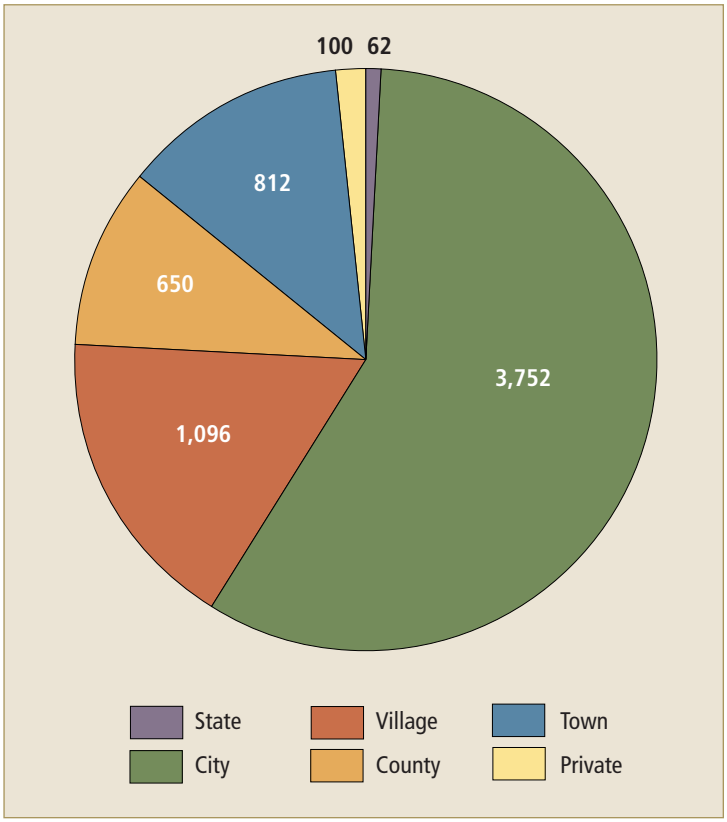
- Statewide, there are 1,135 public and private campgrounds with over 72,000 campsites.
- There are 6,282 holes of golf on 405 courses.
- There are 388 outdoor ice skating rinks evenly distributed thoughout the state.
- There are 167 marinas scattered throughout Wisconsin.
- There are 1,275 softball diamonds with the majority in the northern half of the state.
- There 26 water parks in the state and 546 outdoor swimming pools.
- There are 141,619 seasonal/second homes with most of these in the northern half of the state.
- There are 50 observation towers, mostly on state lands.
- There are 83 dog parks, mostly in urban areas.

It is also important to note that the elements in Table 3-3, when assessed for ownership group, represent a broad and complex picture of recreation elements; given alternate ownership groups, the dataset represents a total of 335 unique recreation supply elements. Some recreation elements may occupy multiple ownership categories. Parks, for example, are primarily operated by public agencies in various units of government such as towns, villages, counties, and the state. There are also a limited number of privately operated parks run by non-profit groups. As shown in Figure 3-2, there are a total of almost 6,500 individual parks in Wisconsin. Of these parks, municipal units of government (cities) manage the largest number with over 3,700.

Further interpretation and discussion of these ownership elements at the regional level is presented in Chapter Five. In addition, a complete listing of recreational elements by county is available online at www.dnr.wi.gov/planning/scorp.

[1]The USDA Forest Service has been actively involved in recreation supply planning for the past 50 years. Since the 1980s, there has been a nationwide effort to standardize data on recreation supply. Today, the NORSIS data set—developed and maintained by the USDA Forest Service's Wilderness Assessment Unit, Southern Research Station at Athens, Georgia—provides one of the few standardized sources of data for recreation in the United States. This database is a record of roughly 450 different amenity and recreation site variables for every county in the country. It contains a wide array of amenity attribute measures, including everything from the American Business Index's number of archery ranges per county to the USDA Forest Service's measure of wild and scenic river miles per county. Unfortunately, its ground-truthing for accuracy, regular updating, and ownership specificity remain significant issues for further refinement and additional research. Nevertheless, NORSIS remains the only national recreational dataset in which a base reference point can be established.

Table 3-2: **Total Number of Wisconsin Parks by Ownership Type**



As Wisconsin works to develop and expand recreation, it is important that the state develop a system for evaluating potential sites with an eye towards their recreational value.

Recreation Prioritization of Land Legacy Areas

As Wisconsin works to develop and expand recreation, it is important that the state develop a system for evaluating potential sites with an eye towards their recreational value. Initial work done by the Wisconsin Land Legacy Report has identified an inventory of places believed to be critical in meeting Wisconsin's conservation and recreation needs over the next 50 years. To create an initial inventory of places, state citizens and nonprofit organizations were asked which areas they believed were critical in meeting Wisconsin's present and future conservation and recreational needs. From this polling, 228 sites across the state emerged as areas of special significance.

In classifying areas as Land Legacy sites, previous SCORPs have not incorporated data elements on social, economic, and demographic trends. These elements give a more accurate and integrated inventory of "Recreational Land Legacy Places"—areas of special importance to Wisconsin citizens and statewide recreation. For this SCORP, the WDNR and the University of Wisconsin Applied Population Lab divided the initial 228 Land Legacy areas into their appropriate SCORP regions. Next, five additional elements were evaluated: potential visitors, population/development pressure, cost of land acquisition, conservation significance value, and recreational potential. Each of these five elements was ranked on a scale of one to five, with more weight applied to recreational potential than other elements.

1. Potential Visitors

Future recreational areas should be easily accessible to a large number of potential visitors. To determine the number of visitors an area may receive, sites were assessed for the number of people living within a one-hour drive of their respective boundaries. Road data was used to create buffer areas which were then placed on a map and compared to the buffer areas of surrounding sites. Areas with the highest amounts of potential visitors were assigned a higher score than those with lower amounts. While these areas certainly receive visitors outside of a one-hour drive, additional work evaluating travel patterns will need to be completed before including this data in Land Legacy designations.

2. Population/Development Pressure

In addition to providing sites that are easily and widely accessible, the WDNR also hopes to preserve Wisconsin's unique and special environments. Sites with especially high development pressures may, therefore,

deserve priority in the designation of future protected areas. To determine population and development pressure, projected population growth estimates were assessed for each site. Areas expected to undergo the highest population growth were assigned higher scores than those in which population growth was expected to be minimal.

3. Cost of Land Acquisition

Cost of land acquisition is also an important consideration when evaluating potential Land Legacy sites. Areas in which undeveloped land (land which has not been developed for either urban or agricultural use) is relatively inexpensive were assigned a higher score than those in which land was relatively more expensive.

4. Conservation Significance Value

Though the primary goal of the SCORP is improving and expanding recreation within state-owned lands, the WDNR also hopes to preserve places of special ecological importance. For this reason, sites with significant ecological conservation value were assigned higher scores than those with a lower conservation value.

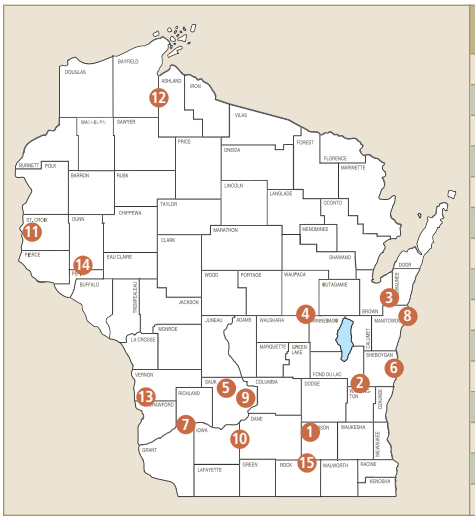
5. Recreational Potential

Finally, any future site must also facilitate participation in its region's top recreational activities. The top 15 recreational uses in each SCORP region were used as a template against which potential sites were evaluated. Sites that offered the most opportunities for popular recreational opportunities received a higher score than those areas that provided fewer opportunities for these activities.

Sites receiving the highest scores within each region were designated as high recreational potential Land Legacy sites.

Data from all five components was then compiled on a site-by-site basis. Sites receiving the highest scores within each region were designated as high recreational potential Land Legacy sites. Table 3-4 presents the 15 top ranking Land Legacy areas within the state that should be targeted for recreational development and/or environmental preservation. Sites are listed in priority order. These results suggest that, though not a problem exclusive to the Southern Gateways or Lake Michigan Coastal Regions, suburban development was a particular threat in these regions. Targeted protection and acquisition efforts in southern areas should therefore be made in the near term, before population or land value pressures become too great for further purchases and/or environmental preservation. More specific Land Legacy rankings for each of the SCORP regions are presented in Chapter Five.

Table 3-4: **Top 15 Wisconsin Statewide Land Legacy Recreation Areas in Need of Near Term Preservation and/or Continued Protection (results ranked in priority order)**



Ranking	Primary Location (County)
1. Crawfish River-Waterloo Drumlins	Jefferson
2. Kettle Moraine State Forest	Walworth, Waukesha, Washington, and Sheboygan
3. Niagara Escarpment	Fond du Lac, Calumet, Door, Brown, and Kewaunee
4. Lakes of the Winnebago Pool	Winnebago, Waupaca, and Waushara
5. Baraboo Hills	Sauk
6. Kohler-Andrae Dunes	Sheboygan
7. Lower Wisconsin River	Sauk, Iowa, Richland, Grant, and Crawford
8. Point Beach and Dunes	Manitowoc
9. Baraboo River	Sauk
10. Blue Mound State Park	Iowa and Dane
11. Balsam Branch Creek and Woodlands	St Croix
12. Chequamegon-Nicolet National Forest	Forest, Langlade, Bayfield, Ashland, Price, and Taylor
13. Kickapoo River	Vernon and Crawford
14. Lower Chippewa River and Prairies	Dunn and Pepin
15. Lake Koshkonong to Kettle Moraine	Rock and Jefferson

Local Park and Recreation Needs

As another aspect of this planning process, local recreational needs (county, city, village, and town) were also assessed. This process involved a review of 373 local park and recreation plans on file as part the WDNR recreation grants program. These plans represent all forms of local government, though there are proportionally more city and county governments than village and town governments. These plans have a five year life span, with updating to occur for continued grant eligibility.

During this plan review, the top five planning recommendations of each county, city, village, and town plan were summarized. These recommendations were then compiled into a larger list and categorized into three areas: park and open space acquisition needs, general recreation improvements, and new recreation developments. The results of this summary, presented in Table 3-5, indicate a need for further improvements and developments in urban, developed settings. This result is not surprising as local park and recreation plans tend to focus upon improving or expanding traditional park-like developed settings.

In addition to traditional park developments such as swimming pools and park shelters, this list also indicates demand for several nontraditional recreation developments. For example, many communities need more disc golf courses at the local level. These results reflect the changing demands on public recreation lands.

Table 3-5: **Summary of Local Park and Recreation Plan Recommendations**

Park and Open Space Acquisition Needs:

- Community parks[1]
- Dog parks
- Ice Age Trail
- Mini parks[1]
- Neighborhood parks[1]

General Recreation Improvements:

- ADA accessible facilities
- Athletic field upgrades and improvements
- Better signage
- Playground equipment upgrades
- Restroom upgrades

New Recreation Developments:

- Bike trails
- Boat launches
- Camping
- Disc golf courses
- Ice skating rinks
- Indoor recreation complexes
- Nature trails
- Park shelters
- Picnic areas
- Scenic drives
- Skateboard parks
- Sledding hills
- Soccer fields
- Swimming pools
- Tennis court development
- Trail connections
- Volleyball courts
- Water access
- Water trails
- Water spray parks

[1] Descriptions of these park types and other parks are described in Appendix B.

The results of this summary indicate a need for further recreation improvements and developments in urban settings.

Warren Knowles – Gaylord Nelson Stewardship 2000 Program

Wisconsin has a long and successful history of bipartisan financial support for the conservation of the state's natural resources and the provision of outdoor recreation opportunities. The state's first comprehensive, long-term land acquisition and recreational development program was the Outdoor Recreation Action Program (ORAP), enacted in 1961, and revised in 1969 and 1981. This program provided funds to state and local governments for the acquisition of conservation lands and the development of recreational facilities.

Today, the Warren Knowles–Gaylord Nelson Stewardship Program (Stewardship 2000) is the state's primary funding source for the state, local governments (including tribes), and non-profit conservation organizations to acquire land and easements for conservation and outdoor recreation purposes. The program is funded by general obligation bonds.[2] The original ten year Stewardship Program (FY1991-2000) created in 1989 (*Wis. 1989 Act 31*) authorized approximately $23.1 million annually to be used by the WDNR, local units of government, and nonprofit conservation organizations. The success of this program resulted in an extension and redevelopment of the original program. The subsequent ten year program, Stewardship 2000, was created in 1999 (*Wis. 1999 Act 9*). This program remains comprehensive and addresses a broad spectrum of land conservation and nature-based recreation needs across the state. For Stewardship 2000, the original Stewardship Program's fund subprograms were reorganized to allow for more flexibility of use depending on need. In addition, local assistance grants were redefined from broad spectrum community outdoor recreation to "nature-based outdoor recreation."[3]

Stewardship 2000 is administered by the WDNR and provides $60 million annually through FY 2010. As shown in Table 3-6, the program includes several subprograms, each with its own goals and priorities. These subprograms provide funds to improve visitor amenities at state and local parks; restore wetlands and prairies; and acquire land for trails, natural areas, state and county forests, wildlife habitat, urban greenspace, state and local parks, river and stream corridors, and flowages and wild lakes.

2 The state of Wisconsin sells bonds to investors now to raise the funds, then pays back the debt over the next 20 years. This spreads the cost over time so it is shared with future users of public lands.

3 "Nature-based outdoor recreation" focuses on the appreciation or enjoyment of nature and excludes recreation that requires extensively developed space such as sports fields, swimming pools, and tennis courts.

Table 3-6: **Annual Stewardship 2000 Fund Subprograms and Expenditure Plan**

Program Category	Subprogram	Annual Funds ($)	% of Fund
Land Acquisition	WDNR Conservation and Recreation Land and Trails	$37,000,000	62%
	Nonprofit Conservation Organization (NCO) Conservation and Recreation Land and Trails	8,000,000	13%
Bluff Protection	WDNR and NCO land acquisition in the Great Lakes; $1 million earmarked through FY 2004		
Baraboo Hills	WDNR, NCOs, local governments; $5 million		
Property Development and Local Assistance	Earmarked over previous years	6,750,000	12%
	NCO State Property Development Grants (e.g. Friends of Wisconsin State Parks)	250,000	<1 %
	Local Assistance Grants: for acquisition and development; local governments and NCOs	8,000,000	13%
TOTAL		**$60,000,000**	

An important component of the Stewardship 2000 Program is the cooperative partnership between the WDNR, local governments, and private Non-Profit Conservation Organizations (NCOs) such as The Nature Conservancy, the Ice Age Park and Trail Foundation, and regional NCOs such as the Door County Land Trust and the West Wisconsin Land Trust. To foster these partnerships, Stewardship 2000 provides 50% match grants to local governments and NCOs for eligible projects. These grants enable the state to stretch its dollars by leveraging other funding sources. Foundations, businesses and private citizens also contribute to Stewardship projects, and landowners may donate land and easements as well. This leveraging of private resources with public funds is another important component of Stewardship 2000's success. The Stewardship Advisory Council, with representatives from both local governments and nonprofit organizations, advises the WDNR on matters relating to the program.

Qualified NCOs are also eligible to acquire lands and conservation easements with Land Acquisition funds for purposes such as the Ice Age National Scenic Trail.

Stewardship 2000 has four major components:

1. ***Land Acquisition by WDNR and NCOs:*** Acquisition of land and easements for a wide range of conservation and outdoor recreation purposes. Examples of WDNR properties that included Stewardship 2000 land acquisition funds: Turtle Flambeau Flowage in Iron County, Forest Legacy easements in northern counties, Buckhorn State Park and Buckhorn Wildlife Area in Juneau County, Spread Eagle Barrens State Natural Area in Florence County, and Milwaukee Lakeshore State Park.

   Qualified NCOs are also eligible to acquire lands and conservation easements with Land Acquisition funds for such purposes as the protection of natural areas, habitat areas, streambank protection, and the Ice Age National Scenic Trail. Table 3-7 lists a summary of Stewardship 2000 projects. Examples of these projects include the West Wisconsin Land Trust's acquisition along Pine Creek, a class one trout stream in Pierce County; the Door County Land Trust's Bayshore Bluff Project along the Niagara Escarpment; and The Nature Conservancy's Wolter property acquisition in Vilas County.

Table 3-7: **Stewardship 2000 Program – Land Acquisitions as of July 1, 2004**

Category	Cost	Acres Purchased
Fisheries, Streambank	$14,110,100	6,248
Parks and Southern Forests	$14,223,400	5,328
Northern Forests	$29,011,700	45,498
Wild Rivers & Resources	$22,245,600	24,012
Wildlife & Habitat	$25,307,400	27,010
Natural Areas	$11,028,400	11,607
Trail & Ice Age Trail	$11,494,500	7,795
Non-point and Other	$211,800	825
Total	**$137,667,000**	**128,323**

2. ***Local Assistance:*** Grants to local governments and NCOs for acquisition of land, conservation easements, and development projects that support nature-based outdoor recreation. See Table 3-8 for a summary of local government Stewardship 2000 projects. Examples of these projects include the City of Fort Atkinson's development of their Rock River Riverwalk, the City of Ladysmith's acquisition of land along the Flambeau River, and the Baraboo Range Preservation Association's purchase of a conservation easement along the Baraboo River in Sauk County.
3. ***Property Development on State Lands by WDNR, Friends groups, and NCOs:*** Development of recreational facilities on state properties includes such projects as campground renovations, construction of park support and interpretive facilities, and improved accessibility to recreation areas.
4. ***Baraboo Hills:*** Land and easement acquisition for the conservation of the hardwood forests of the Baraboo area by the WDNR, local governments, and NCOs.

Table 3-8: **Stewardship 2000 Grants (July 1, 2000 through December 31, 2005)**

	Number of Grants	Award Amount	Acres Acquired
Acquisition-Grants Only			
To Local Units of Government	134	$15,590,445	4,490
To Non-Profit Organizations	155	$35,810,243	22,459
Total	**289**	**$51,400,688**	**26,949**
Stewardship Grants Overall *(Acquisition & Development/Maintenance Combined)*			
To Local Units of Government	380	$32,285,177	4,490
To Non-Profit Organizations	268	$36,749,645	22,459
Total	**648**	**$69,034,822**	**26,949**
Development, Habitat Restoration, Maintenance Grants			
To Local Units of Government	246	$16,694,732	—
To Friends Groups, Non-Profit Organizations	113	$939,402	—
Total	**359**	**$17,634,134**	**—**

As the state budget fluctuates and funding for programs statewide becomes increasingly scarce, proposals have been made to severely cut or reduce the scope of Stewardship 2000 funding. Editorials in support of the program appeared at the time in more than 25 newspapers statewide, indicating that Wisconsinites recognize and support the key role this program has played and will continue to play in the long-term protection of Wisconsin's special places.

Summary

Wisconsin enjoys an abundance of outdoor recreation opportunities and activities. Across the state there are sites that cater to active, passive, and motorized recreational uses. These sites may vary widely in the types and extent of recreational opportunities they offer depending on where in the state they are located. Urban regions in Wisconsin generally have more sports facilities and viewing and learning resources, while rural parts of the state have relatively more land-, forest-, and water-based activities.

The need for an increased supply of recreation land and facilities is evident on a variety of levels. On a landscape scale, there are a number of important areas within the state that deserve increased attention for environmental protection and preservation. At the local level, municipal and county parks are in need of facility upgrades and continued management. The Stewardship 2000 Program, with assistance from the Federal Land and Water Conservation Fund, has been instrumental in helping state and local agencies meet these needs. As the Stewardship 2000 Program is redeveloped in 2010, the base of the program should be expanded to provide funding for additional outdoor recreational facilities at the municipal and local level.

Matching the presence of outdoor recreation facilities with recreational demands presents a complex challenge. Provision of high quality outdoor recreation is a primary responsibility of public agencies and will require sound, standardized efforts to better understand the supply and demand aspects of outdoor recreation. It is our hope that the information presented in this chapter will aid recreation planners and providers in accomplishing this goal of providing high quality outdoor recreation across all levels of ownership.

CHAPTER 4

Compatibility and Conflict in Wisconsin Outdoor Recreation

For state government and other recreation providers, providing sufficient outdoor recreation opportunities for both Wisconsin residents and visitors is becoming a growing challenge. These difficulties may be attributed to a variety of restricting factors: As the number of different recreational activities increases and new recreational technologies (i.e. geocaching, etc.) are developed, public lands are facing pressure from an increasing number of different user groups. Interactions between these groups are frequently marked by competition over land use and access. This situation has been amplified by the fragmentation of land in rural areas, the result of private landowners purchasing land which then becomes unavailable for public recreation. As these issues continue to affect the quality and supply of recreation within Wisconsin, management will become increasingly important in ensuring a high quality recreation experience for all user groups.

This chapter examines the extent of outdoor recreation conflict in Wisconsin and categorizes the relative compatibility of different recreation uses in a common landscape. It is important to remember that certain activities interact better than others. A hiker, for example, is not likely to be bothered by campers in an adjacent campground. Someone birdwatching from their canoe, however, is likely to be bothered by the presence of a noisy personal water craft. Because Wisconsinites pursue many different types of recreation activities, all with various levels of compatibility, it is important to understand how these activities interact. While many innovative strategies have been used to mitigate recreation conflict in Wisconsin, the study presented in this chapter represents the first attempt at developing a more systematic understanding of recreation conflicts, an understanding which will aid recreation providers in developing effective management solutions.

The impetus for this work first emerged at the 2005 Governor's Conference on Forestry, the kickoff event for the Wisconsin Statewide Forest Plan. During this conference, a diverse group of participants came together to strategize and set priorities in a session entitled "Minimizing Recreational Use Conflicts in Wisconsin's Forests." From this working session, several key goals emerged. These included the needs to (1) revitalize and reconfigure the Wisconsin State Trails Council, (2) support and promote research in recreation compatibility and conflict, (3) support and promote education and interpretation services with respect to recreation compatibility, and (4) increase funding for recreation management. The second of these goals—researching recreation conflict dynamics—is also one of the primary goals of this SCORP and was adopted as the inspiration and guiding focus for the work presented in this chapter.

Outdoor Recreation Conflict Reporting in Wisconsin and Surrounding States

In order to establish a general understanding of which Wisconsin recreational activities experience conflict, researchers performed a LexisNexis[1] search for Wisconsin popular press[2] articles from the past two years (December 2003 – December 2005) that discussed issues of recreation conflict. A total of 75 different news stories were found, a summary of which is contained in Figure 4-1. The most frequently cited conflicts included concerns over environmental damage (19 citations), trails (18 citations), conflict with landowners (15 citations), the implementation of activity bans (14 citations), management actions by state or local agencies (12 citations), and disputes over the use of local parks (11 citations). Other issues included, in order of frequency: safety, conflict with wildlife, noise, budget allocation or fee disputes, local ordinances, access to recreational lands and facilities, loss of viewscapes, park creation, water levels, and passage of state bills.

The activities most frequently cited as involved in some form of conflict were hunting (31 citations), ATVs (14 citations), and recreational fishing (8 citations). Other activities found to be associated with some form of conflict included, in order of frequency: bicycling, snowmobiling, hiking, boating, cross-country skiing, camping, swimming, boating, kayaking, wildlife watching, water skiing, and horseback riding.

Articles gathered through this search revealed that conflict associated with non-motorized activities is generally associated with trail use. Articles also indicated that conflicts involving hunting are unique in that they rarely involve conflicts with other outdoor recreation activities. Rather, conflicts related to hunting are most often due to conflicts with private landowners over issues of access or trespassing, or conflicts with the state or recreation area over state management actions or use of parks by hunters.

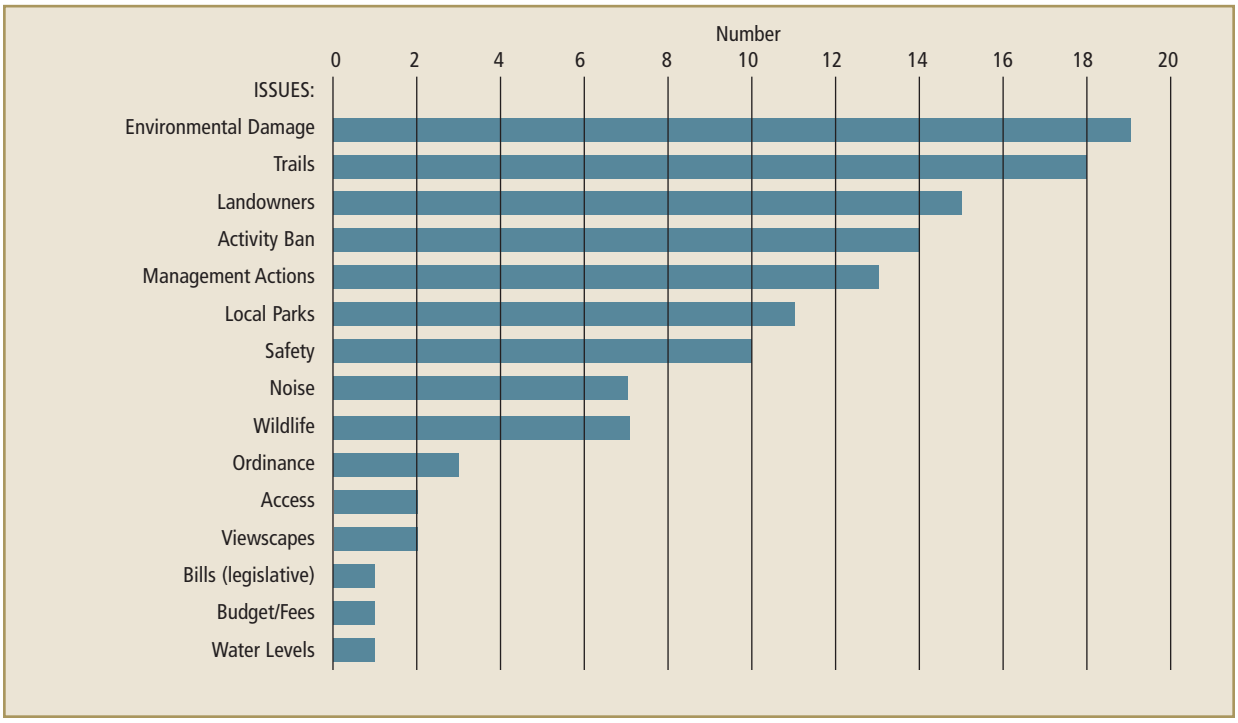
An additional LexisNexis search was completed for articles from the surrounding states of Illinois, Michigan, and Minnesota. Results of this search revealed far fewer articles relating to recreation conflict than the search performed in Wisconsin. For the activities of ATV riding, hunting, and fishing, there were 50 articles found in Wisconsin alone and only 38 articles in all other three states combined. These findings beg the question: What causal effects are contributing to more recreation conflicts in Wisconsin than elsewhere in the upper Midwest?

[1] The LexisNexis database is divided into two components: Lexis publishing is for the legal profession and the NEXIS unit serves the business, government and academic markets. The system is divided into libraries, which contain related documents and files within the libraries. LexisNexis is heavily used by researchers who often use its database of American case reports, legislation, International law, Law Journals, and newspapers.

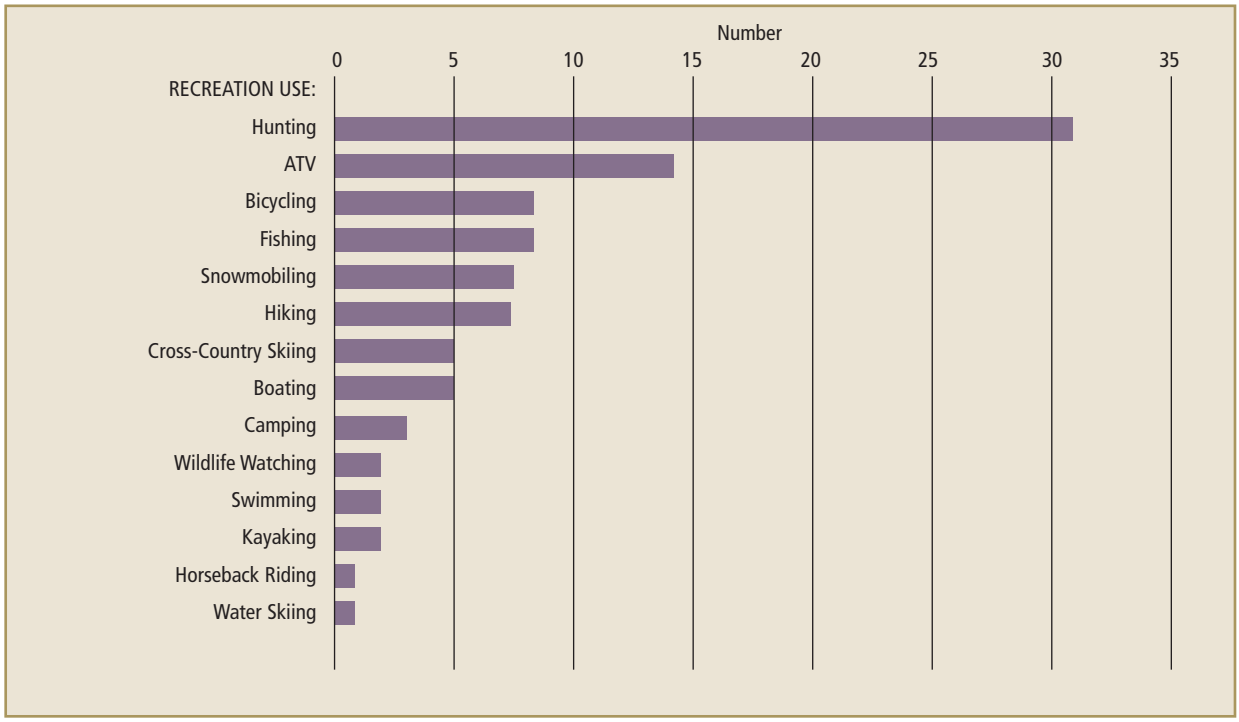
[2] Sources included in LexisNexis are The Associated Press State & Local Wire, The Capital Times, The Daily Reporter, The Milwaukee Journal Sentinel, The Wisconsin Law Journal, and The Wisconsin State Journal. Sources from surrounding states are also included.

Figure 4-1: **Results of LexisNexis Popular Press Search on Recreation Conflict in Wisconsin**

CONFLICT TYPE



ACTIVITY



Results from Wisconsin news sources dated December 2003 – December 2005.
Keyword searches included "conflict", "protest", and "dispute" with "ATV", "bicycling", "biker", "boating", "boater", etc.

An Approach to Understanding Recreational Compatibility

Past research in the field of recreational compatibility has focused on two principle explanations for why recreation conflict occurs.[3] The first of these explanations suggests that conflict occurs when the goals of one recreation participant interfere with the goals of another recreation participant in the same location. For example, the goal of a mountain biker to ride fast through a forest may conflict with a horseback rider's goal of a tranquil ride through the same forest. The actual amount of conflict that occurs when the horseback rider and mountain biker actually encounter one another is dependent on a host of factors including each user's experience level, previous experience with similar situations, feeling of attachment to the trail they are riding, design of the trail, proximity to one another, duration of their meeting, and tolerance of the other person's behavior. The second explanation for recreation conflict suggests that conflict may occur simply because of differences in social values. A classic example of this type of clash is the conflict that may occur between hunters and other recreation participants when there are differences in opinion about when and where hunting should occur, or differences in the values held towards live animals. This type of value-based conflict is more likely to be an issue during planning processes and public meetings than in recreation settings themselves.

Previous research has also documented a number of important generalizations about recreation conflict. First, recreation conflict is often asymmetrical, meaning that one user group is generally more impacted by the conflict than another. For example, cross-country skiers may be very bothered by snowmobile users, but snowmobile users are not generally bothered by the presence of cross-country skiers. Second, asymmetrical conflict is most likely to occur between motorized and non-motorized recreation activities than between either two motorized or two non-motorized activities. Third, because recreation users employ a variety of coping methods when encountering recreation conflict, increased levels of conflict may not necessarily reduce a person's satisfaction with their experience. An angler encountering more boaters on a lake than he had expected may, for example, move to another lake or revise his expectations for the trip. In this way, the angler still enjoys his fishing expedition regardless of the fact that it did not meet his initial expectations.

Despite these observations, there has, until this point, been no unified theory of recreation conflict. This is due, partially, to the way conflict has been analyzed. Most research in the field of recreation conflict has focused on the interaction of recreation participants at individual sites, a method that does not lend itself to theorizing across the wide range of sites where conflict occurs. Research presented in this SCORP represents one of the few attempts to categorize recreation conflict as it occurs across Wisconsin recreation settings and activities as a whole. In order to understand recreation conflict on a broader scale, this study utilized a conceptual approach; rather than documenting where conflict occurs between recreation activities, this report relied on a panel of recreation experts to describe how compatible various recreation activities are. This approach is based on theory from land and environmental economics literature, which suggests a range of compatibility for different uses of a land resource. Responses from this panel represent a comprehensive view of recreation conflict within the state and account for the range of compatibility between different recreation activities.

[3] The interested reader is referred to a companion literature review and annotated bibliography entitled *Compatibility and Conflict as a Conceptual Basis for Outdoor Recreation Planning* available from the authors.

Value-based conflict is more likely to be an issue during planning processes and public meetings than in recreation settings themselves.

Table 4-1: **Spectrum of Interaction Types and Their Recreational Outcomes**

Interaction Type	Key Characteristic	Outcome	Example
Complementary	Increasing compatibility with increased use	No conflict	Canoeing and fishing
Supplementary	Neutral interaction – no impact on compatibility	Minor conflict	Snowmobile and ATV riding
Competitive	Decreasing compatibility with increased use	Conflict	Fishing and personal water craft use
Antagonistic	Activities completely incompatible	Strong conflict	Wilderness camping and ATV riding

Spectrum of Interaction Types

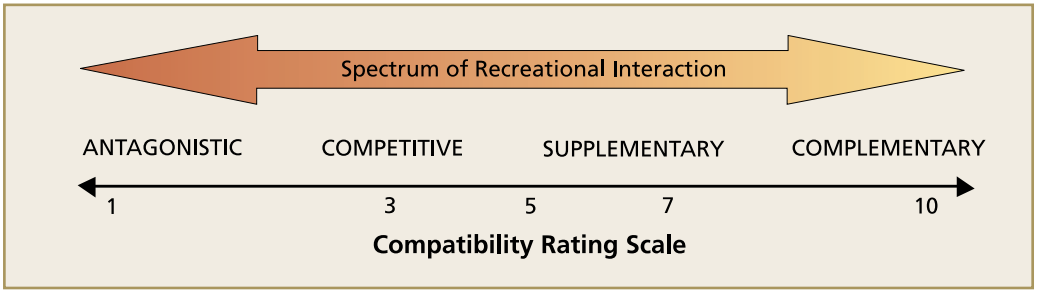
Recreation activities interact in a variety of ways. Some activities positively impact one another and are called complementary. Camping facilities, for example, often attract many visitors, thereby increasing the number of people who hike on an adjacent trail network. Other recreation activities are merely compatible, having a neutral impact on the pursuit of another recreation activity. These activities are called supplementary. Most activities, however, experience some form of conflict when encountering other activities. Users from these different groups may experience conflicts over competition for space, trail infrastructure, viewscapes, and soundscapes. In minor cases, these conflicts are called competitive interactions. In more extreme cases, two activities may be completely incompatible and interactions between them are described as antagonistic. Table 4-1 outlines the spectrum of recreation interactions.

Expert-Based Focus Groups

To investigate the compatibility of recreation activities in Wisconsin, a series of expert-based focus groups were held with recreation managers, members of the Wisconsin SCORP External Review Panel, and the leadership team from the "Minimizing Recreational Use Conflicts in Wisconsin's Forests" session of the Governor's Conference on Forestry.[4] Approximately 30 people participated in these group sessions, with discussion centering on the validity of recreation compatibility and the strategies currently used to minimize recreation use conflicts in Wisconsin.

Participants in these sessions discussed a series of issues related to the compatibility of different recreation activities in the state. Using a ten-point scale developed specifically for this study (as shown in Figure 4-2), participants were asked to complete a matrix comparing recreation activities to other recreation activities. Given an interaction between two activities, participants were asked to assess their relative level of compatibility. Ten different land-based activities were included for consideration in this matrix, these activities representing the primary recreation groupings relevant to outdoor recreation in Wisconsin. Activities included were ATV riding, camping, cross-country skiing, hiking, horseback riding, hunting, linear trail biking, mountain biking, snowmobiling, and wildlife watching. A separate matrix compared six water-based activities. These activities included canoeing/kayaking, fishing, personal water craft use, motorboating/water skiing, sailing, and swimming. Recognizing the asymmetrical nature of outdoor recreation conflict, respondents were asked to rate the degree of compatibility in both directions of recreational interactions. In this way, conflict was rated for users of the first activity interacting with users of the second activity, and users of the second activity interacting with users of the first activity.

Figure 4-2: **Spectrum of Recreational Interaction and Compatibility Rating Scale**



[4] For the purposes of this study we used a modified Delphi process eliciting expert input from Wisconsin-based recreation professionals. These experts were used to assess recreational compatibility while minimizing the obvious bias of individual recreationists and/or special interest representatives of user groups. It is our belief that recreation professionals charged with managing recreational resources are knowledgeable about alternative recreational user needs, desires, and value structures. Further, they must necessarily use some level of professional objectivity in how they assess alternative forms of recreational compatibility. Future research into user perceptions and special interest group input into compatibility would undoubtedly prove interesting and useful, but is beyond the scope of this research effort.

Findings and their Implications

Results of this survey suggest some interesting patterns in recreation compatibility. While there was some variability in responses gathered, there are clearly some activities that recreation managers feel are complementary or supplementary and others that appear to be much more competitive or antagonistic. The average ratings reported for land-based recreation activity interaction ranged from 9.2, a number representing complementary interactions (recorded for hiking with camping), to 1.8, a number representing antagonistic interactions (recorded for cross-country skiing with ATV riding). For water-based activities, average ratings ranged from 7.9 for canoeing/kayaking with fishing to 2.5 for fishing with personal water craft use. The average compatibility rating for land- and water-based outdoor recreational activities are summarized in Tables 4-2 and 4-3. Ratings reflect the perceived level of conflict from the perspective of users listed in the vertical Y axis (labeled as Primary Use). Ratings indicating a user's level of perceived recreation conflict should therefore be read horizontally across rows. For example, hunting interaction ratings range from a low of 3.3 for interactions with ATV riding to a high of 6.3 for interactions with camping. Green shading represents generally complementary recreation interactions, yellow shading represents generally compatible interactions, and red shading represents generally antagonistic interactions.

Upon closer examination of these compatibility ratings, two general observations are evident. First, it is fairly apparent that motorized and/or consumptive recreational activities are consistently rated as being less compatible with non-motorized activities than with other motorized activities. For example, when comparing the compatibility of all other land-based activities with hiking and ATV riding (See Table 4-2), it is evident that ATV riding is incompatible with every other land-based activity but snowmobiling. Hiking, on the other hand, is supplementary or complementary with all other activities.

This same pattern of compatibility may also be seen in the graphs of wildlife watching as compared to hunting, personal water craft as compared to canoeing/kayaking, and motorboating/water skiing as compared to sailing. These graphs appear in Figure 4-3, which charts thirteen different recreation activities and their

Table 4-2: **Average Land-Based Recreation Activity Compatibility Ratings** [a] [b]

	INTERACTS:										
PRIMARY USE:	ATV Riding	Hunting	Snow-mobiling	Horseback Riding	Mountain Biking	Cross-Country Skiing	Linear Trail Biking	Hiking	Wildlife Watching	Camping	Average Compatibility
ATV Riding	X	5.3	6.5	5.1	5.5	4.9	5.5	6.1	6.9	7.5	6.0
Hunting	3.3	X	3.7	4.7	4.3	5.3	5.7	5.4	6.0	6.3	5.0
Snowmobiling	4.3	4.0	X	4.0	4.8	4.3	5.8	5.3	6.3	7.2	5.1
Horseback Riding	2.2	3.5	3.0	X	3.8	4.9	4.5	6.3	7.3	7.7	4.8
Mountain Biking	3.1	3.6	4.7	4.8	X	5.7	8.1	6.1	7.4	8.0	5.7
Cross-Country Skiing	1.8	3.6	2.6	3.3	4.2	X	5.6	4.9	8.1	8.5	4.7
Linear Trail Biking	2.6	3.9	5.5	5.3	8.2	7.1	X	7.4	8.0	8.7	6.3
Hiking	2.4	3.5	3.5	5.7	4.7	6.1	6.5	X	8.9	9.2	5.6
Wildlife Watching	2.2	3.2	2.9	6.4	5.2	7.6	6.8	8.6	X	8.3	5.7
Camping	3.9	4.1	5.0	7.5	7.8	8.2	8.2	8.9	8.5	X	6.9
Average Compatibility	2.9	3.9	4.2	5.2	5.4	6	6.3	6.6	7.5	7.9	

a. Compatibility ratings are for how column activity interacts with the row activity. Ratings should therefore be read horizontally across rows.

b. Ratings below 4.0 (highly competitive or antagonistic) are highlighted in red, ratings between 4.0 and below 7.0 are highlighted in yellow (moderately to mildly competitive), and ratings 7.0 (supplementary or complementary) and above are highlighted in green. Results are based on responses from 23 Wisconsin recreation professionals.

Table 4-3: **Average Water Based Recreation Activity Compatibility Ratings** [a b]

PRIMARY USE:	INTERACTS:						
	Personal Water Craft Use	Motorboating/ Water Skiing [c]	Swimming	Fishing	Sailing	Canoeing/ Kayaking	Average Compatibility
Personal Water Craft Use	X	7.1	5.4	5.9	6.5	6.2	6.2
Motorboating/Water Skiing	6.5	X	4.9	5.6	5.8	5.9	5.7
Swimming	2.9	3.5	X	6.1	6.2	7.4	5.2
Fishing	2.5	3.0	5.4	X	6.5	7.7	5.0
Sailing	3.4	4.3	6.4	7.0	X	7.6	5.7
Canoeing/Kayaking	2.6	3.2	7.6	7.9	7.4	X	5.7
Average Compatibility	3.6	4.2	5.9	6.5	6.5	7.0	

a. Compatibility ratings are for how column activity interacts with the row activity. Ratings should therefore be read horizontally across rows.

b. Ratings below 4.0 (highly competitive or antagonistic) are highlighted in red, ratings between 4.0 and below 7.0 are highlighted in yellow (moderately to mildly competitive), and ratings 7.0 (supplementary or complementary) and above are highlighted in green. Results are based on responses from 23 Wisconsin recreation professionals.

c. Some Delphi participants felt that this activity category combined two activity categories inappropriately. Future work should separate these uses to gauge a more accurate understanding of compatibility.

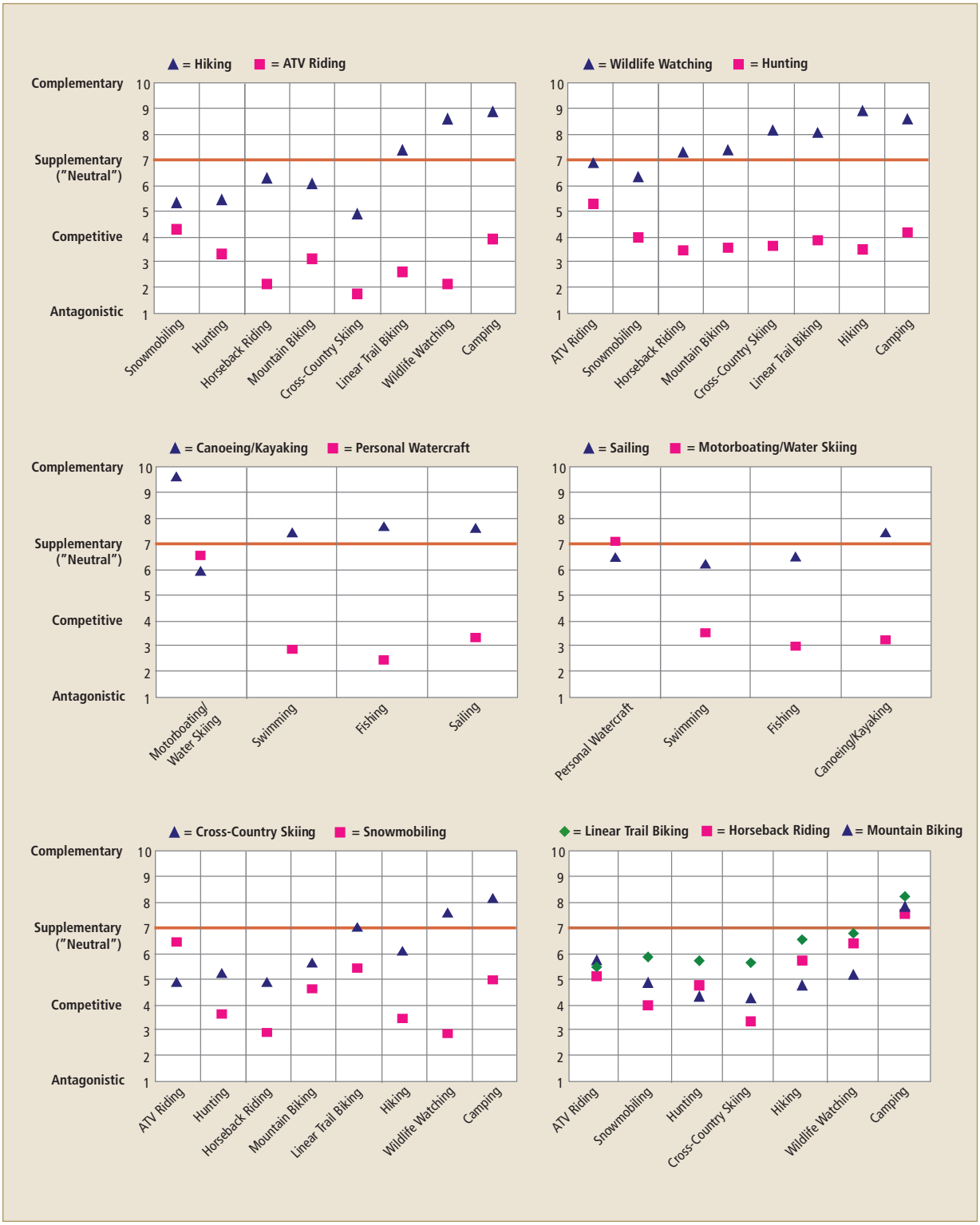
compatibility ratings with other activities. From this figure it is easy to see that consumptive/motorized activities (represented by pink squares) are far more likely to cause a competitive or antagonistic interaction with other user groups than non-consumptive/non-motorized activities (represented by blue triangles).

A second observation from the expert-based focus groups indicates that differences in compatibility between motorized and non-motorized activities becomes less pronounced when more specialized trail-based activities such as cross-country skiing, horseback riding, mountain biking, and linear trail biking are compared to motorized activities. Because these types of specialized activities need particular kinds of trail infrastructure and have activity styles that are not as compatible with other recreation activities, they are often partially separated from other recreation activities. This may explain the higher levels of compatibility recorded between these activities and motorized uses.

Although this study relies on the expert opinion of recreation management professionals, previous research in the field of recreation conflict has focused on the attitudes of recreation users themselves. One such study focused on forest-based recreation in Wisconsin and rated the compatibility of different recreation activities by surveying a large sample of outdoor recreation participants. Respondents in this study were asked whether they agreed with the statement that other recreational users were not bothersome. Most respondents had some level of agreement with this statement. Rated on a five-point scale, activity compatibility ranged from about 4.3 for the compatibility of hikers or bikers with primitive camping to about 1.6 for the compatibility of horseback riders with motorized vehicles. In general, compatibility ratings were lowest with motorized vehicle use or hunting and highest with primitive camping or hiking/skiing. These results suggest that recreation participants may hold a more positive view of outdoor recreation compatibility than recreation managers. In order to develop comprehensive management techniques, future research in the field of recreation conflict will need to elicit input from all groups involved in outdoor recreation—managers and participants alike.

[5] The interested reader is referred to two previously published reports. The first is entitled *Recreational User Groups and their Leisure Characteristics: Analysis for the Statewide Comprehensive Outdoor Recreation Planning (SCORP) Process.* (PR447 - WDNR, Madison, WI and Staff Paper 98.4 - Center for Community Economic Development, University of Wisconsin - Extension, Madison, WI.). The second is entitled *Forests and Regional Development: Economic Impacts of Woodland Use for Recreation and Timber in Wisconsin* (Monograph G3694, Board of Regents of the University of Wisconsin System, Madison, WI.). Both reports are available from the authors.

Figure 4-3: **Average Outdoor Recreation Compatibility Ratings for Interaction with Highlighted Activities**



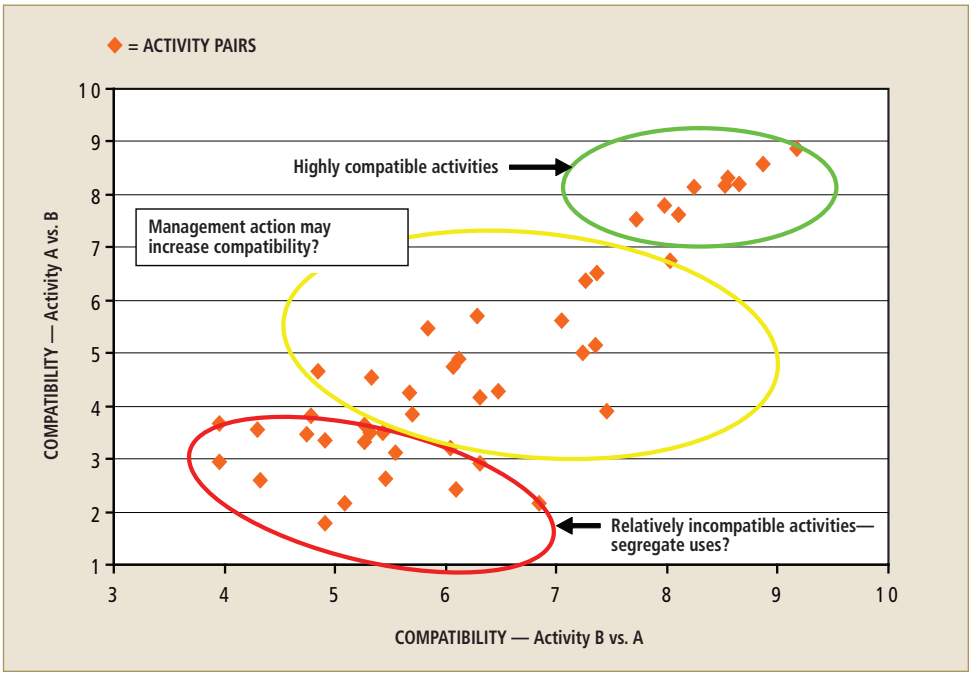
Current and Potential Management Strategies

Recent reviews of research in the field of recreation conflict management have revealed that management which aims to avoid recreation conflict is ineffective. Rather, successful management must seek to understand and mitigate conflict. The conceptual model used in this study adopts this perspective by seeking to classify—not avoid—recreation conflict. With a firm understanding of these conflicts in hand, recreation managers may work to mitigate and address them. This study is also careful to highlight the positive aspects of recreation interaction. Rather than evaluating recreation activities according to conflict, it evaluates activities in terms of compatibility. In expert panel sessions with recreation management professionals in Wisconsin, there was a generally favorable reaction to this approach and a number of comments that suggested it could represent a refreshing new perspective in the field of recreation conflict.

Figure 4-4 shows the compatibility ratings of all recreation pairs used in the study. From this figure it is clear that most recreation activities in Wisconsin are highly compatible (circled in green), or somewhat compatible (circled in yellow). It may be that the activity pairs that fall in the middle of graph (with ratings of 4-7 for both uses) have the greatest potential for improved compatibility. With strong, assertive management, these activity pairs may be shifted to a more positive interaction level. Activities that fall towards the top of the graph (with ratings above a seven) already work well together and could therefore occur in the same management unit. Those activity pairs that fall below a specific compatibility rating (a threshold of 4 has been chosen for this figure) are likely incompatible. The most appropriate management action for these activities will generally involve segregating uses and aggressively managing interactions with other activities through regulation, interpretation, and/or voluntary restrictions.

Successful recreation management must seek to understand and mitigate conflict.

Figure 4-4: **Compatibility Ratings for Land-Based Recreation Activities**

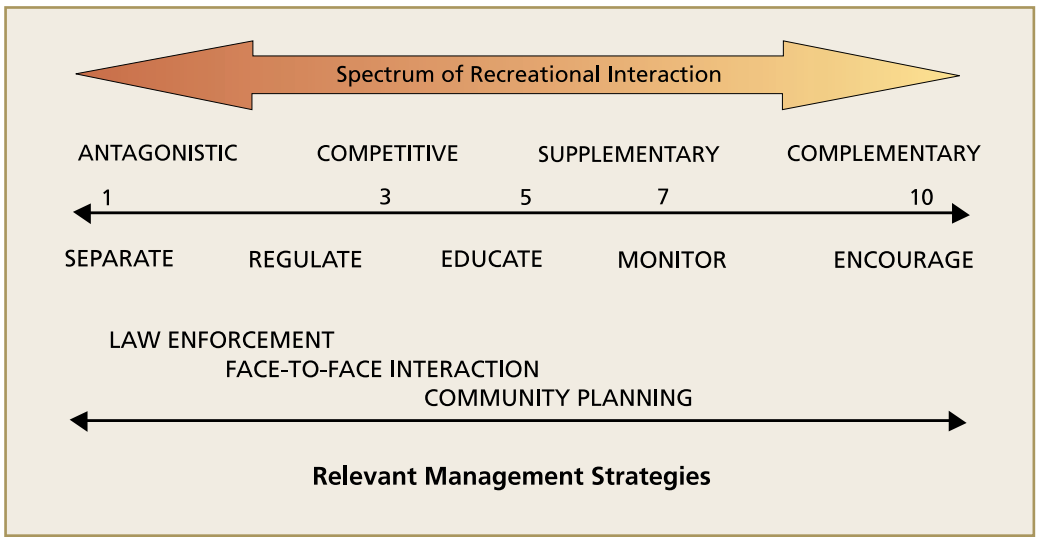


Focus group participants also discussed the use of programs promoting community involvement in the recreation management process as a way to involve the public in the development of management strategies.

Just as there is a spectrum of possible compatibility interactions between recreation activities, there is an analogous spectrum of possible management interaction. Recreation management professionals used in the focus group described a range of overlapping and complementary management strategies that they use to manage conflict within their jurisdictions. Their speculation on the likely relationship between the compatibility spectrum and types of management strategies are summarized in Figure 4-5. For activities that fall towards the antagonistic end of the compatibility spectrum, management typically involves segregating uses through the development of separate facilities and infrastructure. In these situations, regulation and enforcement are the primary implementation strategies, with wardens and other law enforcement officials taking the lead in enforcement. In the highly competitive range of the compatibility spectrum, regulation, interpretation, and voluntary restriction are the dominant management strategies. Possible actions in this range of the spectrum include limiting different uses to different times of the year or designating authorized equipment for different activities. In the more moderately competitive range of the compatibility spectrum, strategies such as interpretation and discussion may be used to facilitate communication between user groups and promote the development of user-created solutions to recreation conflict.

Focus group participants also discussed the use of programs promoting community involvement in the recreation management process as a way to involve the public in the development of management strategies. A good example of this type of effort is the Community Wardening program, which encourages local field war-

Figure 4-5: **Spectrum of Recreation Interaction and Relevant Management Strategies**



An important challenge to recreation planning is the fact that much of the conflict in outdoor recreation may be attributed to the actions of a small number of individuals, not the larger group of responsible participants.

dens to establish collaborative relationships between wardens and the communities they serve. In this program, wardens are first trained, and then stationed in key communities around the state with at least one warden in every county. Under this system, more than 90% of the entire law enforcement corps is decentralized to local communities. These joint community/warden efforts help develop relationships between law enforcement and local communities, which in turn aids in the enforcement of state regulations and the protection of natural resources.

Educational efforts, both at a community and personal level, are always the first step in mitigation of recreational conflicts. These educational messages can be delivered in many forms, such as the Wisconsin Trail Ambassador Program, which promotes the safe and responsible public use of ATVs in a way that does not harm the environment or conflict with laws or rules. Another example is Wisconsin wardens who regularly present fishing and wildlife regulations at schools, conservation clubs, civic organizations, and other group meetings. They also work with local radio, TV, and newspapers. Wardens often have regular columns in local newspapers for sharing timely information about current outdoor recreation issues and regulations.

Across the recreation interaction spectrum as a whole, focus group participants emphasized the need for good integrative recreation planning, an effort that will involve all user groups, park staff, law enforcement, and park and recreation facilities.

Despite these management recommendations, some activities remain difficult to plan for. For some of the activity categories used in this study, there is no unity in activity style or participant perspective. For instance, there are many different types of hunting (e.g., bow-hunting for deer, gun-hunting for deer, turkey hunting, grouse hunting, duck hunting, etc.) and unique factors that relate to the specific forms of hunting (e.g., the season in which it is conducted, whether it is stand-based or trail-based, and whether an ATV or other motorized vehicle is used). This variability can have a significant influence on the degree of conflict that may be generated with other recreation participants as different kinds of hunters interact differently with other user groups.

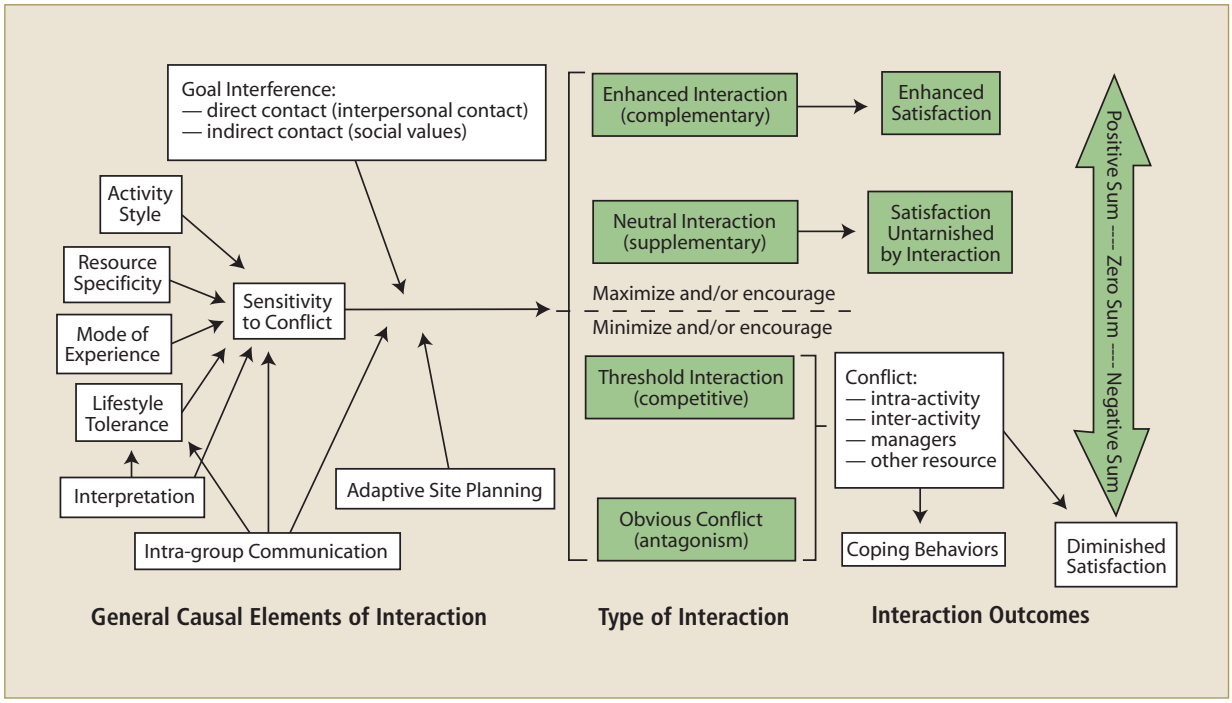
A second important challenge to recreation planning is the fact that much of the conflict in outdoor recreation may be attributed to the actions of a small number of individuals (the "bad apples"), not the larger group of responsible participants. Panel participants did not agree on what percentage of recreation participants fall into the "bad apple" category or to what degree the management of recreation conflict should be adapted toward this small percentage of users.

Summary

By applying the findings of the recreation expert panel to a goal interference model of recreation conflict, this SCORP process has developed an expanded model of outdoor recreation interaction. This model, shown in Figure 4-6, relies on interpretation and adaptive site planning as key elements in determining recreation interaction outcomes. This model is not limited to interactions classified as competitive or antagonistic. In fact, most recreational interaction can be considered supplementary and/or complementary and should be considered in any effective recreation management plan. Both antagonistic and non-antagonistic recreation interactions will best be addressed through proper recreation planning and management, activities that will maximize positive interactions between non-antagonistic activities and mitigate antagonistic uses.

Both antagonistic and non-antagonistic recreation interactions will best be addressed through proper recreation planning and management.

Figure 4-6: **Expanded Goal Interference Model of Outdoor Recreation Conflict**

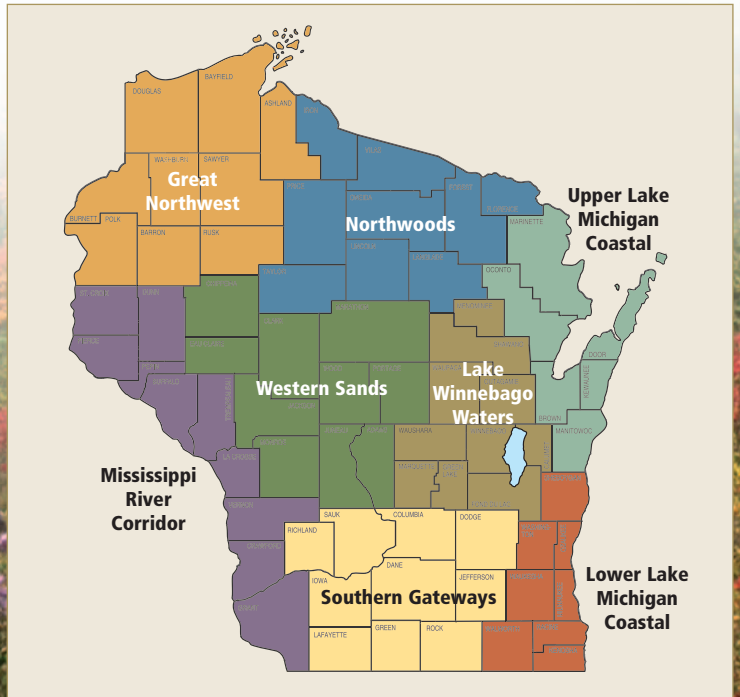


CHAPTER 5

Wisconsin SCORP Regional Profiles

For the purposes of this plan, Wisconsin has been divided into eight planning regions: The Great Northwest, Northwoods, Upper Lake Michigan Coastal, Lower Lake Michigan Coastal, Southern Gateways, Mississippi River Corridor, Western Sands, and Lake Winnebago Waters. These regions, shown in Figure 5-1, are areas of the state of roughly the same geographic size that represent different demographic trends, tourism influences, and environment types. Together, these influences shape each region's recreational profile, describing which activities are popular, which facilities need further development, and which issues are hindering outdoor recreation.

Figure 5-1:
Wisconsin SCORP Planning Regions



Physical environment is obviously an important factor in determining which activities are popular within a given region. Regions with easy access to water—the Mississippi River Corridor, Great Northwest, Northwoods, and Lake Michigan Coastal Regions—are generally popular for boating, fishing, swimming, and visiting beaches. Regions that remain largely undeveloped—the Great Northwest, Northwoods, and Western Sands, for example—are often popular for activities that require large areas of open space such as snowmobiling and ATVing. Regions with high densities of forests and park areas—the Great Northwest, Northwoods, and Upper Lake Michigan Coastal—are popular for activities such as hiking and camping.

Urban resources in the state also affect regional recreation profiles. The Lower Lake Michigan Coastal Region, for example, is heavily influenced by the presence of Milwaukee and its suburbs. Recreation needs in this region reflect an urban character, with needs for facility developments such as dog parks, picnic shelters, and other developed-setting facilities. These needs also exist in the Southern Gateways Region, which is heavily influenced by the City of Madison and its suburbs. Areas of the state with little urban presence, the Great Northwest, for example, are in need of ATV trails and increased park maintenance.

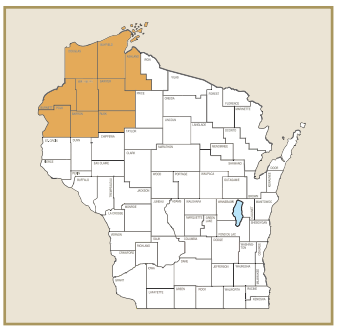
Tourism also affects regional recreation. Regions close to the metropolitan areas of the Twin Cities (the Mississippi River Corridor and the Great Northwest) are heavily influenced by the recreational preferences and demands of tourists from Minnesota. Other regions, particularly those in the northern regions of the state, are more heavily influenced by in-state visitors. The Great Northwest and Northwoods have both experienced a boom in the development of seasonal housing, homes that are generally built by Wisconsinites looking to have a second home within their own state.

This chapter summarizes recreation supply and demand across Wisconsin SCORP regions. These results provide a context for further discussion on recreation needs.

More detailed regional descriptions and datasets are available online at: *http://dnr.wi.gov/planning/scorp/reports/*.

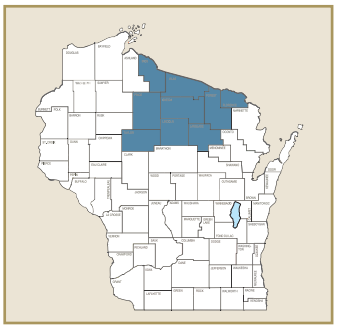
The eight SCORP regions represent different demographic trends, tourism influences, and environment types. Together, these influences shape each region's recreational profile, describing which activities are popular, which facilities need further development, and which issues are hindering outdoor recreation.

Wisconsin SCORP Regional Descriptions



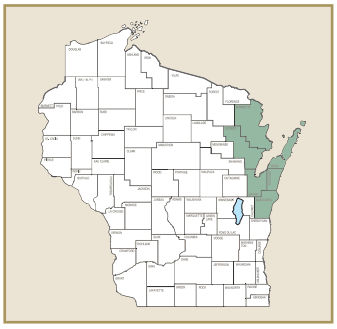
The Great Northwest:

The Great Northwest Region is located in the northwestern part of the state and encompasses Douglas, Bayfield, Ashland, Burnett, Washburn, Sawyer, Polk, Barron, and Rusk Counties. The region as a whole has an abundance of natural resources such as Lake Superior, the Namekagon River, the St. Croix River, and the Chequamegon National Forest. Because of these resources, several counties within the region are considered Non-Metro Recreation Counties, areas that offer an exceptional amount of outdoor recreation opportunities. Not surprisingly, tourism is a large and growing industry within the region. Visitors from the Twin Cities and surrounding suburban areas, as well as visitors from within Wisconsin, are placing increasing pressure on the region's recreational resources. Seasonal home development, particularly along river and lakeshore areas, has increased dramatically within the Great Northwest. Other areas of the region are rural with small populations and little urban influence.



Northwoods:

The Northwoods Region is located in the north-central part of the state and encompasses Florence, Forest, Iron, Langlade, Lincoln, Oneida, Price, Taylor, and Vilas Counties. Like the Great Northwest Region, many of these counties are considered Non-Metro Recreation Counties because of the abundant natural and recreational resources they offer. In the Northwoods Region these resources include the Northern Highland/American Legion State Forest, the Nicolet National Forest, the Wolf River, and the Peshtigo River. With its numerous high quality lakes and rivers, the region supports a large number of water-based recreation opportunities. Tourism is an important—and growing—business in the region as increasing numbers of visitors from Milwaukee, Madison, and Chicago make use of the Northwoods environment. With this influx of visitors and an ever-growing population of baby boomers retiring to the region, the Northwoods has experienced a surge in its seasonal housing and recreational property market. These properties and the populations they attract are expected to be an important influence on future recreation uses within the region.

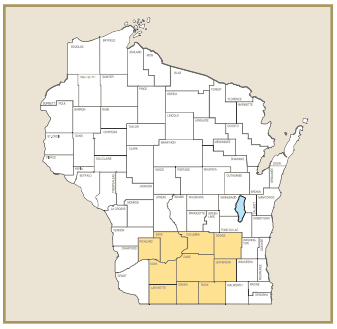


Upper Lake Michigan Coastal:

The Upper Lake Michigan Coastal Region is located in the northeast part of the state and encompasses Brown, Door, Kewaunee, Manitowoc, Marinette, and Oconto Counties. The region as a whole is heavily influenced by its association with Lake Michigan, with each of the region's six counties containing some portion of the lake's shoreline. Although many residents and visitors to the region use Lake Michigan for their recreational needs, other water resources such as the Peshtigo River, Popple River, and Pike River also attract visitors with their abundant fishing and paddling opportunities. Urban resources also affect the Upper Lake Michigan Coastal Region. Green Bay, the region's urban center, impacts much of its surrounding area with its suburban growth and cultural resources. Other natural and recreational resources within the region offer state citizens and out-of-state tourists a glimpse of what makes this region so exceptional. Door County contains over 250 miles of picturesque shoreline (more than any other county in the United States) and 10 historic lighthouses, features that attract many tourists and seasonal residents. Peninsula State Park, located along the picturesque shores of Green Bay, is one of the most popular state parks in Wisconsin.

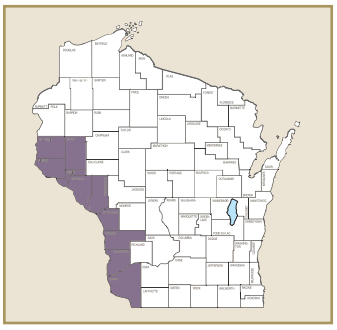
Lower Lake Michigan Coastal:

The Lower Lake Michigan Coastal Region is located in the southeast part of the state and encompasses Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington, and Waukesha Counties. Home to Milwaukee, the largest city in the state, the Lower Lake Michigan Coastal Region is the most urban and most populous of all Wisconsin regions. The urban influence of Milwaukee and its surrounding suburbs has created demand for distinctly urban recreation facilities such as dog parks, city trails, and basketball courts. Despite this urban influence, some areas of the region such as Walworth County, the lakes area of western Waukesha County, and the Kettle Moraine State Forest offer opportunities for undeveloped outdoor recreation. Tourism, especially from the greater Chicago metropolitan area, is a major influence on Lower Lake Michigan Coastal recreation as increasing numbers of Illinois residents travel to the region to use Wisconsin lands and waters.



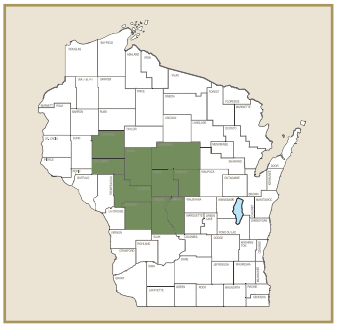
Southern Gateways:

The Southern Gateways Region is located in the south-central part of the state and encompasses Columbia, Dane, Dodge, Green, Iowa, Jefferson, Lafayette, Richland, Rock, and Sauk Counties. From the rolling green hills of the southern parts of the region, to the centrally-located Wisconsin River, and the marshy areas of eastern portions, this region contains a variety of environments, the combination of which provide a wide array of recreational opportunities. The Southern Gateways also has a number of important geologic features. Devil's Lake State Park, a craggy glacial lake surrounded by high cliffs and scenic overlooks, is one of the most popular recreation areas in the region. The Baraboo Hills, located in one of the few portions of the state that remained unglaciated in the past Ice Age, is a spectacular geologic resource with many unique rock formations, cliffs, waterfalls, and a high diversity of plant and animal species. The central presence of Madison impacts much of the Southern Gateways Region. Rapid suburban development within the greater Madison metropolitan area has made areas of Dane County among the fastest growing in the state. As urban populations increase, so too does the demand for traditionally urban-based recreation such as dog parks and developed sports facilities. These resources will continue to impact future recreation supply and demand.



Mississippi River Corridor:

The Mississippi River Corridor Region is located in the southwestern portion of the state and encompasses St. Croix, Dunn, Pierce, Pepin, Buffalo, Trempealeau, La Crosse, Vernon, Crawford, and Grant Counties. The Mississippi River running along the region's western border is the primary recreational resource in the region. The river and its backwaters are used for a variety of nature- and water-based recreational activities such as boating and swimming. Streams extending off the Mississippi support an excellent coldwater fishery. Although most public lands within the region are fishery or wildlife areas, there are also a number of state parks. The Great River Road, a thoroughfare that follows the Mississippi for 250 miles, connects over 50 local parks and beaches. Urban influences also impact the region as visitors from the nearby Twin Cities metropolitan area make use of the region's recreational resources. Suburban development associated with the greater Twin Cities metropolitan area in St. Croix and Pierce Counties continues to impact recreation supply and demand across the region.



Western Sands:

The Western Sands Region is located in the west-central part of the state and encompasses Adams, Chippewa, Clark, Eau Claire, Jackson, Juneau, Marathon, Monroe, Portage, and Wood Counties. Outside of northern Wisconsin's abundant park and water resources, the Western Sands Region has the largest amount of public lands and water in the state. These areas include the Black River State Forest, Jackson County Forests, the Necedah National Wildlife Refuge, the Wisconsin River, the Chippewa River, the Black River, and many other smaller state and county parks. Although the region remains largely rural, it is influenced by outside tourism demands from the Chicago and Twin Cities metropolitan areas. Easy highway access and relatively cheap land prices within the region have made it a popular location for seasonal home development. The region's Non-Metro Recreation Counties, Adams and Juneau, have experienced especially high housing growth, particularly along river flowages.

Lake Winnebago Waters:

The Lake Winnebago Waters Region is located in the south-central part of the state and encompasses Calumet, Fond du Lac, Green Lake, Marquette, Menominee, Outagamie, Shawano, Waupaca, Waushara, and Winnebago Counties. Lake Winnebago, the largest lake in the state, is a major recreational resource within the region and includes within its larger system the smaller lakes of Butte des Morts, Winneconne, Poygan, and the Fox and Wolf Rivers. Because Lake Winnebago exerts such a strong influence on the region as a whole, populations have tended to concentrate around its shores. Most cities within the region are in the Fox River Valley and include the urban areas of Appleton, Oshkosh, Kaukauna, Neenah, and Menasha. Urban and suburban development within the region continues to grow and extend into previously undeveloped areas and public lands. As development continues, natural areas such as High Cliff State Park are becoming increasingly threatened. Continued monitoring and proactive management techniques will be needed to ensure the continued protection of the region's important natural and recreational resources.

As development continues, natural areas are becoming increasingly threatened. Continued monitoring and proactive management techniques will be needed to ensure the continued protection of these important natural and recreational resources.

Regional Demographic Overview

Although Wisconsin SCORP regions share some similarities, each represents a unique set of demographic, socio-economic, and environmental influences. These differences shape each region's recreational profile.

Although most of Wisconsin's land remains rural, most state residents (68%) live in a relatively small, urbanized area of Wisconsin. Populations are concentrated in the southern and eastern portions of the state, especially in the Lower Lake Michigan Coastal Region (home to Milwaukee and expanding Chicago suburbs). In the year 2000, the population of the Lower Lake Michigan Coastal Region was over two million, a number representing 38% of all Wisconsin residents. The Great Northwest and Northwoods are the most sparsely populated of all Wisconsin regions, together comprising only about 7% of the total state population.

Population growth has also influenced statewide recreation. During the 1990s, every SCORP region experienced population growth. The Southern Gateways Region (including Madison and surrounding suburban areas) and the Lake Winnebago Waters Region experienced especially high growth rates, each growing about 13% between 1990 and 2000. Between 2000 and 2010, the Mississippi River Corridor Region is projected to have the highest population growth rate in the state (9.5%), a result of rising populations in St. Croix County. Other regions projected to experience high growth during this period include the Southern Gateways Region (projected to grow 9.3%), and the Lake Winnebago Waters Region (projected to grow 8.1%). The Northwoods is projected to grow at the slowest rate (3%). On a larger timescale, the counties projected to have the fastest rates of population growth between 2004 and 2020 include St. Croix (31% projected growth), Calumet (21% projected growth), Outagamie (18% projected growth), and Dane (17% projected growth).

Natural and recreational resources also affect the population growth of regions across the state. Because people are attracted to natural amenities like lakes and forests, naturally beautiful or recreation-rich areas of the state have experienced disproportionately high population and housing growth. The population of Wisconsin's Non-Metro Recreation Counties grew at an annual rate of 1.5% between 1990 and 2000, a population growth rate higher than either Metro Counties (0.9% population growth), or other Non-Metro Counties (0.8% population growth). In addition, Non-Metro Recreation Counties experienced a higher annual rate of housing growth in 2000-2004 (1.7% growth) than either Metro (1.5% growth) or other Non-Metro Counties (1.4% growth).

Three SCORP regions have high rates of seasonal home ownership: the Northwoods, where 34% of all home ownership is seasonal; the Great Northwest, where 25% of all home ownership is seasonal; and the Upper Lake Michigan Coastal where 10% of all home ownership is seasonal. These same regions also had the oldest median ages in 2000: 41.3 years, 39.7 years, and 36.6 years, respectively. Populations in these regions are expected to grow even older by 2010 with projected median ages of 45.7 years, 43.3 years, and 39.4 years, respectively. Specific counties within these regions—Vilas, Door, Burnett, and Iron—are projected to have median ages of over 50 years by 2010. The national median age in 2000 was 35.3 years.

Regional Recreation Demand Overview

As part of this SCORP process, outdoor recreation participation surveys conducted by the National Survey on Recreation and the Environment (NSRE) have examined 62 recreational uses broken down to the SCORP regional level. Regional recreation participation is based on a number of factors including environmental resources, resident demand, and seasonal variations. Table 5-1 lists the participation rates of adults ages 16 and older for all 62 recreational uses examined in NSRE data. The highest level of regional participation is highlighted in **ORANGE BOLD** type for each recreation activity. When analyzing this data by individual regions, patterns appear which may be used to define a regional recreational topology based upon demand. Recreation participation patterns across the state indicate a recreation supply that is diverse and varied across regions; each region is unique and offers different types of recreational opportunities according to its specific natural and built amenities. Upon examining these trends further, larger patterns spanning multiple regions begin to emerge. Motorized recreation, for example, is popular across all northern regions, while urban activities such as visiting a dog park are popular in the urbanized southern and eastern portions of the state. A common factor across all regions is the popularity of water-based activities supported by the state's abundance of water resources

Table 5-1: **Wisconsin Recreation Demand by SCORP Region (%)**

Activity	Wisconsin Percent	Great Northwest	Northwoods and Upper Lake Michigan Coastal*	Lower Lake Michigan Coastal	Southern Gateways	Upper Mississippi River	Western Sands and Lake Winnebago Waters*
Walk for pleasure	85.8	86.6	81.4	85.7	**88.6**	86	85.8
Family gathering	78.9	74.1	**84.2**	75.8	79.9	79	81.2
Driving for pleasure	60.3	**68.5**	58.3	58.2	62.1	59.2	62.1
Picnicking	56.6	60.9	54.3	54.9	**62.5**	51.9	56.9
Bicycling	49.3	42.6	46.9	47.2	53.5	40.4	**55.6**
Boating (any type)	47.6	**56.2**	48	44.7	48.5	47	49.8
Visit a beach	47.3	48.8	44.9	**51.4**	43.4	42.1	47
Swimming in lakes, streams, etc.	45.8	**52.9**	44.5	47.7	42.7	41.9	46
Snow/ice activities (any type)	44.4	48.7	**50.1**	42.1	40.8	45.5	46.7
Freshwater fishing	40.7	**49.4**	45	35.9	35.1	40.3	48.6
Swimming in an outdoor pool	38.3	24.9	32.9	**43.1**	38.6	34	38
Visit a wilderness or primitive area	38.3	**62.2**	34.7	33.1	39.9	34.3	43.4
Visit outdoor theme/water park	37.6	28.1	30.4	36.9	37.9	39.2	**42.9**
Warmwater fishing	37	42.4	42.1	31.4	33.3	36.8	**45**
Motorboating	36.4	**44.1**	39.5	33.3	32	37.3	41.3
Day hiking	35	**42.7**	34.5	33.5	38	34.5	33.8
Developed camping	32.3	30.5	29.7	29.9	31.4	**37.7**	36.3
Visit a farm or agricultural setting	31.8	27	21.2	28.9	32.9	**40.4**	38.7
Mountain biking	31.3	27.8	33.3	31	30.9	24.6	**34.4**
Running or jogging	29.4	28.9	23	**32.6**	32.1	21.1	28.6
Visit other waterside (besides beach)	26.4	26.4	23.5	25.8	26.4	23.9	**30.1**
Golf	25.9	23.4	**29.3**	28.2	22.6	31	21.9
Drive off-road	25.8	34.5	30.5	20	17.1	32.5	**34.7**
Off-road driving with an ATV	23.4	33.9	29.5	14.1	15.2	**34.6**	34.1
Hunting (any type)	21.7	**37.3**	26.7	14.9	16	30.5	27.2
Canoeing	20.5	**29**	21	18.3	24.6	18.5	19.8
Target shooting	20.2	20.3	**31.4**	15.1	17	29.8	21.5
Big game hunting	19.2	**32.7**	23.9	12.8	12.8	30.2	24.4
Snowmobiling	18.3	**26.5**	25.1	13.9	10.1	21.9	25.1
Off-road 4-wheel driving (SUV)	17.7	22.7	**25.3**	14.8	11.6	22.2	20.3
Ice skating outdoors	16.6	14.2	**20.7**	15.6	19.9	14.5	15.2
Nature-based educational program	16.3	9.8	14.1	18.4	**22.6**	8.3	14.1
Primitive camping	16	18.9	17.4	12.1	18.3	15.6	**19.2**
Small game hunting	14.5	**23.1**	20.2	10.3	11.1	18.6	17.4
Rafting	14.4	11.8	13.4	13.5	13.2	15.7	**17.2**
Coldwater fishing	13.9	**17.1**	16.9	12.1	11	15.6	16.2
Visit a dog park to walk a pet	12.4	2.8	5.2	14.3	**14.5**	11.5	13.2
Tennis outdoors	12.3	3.7	8.1	13.6	**16.4**	10.5	11.9

* Because of the small sample size in the Northwoods and Upper Lake Michigan Coastal Regions, results from these regions were combined. Numbers presented in this graph are therefore the same for both regions. This was also done for the Western Sands and Lake Winnebago Waters Regions.

Source: NSRE 2000-2004. Versions 1-18 (except 12 & 17), N=2,935. Interview dates: 7/99 to 11/04.

ORANGE BOLD type indicates the highest percentage of participants per activity.

Table 5-1: **Wisconsin Recreation Demand by SCORP Region (%)** (continued)

Activity	Wisconsin Percent	Great Northwest	Northwoods and Upper Lake Michigan Coastal*	Lower Lake Michigan Coastal	Southern Gateways	Upper Mississippi River	Western Sands and Lake Winnebago Waters*
Waterskiing	12.2	8.7	11.8	12	7.1	**16.4**	15.7
Cross-country skiing	11.4	17.3	**19.4**	10.1	7.3	6.9	13.3
Fishing in the Great Lakes	11	13.2	**15**	14.1	5.8	6.5	9.2
Hunt upland birds	10.5	14.7	15.5	9.2	5	**19.2**	10
Rowing	10.1	12.2	**14.6**	10.8	6.2	3.9	11.7
Horseback riding (any type)	9.8	9.2	7.4	9.2	10.2	10.4	**11.6**
Downhill skiing	9.7	14.1	9	8.6	8.8	**13.3**	10
Use personal watercraft	9.7	5.7	11.5	10.5	6.4	**12.2**	9.9
Disc golf	8.8	5.9	7	9.3	6.7	5.3	**12.3**
Horseback riding on trails	8.1	4.1	5.8	7.5	9.3	7.1	**10.7**
Snowshoeing	8	**15.5**	18	5.6	3.5	5.8	9.8
Snorkeling	7.7	**8.9**	9	8.8	6.4	4	7.8
Backpacking	6.9	**9.6**	7.4	6.3	6.9	7.6	6.5
Paintball games	6.6	5.9	7.7	6.5	4.8	**8.9**	6.5
Kayaking	6.3	5.3	5.3	**7.2**	**7.2**	1.8	6.9
Off-road motorcycling	5.9	5.2	4.3	6.2	2.8	7.2	**7.9**
Migratory bird hunting	5	**7.7**	4.4	4.7	3	7.5	5.6
Sailing	4.9	3.9	7	**6.1**	5	2.9	3.1
Snowboarding	4.7	1.5	**6.2**	5.5	3.3	5.8	3.9
Ice hockey outdoors	4	2.9	**5.3**	3.8	4	3.5	4.1
Skateboarding	2.6	0	**4.4**	4	1.5	1	1.6
Geocaching	2	1.4	3	2.1	1.3	0.9	**2.3**
Scuba diving	1.3	1.1	**2.1**	1.1	1.2	0.9	1.4
Dog sledding	1.1	3	1.9	0.5	**2.1**	0	0.8
Windsurfing	0.7	1.1	**1.9**	1	0	0	0.2
Surfing	0.3	0	0	**0.7**	0	0	0.2

* Because of the small sample size in the Northwoods and Upper Lake Michigan Coastal Regions, results from these regions were combined. Numbers presented in this graph are therefore the same for both regions. This was also done for the Western Sands and Lake Winnebago Waters Regions.

Source: NSRE 2000-2004. Versions 1-18 (except 12 & 17), N=2,935. Interview dates: 7/99 to 11/04.

ORANGE BOLD type indicates the highest percentage of participants per activity.

In an attempt to quantify out-of-state recreation demand, this SCORP also examined the recreation demands of tourists visiting Wisconsin. In 2004, the Wisconsin Department of Tourism conducted a survey of both the Chicago and Minneapolis Designated Market Areas (DMAs). This survey gauged recreation demand by asking residents of each DMA what types of Wisconsin recreation they participated in. Because each region is influenced differently by out-of-state visitors, data was separated according to Wisconsin SCORP regions. Table 5-2 lists the top 5 most popular outdoor recreation activities for the Chicago and Twin Cities market areas in each of the eight SCORP regions.

Popular activities presented in Table 5-2 represent outdoor recreation activities which could be developed to attract a larger tourist base to Wisconsin. Many of these activities, such as canoeing, fishing, birdwatching, and picnicking, are popular across state regions. Other uses—boating, downhill skiing, among others—are more specific to regions with particular natural resources such as water access or undeveloped land. When compared to recreational demand within Wisconsin (Table 5-1), it is also clear that, while some recreational activities popular among out-of-state residents are also popular among state residents (fishing and hiking, for example), many activities popular among non-Wisconsin residents are not as popular among Wisconsinites (birdwatching and camping, for example). As the state works to develop recreational activities and facilities, it is important that it strike a balance between resident and tourist demands, ensuring all users have access to their preferred activities.

Table 5-2: **Out-of-State Recreation Demand from Chicago and Twin Cities DMAs**

Great Northwest		
Ranking	Chicago	Twin Cities
1	Fishing	Fishing
2	Birdwatching	Sightseeing
3	Camping	Camping
4	Boating	Picnicking
5	Hiking	Hiking

Northwoods		
Ranking	Chicago	Twin Cities
1	Canoeing	Fishing
2	Hiking	Sightseeing
3	Fishing	Boating
4	Downhill Skiing	Camping
5	Camping	Hiking

Upper Lake Michigan Coastal		
Ranking	Chicago	Twin Cities
1	Canoeing	Fishing
2	Hiking	Sightseeing
3	Fishing	Boating
4	Downhill Skiing	Camping
5	Camping	Hiking

Lower Lake Michigan Coastal		
Ranking	Chicago	Twin Cities
1	Picnicking	Sightseeing
2	Sightseeing	Hiking
3	Boating	Picnicking
4	Fishing	Boating
5	Hiking	Fishing

Southern Gateways		
Ranking	Chicago	Twin Cities
1	Downhill Skiing	Sightseeing
2	Sightseeing	Birdwatching
3	Picnicking	Hiking
4	Camping	Picnicking
5	Hiking	Camping

Mississippi River Corridor		
Ranking	Chicago	Twin Cities
1	Downhill Skiing	Birdwatching
2	Canoeing	Sightseeing
3	Sightseeing	Hiking
4	Picnicking	Picnicking
5	Camping	Camping

Western Sands		
Ranking	Chicago	Twin Cities
1	Canoeing	Birdwatching
2	Birdwatching	Hiking
3	Downhill Skiing	Sightseeing
4	Sightseeing	Picnicking
5	Picnicking	Camping

Lake Winnebago Waters		
Ranking	Chicago	Twin Cities
1	Birdwatching	Picnicking
2	Sightseeing	Sightseeing
3	Hiking	Camping
4	Fishing	Fishing
5	Picnicking	Birdwatching

Regional Public Perspectives on Top Recreation Issues and Needs

Certain issues are causing impediments to outdoor recreation opportunities within Wisconsin. In order to better understand these issues, the WDNR conducted a series of town meetings across the state. These meetings, conducted in 2005, collected 125 written comments and an additional 1,300 online comments. All survey participants were asked 2 questions:

- *"What recreation issues will be growing in significance in the next 5 years?"*
- *"What barriers are keeping you from recreating outdoors as often as you would like?"*

Table 5-3 reflects a summary of the most common responses by region.

A number of issues are common across many regions of the state.

Table 5-3: **SCORP Region Public Perspectives on Top Recreation Issues and Needs**

Issues	Great Northwest	Northwoods	Upper Lake Michigan Coastal	Lower Lake Michigan Coastal	Southern Gateways	Mississippi River Corridor	Western Sands	Lake Winnebago Waters
Budget constraints on park and recreation programs					●			
Conflicts between fishermen and sport watercraft						●		
Continued urban sprawl/development				●				
Deteriorating facilities							●	
Development encroaching on public lands						●		
(lack of) Funding for park and recreation maintenance	●		●	●				
Increased competition for natural resources					●			
Increased use of public lands						●		
Increasing ATV usage and associated impacts	●	●	●	●	●		●	●
Increasing costs of recreation						●		
Increasing multiple-use recreation conflicts			●	●	●		●	●
Increasing noise pollution from motorized activities	●							●
Increasing pressure on parks and recreation areas from the growth of urban areas							●	
Increasing use of recreation facilities by disabled populations							●	
Invasive species			●	●			●	●
Lack of educational programs/naturalists/ interpreters	●						●	
Lack of maintenance on parks and recreation areas				●	●			
Lack of park and recreation staff					●			
Loss of public access to lands and waters		●	●	●				●

Table 5-3: **SCORP Region Public Perspectives on Top Recreation Issues and Needs** (continued)

Issues	Great Northwest	Northwoods	Upper Lake Michigan Coastal	Lower Lake Michigan Coastal	Southern Gateways	Mississippi River Corridor	Western Sands	Lake Winnebago Waters
Loss of sites / properties, i.e., Hoffman Hills, Chippewa Moraine							●	
Maintaining rustic areas				●				
Meeting the changing demands of recreation						●		
Conflicts between silent sport and motorized user groups				●				●
Noise pollution from motorized activities		●		●				
Overcrowding	●			●	●		●	●
Poor water quality impairing recreation			●	●	●		●	●
Preserving natural lands				●				
Pressure from the logging industry to harvest on public lands	●							
Protecting silent sport areas					●			
Protection of fragile areas			●					
Relevance to urban populations				●				
The possible loss of silent sport facilities		●						

Needs	Great Northwest	Northwoods	Upper Lake Michigan Coastal	Lower Lake Michigan Coastal	Southern Gateways	Mississippi River Corridor	Western Sands	Lake Winnebago Waters
Better maps/signage for trails			●	●				●
Four wheel drive OHV parks								●
More ATV usage opportunities					●			
More biking trails		●	●	●	●		●	
More birdwatching opportunities	●							
More boating access				●			●	
More camping opportunities				●	●	●	●	●
More canoeing opportunities					●			
More cross-country skiing opportunities					●			
More dog parks				●				
More electric campsites			●	●				
More fishing opportunities						●	●	
More geocaching sites on public lands								●
More hiking trails	●	●	●	●	●	●	●	●
More horse trails				●	●	●	●	●
More hunting opportunities								●
More kayaking opportunities	●			●				●
More mountain biking trails				●				●
More public lake access				●				
More public lands				●				
More silent sport opportunities	●			●				
More swimming opportunities				●				
More trails (all types)							●	

Suburban development pressures are localized to specific regions of the state.

From these results it is clear that a number of issues such as increasing ATV usage, overcrowding, increasing multiple-use recreation conflicts, loss of public access to lands and waters, invasive species, and poor water quality, are common across many regions of the state. Other issues such as concern over logging in the Great Northwest, relevance to urban populations, and increasing suburban development pressures, are localized to specific regions of the state. Similarly, recreation needs are often common across many regions. More biking trails, camping opportunities, hiking trails and horse trails were common needs in most regions. Other needs were localized to specific regions; more dog parks in the urban Lower Lake Michigan Coastal Region, more boating access in the Lower Lake Michigan Coastal and Western Sands Regions, and more public access to recreational resources (including lake access, swimming opportunities, and more public lands) in the highly developed Lower Lake Michigan Coastal Region.

A Relative Metric of Regional Recreation Supply

Recreation demand and recreation supply are fundamentally unique elements built on different units of measurement. While descriptive measures of recreation demand focus primarily on visitor numbers by place of origin, recreation supply represents the extent of physical resources present in a given region and gives some indication of user capacity. Examples of the extent of recreation supply include the number of park acres or the number of lifts in a downhill ski hill. The latter capacity elements speak to a more detailed assessment of capacity; examples include items such as the number and size of camping sites or the uphill lift capacity in skiers per hour. Various approaches for standardizing supply components have been developed. These can be generalized into two groups: those that focus on relevant market size (population) and those that focus on aggregate geographic extent (areal).

For the 2005-2010 SCORP process, a metric was developed to present the "relative" nature of recreation supply. The recreation location quotient (RLQ) is one type of indexed metric that provides comparable measures of a region's recreational resources. An RLQ is a measure of the relative difference in regional recreational characteristics as compared to a given reference region. For recreational resources, RLQ is calculated as follows (eq. 1):

$$RLQ = \frac{\%\ resource\ in\ a\ given\ local}{\%\ resource\ in\ a\ reference\ region}$$

This metric provides a broad measure of recreational supply that captures wider spatial markets than metrics which look only at one region. Although the RLQ remains purely descriptive, it is useful in assessing the relative abundance and scarcity of recreational resources in a given location. In order to assess broad regional supply as it relates to local supply (e.g. relative to everyone else, how much recreation does a specific community have?), the RLQ also includes a measure of local supply relative to a reference region.

Specifically, the recreation location quotient is calculated as follows (eq. 2):

$$RLQ_s^i = \frac{\left(\frac{r_s^i}{pop_s^i}\right)}{\left(\frac{r_n^i}{pop_n^i}\right)}$$

where ***r*** is the extent or capacity of a recreation site, ***i*** is the recreation type, ***s*** is the local community, ***pop*** is population, ***t*** is total units, and ***n*** is the reference region. A variant of this equation that places local resources on an areal basis where ***area*** is measured in acres can be calculated as follows (eq. 3):

$$RLQ_s^i = \frac{\left(\frac{r_s^i}{area_s^i}\right)}{\left(\frac{r_n^i}{area_n^i}\right)}$$

Recreation location quotient values speak to the abundance or scarcity of recreation supply. The theoretical domain of a recreation location quotient extends from zero to infinity ($0 < RLQ < \infty$), but in practice the upper bound falls around 50. Inferences of alternative RLQ values include the following:

RLQ = 1	Region has same proportion of recreation type ***i*** as reference region.
RLQ < 1	Region has less of recreation type ***i*** than reference region (infers relative scarcity).
RLQ > 1	Region has an excess proportion of recreation type ***i*** as compared to reference region (infers relative abundance).
RLQ = 4	Region has four times the level of recreation type ***i*** as compared to the reference region.

Again, the recreation location quotient provides a usable metric for assessing *where* recreation supply exists relative to a reference region. For the purposes of this SCORP, and for data conformability, we have used the State of Wisconsin as a reference region.

Recreation location quotients do have limitations. An RLQ does not allow for variations in regional tastes and preferences, nor does it account for propensities to consume locally, ease of access via transportation networks, income and employment levels, economies of size (agglomerative effects of urban influence), or regional comparative advantage. Despite these limitations, location quotients are valuable in that they provide an inexpensive and comparable statistic for examining the incidence of a characteristic in a given location.

For this SCORP, RLQs were calculated at the most disaggregate level and averaged to both recreation type and regional aggregate. Regional RLQs by SCORP recreation typologies outlined in Table 5-4 are summarized in Table 5-5.

Recreation demand and recreation supply are fundamentally unique elements built on different units of measurement.

Table 5-4: **Wisconsin Outdoor Recreation Supply Data Elements**

Developed Land	111 Unique Elements
• ATV Parks [#]	
• Campgrounds – public and private [#]	
• Campsites – electrical [#]	
• Campsites – non electrical [#]	
• Carnivals [#]	
• Carts – motorized [#]	
• Country clubs [#]	
• Dirtbike/motocross tracks [#]	
• Dog parks [#]	
• Equipped playground facilities [#]	
• Fairgrounds [#]	
• Golf driving ranges [#]	
• Golf resorts [#]	
• Highway wayside stops [#]	
• Highway/interstate rest stops [#]	
• Horseback riding stables facilities [#]	
• Miniature golf courses [#}	
• Outdoor theme parks [#]	
• Paintball games areas [#]	
• Parks [#, acres]	
• Picnic areas [#]	
• Seasonal/second homes [#]	
• Shooting ranges – archery [#]	
• Skateboard parks [#]	
• Softball diamonds [#]	
• Tourist attractions & amusement places [#]	
• Trails – all types warm weather [miles]	
• Zoos [#]	

Nature-based Land	21 Unique Elements
• Balloon rides [#]	
• Caves – accessible [#]	
• Federal refuges [acres]	
• Forest reserves [acres]	
• Forested land [acres]	
• Public hunting lands [#]	
• State natural areas [acres]	
• State park [acres]	
• Trust lands [acres]	
• Waterfowl production areas [acres]	
• Wetland restoration areas [acres]	
• Wilderness areas [acres]	
• Wildlife areas [acres]	

Snow and Ice	24 Unique Elements
• Ice skating rinks – outdoor [#]	
• Ski hills [# areas, runs, hills, vert.]	
• Ski jumps [#]	
• Trails – winter use [miles]	

Water-based Land	31 Unique Elements
• Beaches (Great Lakes) [#]	
• Boat launches [#]	
• Dams [#]	
• Fishing piers [#]	
• Flowages [acres]	
• Lakes [#]	
• Lakes [acres]	
• Marinas [#]	
• Outdoor swimming pools – public [#]	
• Shoreline [miles]	
• State fishery areas [acres]	
• Trails – water use [miles]	
• Trout streams – accessible [miles]	
• Water [acres]	

Viewing and Learning	35 Unique Elements
• Arboretums [#]	
• Battlefields [#]	
• Botanical gardens [#]	
• Camps, educational/recreational [#]	
• Effigy mounds & archeological sites [#]	
• Historic places [#, districts, forts, ships, villages]	
• Horseback riding academies and schools [#]	
• Lighthouses [#]	
• Monuments [#]	
• Nature centers [#]	
• Observation towers [#]	
• Observatories [#]	
• Rustic roads [miles]	

Sports – Individual	14 Unique Elements
• Disc golf courses [#]	
• Golf course [# courses and holes]	
• Outdoor track and field facilities [#]	
• Rodeo stands [#]	
• Sports car tracks [#]	
• Tennis courts – outdoor [#]	

Sports – Team	24 Unique Elements
• Baseball diamonds [#]	
• Basketball courts – outdoor [#]	
• Football stadiums [#]	
• Football teams – pro and semi-pro [#]	
• Professional baseball facilities [#]	
• Professional football facilities [#]	
• Soccer fields – outdoor [#]	
• Soccer teams – pro and semi-pro [#]	
• Volleyball courts – outdoor [#]	

Private Clubs	11 Unique Elements
• ATV clubs [#]	
• Bicycling clubs [#]	
• Curling clubs [#]	
• Fishing clubs [#]	
• Golf clubs [#]	
• Horseback riding clubs [#]	
• Lawn bowling clubs [#]	
• Sailing and yacht clubs [#]	
• Ski clubs [#]	
• Snowmobile clubs [#]	
• Water ski clubs [#]	

Private Retail	35 Unique Elements
• Archery supplies providers [#]	
• ATV dealers [#]	
• ATV rental places [#]	
• Bed and breakfasts [# beds, rooms]	
• Bicycle dealers and renters [#]	
• Boat dealers, sales, service, rental [#]	
• Camping equipment [#]	
• Canoe – rental and charter [#]	
• Circus companies [#]	
• Diver's equipment and sales, retail [#]	
• Fishing bait and tackle dealers [#]	
• Golf equipment and supplies, retail [#]	
• Guide/charter services [#]	
• Guns and gunsmiths [#]	
• Horse riding and rentals [#]	
• Hotel/motel [beds]	
• Hunting equipment and supplies, retail [#]	
• Motorcycle and motor scooter dealers [#]	
• Rafting tour agencies [#]	
• Recreational equipment/parts providers [#]	
• Saddlery and harness [#]	
• Skiing equipment – rental and retail [#]	
• Snowmobiles retail [#]	
• Soccer equipment and supplies, retail [#]	
• Sporting goods, retail [#]	
• Tennis equipment and supplies, retail [#]	
• Tourist rooming houses [#]	
• Tourist rooming houses [beds]	
• Watersport equipment, sales & service [#]	
• Yacht charters [#]	

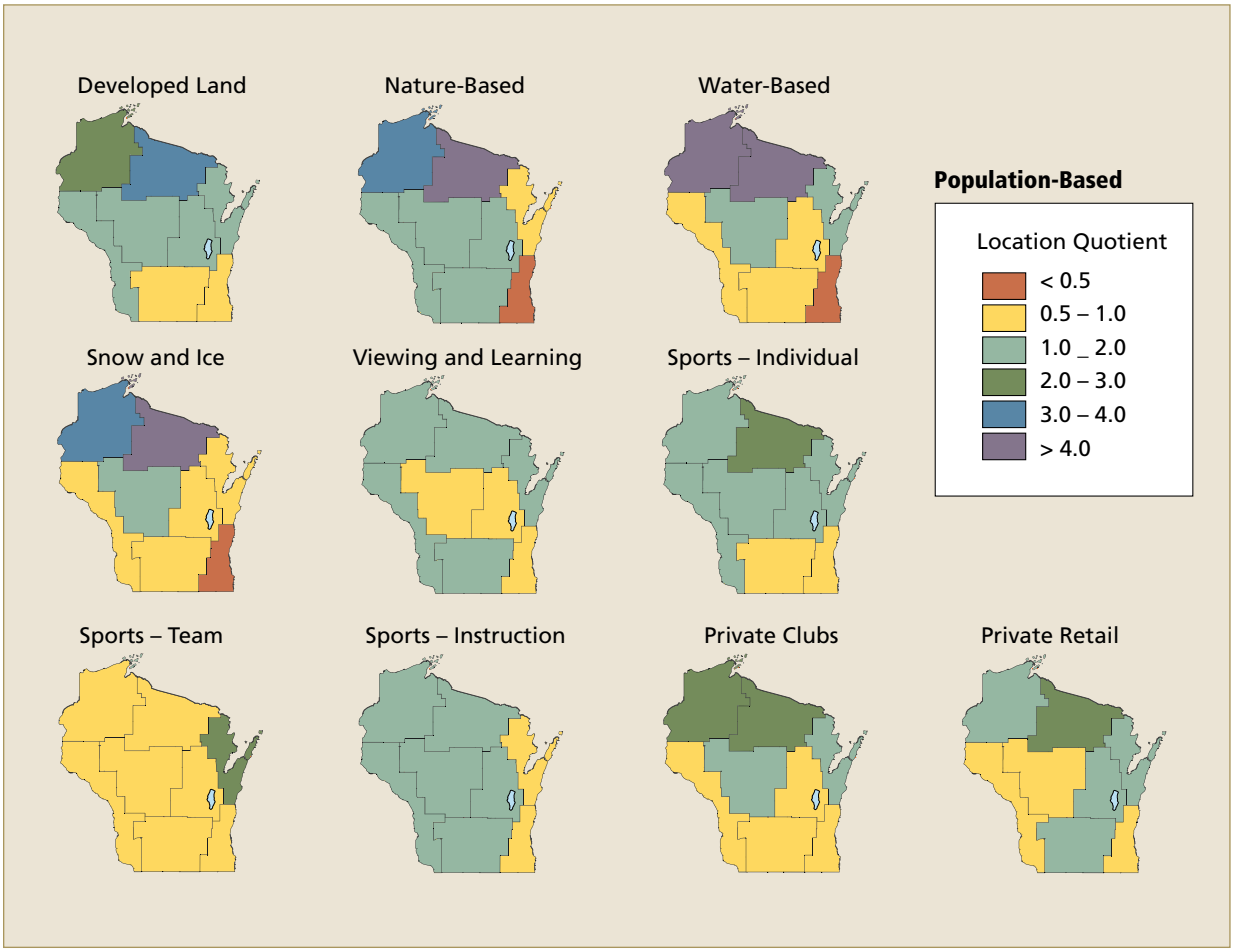
Results suggest that, in general, regions with high demand for outdoor recreation do not provide opportunities for this recreation in proportion to their physical size.

Sports Instruction	29 Unique Elements
• Baseball programs [#]	
• Cross-country programs [#]	
• Football programs [#]	
• Golf programs and instruction [#]	
• Scuba and skin diving instructions [#]	
• Soccer programs [#]	
• Softball programs [#]	
• Tennis programs [#]	
• Track and field programs [#]	

Regional recreation supply components in Wisconsin as categorized by the ten supply typologies described in Table 5-4 and as measured by population and area-based RLQ scores, suggest some interesting issues related to the provision of outdoor recreation opportunities across Wisconsin regions. Results suggest that, in general, regions with high demand for outdoor recreation do not provide opportunities for this recreation in proportion to their population. For instance, the Lower Lake Michigan Coastal Region (including Milwaukee, Racine, Kenosha, and the northern Chicagoland suburbs) and Southern Gateways Region (including Madison) have overall population-based RLQs of less than one (.56 and .93, respectively), which indicate a relative lack of recreation supply within these regions. When comparing these results to those of the less populous northern regions (the Great Northwest and the Northwoods), it is clear that northern regions have comparatively abundant opportunities relative to their low populations (population-based RLQs of 2.38 and 3.53, respectively).

Another interesting aspect of these results is the relative supply of more urban-oriented recreation types such as team sports, viewing and learning (interpretive), and private retail/service as compared to natural resource-oriented activities associated with land and water. For all recreation types, northern regions of the state have RLQs that are higher to or equal to southern regions. However, for urban-oriented activities the RLQs are much more consistent throughout the entire state. The urban influence of high population regions leads to the provision of urban-oriented recreation opportunities at levels comparable to less populated regions.

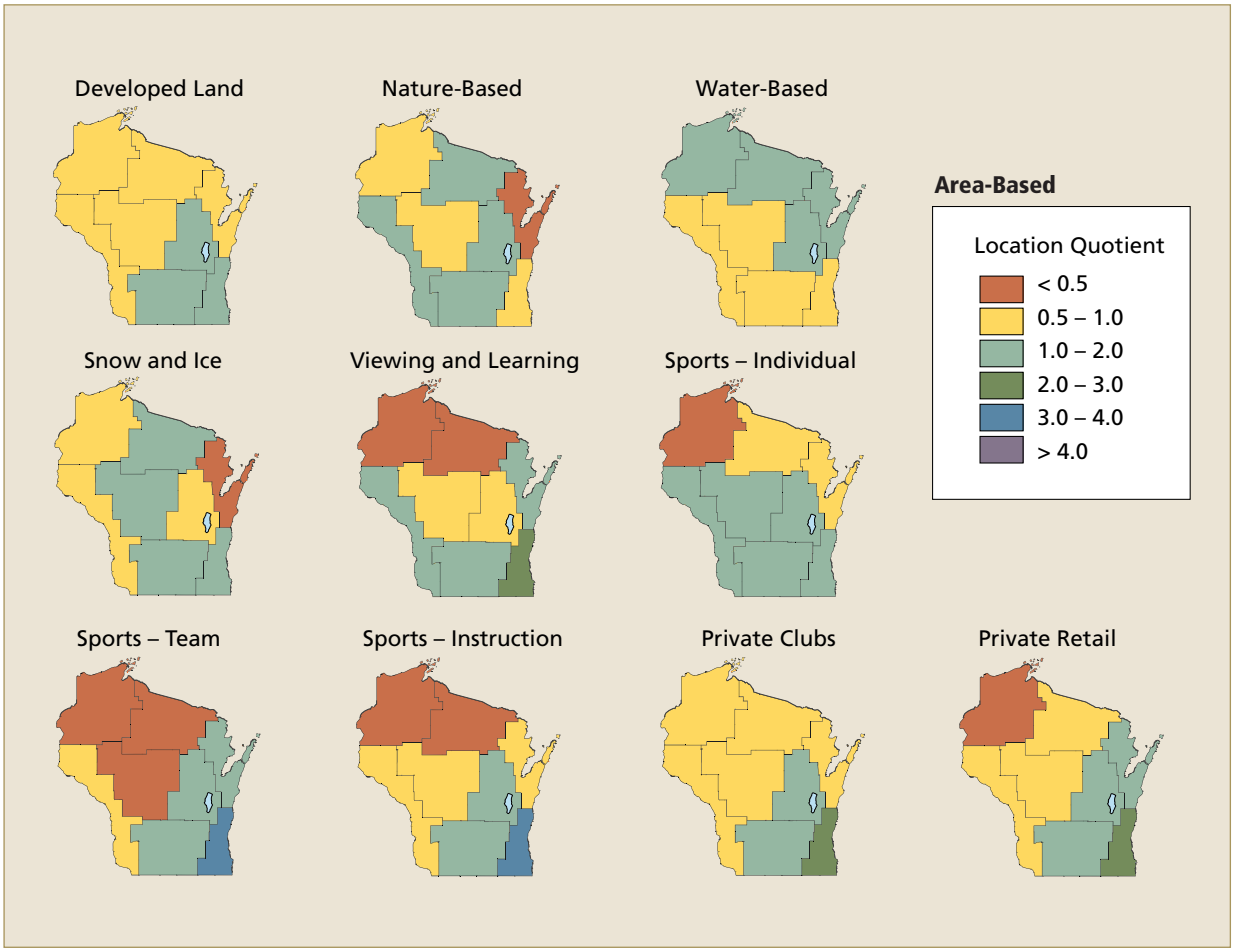
Figure 5-2: **Relative Supply of Recreation by Type • Population-Based Recreation Location of Quotients**



This pattern in the provision of recreation opportunities is revealed in the area-based RLQ. For regions with a high population such as Lower Lake Michigan Coastal and Southern Gateways, the area-based RLQ is higher for many recreation types—developed land, viewing and learning, sports–individual, sports–team, sports–instruction, private clubs, and private retail—than the less populated regions of northern and central Wisconsin. The large populations in urban regions, and the associated recreation demand, lead to the provision of these urban-oriented recreation opportunities at a higher per acre rate than in less populated regions. Indeed, even for some natural resource-oriented recreation types—nature-based and snow and ice—the differences in the RLQ between northern and southern regions of Wisconsin are less apparent for the area-based RLQs. Area-based RLQs are summarized by region in Figure 5-3 and Table 5-5.

For all recreation types, northern regions of the state have population-based RLQs (PRLQs) that are higher to or equal to southern regions. However, for urban-orientated activities, PRLQs are more consistent throughout the entire state.

Figure 5-3: **Relative Supply of Recreation by Type • Area-Based Recreation Location of Quotients**



Another aspect of recreation supply involves elements of economic development. Because of general increases in leisure demand, changing rural economic patterns, perceptions of tourism as a clean industry, relatively low capital requirements for business, and other community development benefits, communities across Wisconsin have embraced outdoor recreation and tourism as new development strategies. Gateway communities—those communities in close proximity to public recreation destinations—are grappling with a number of complex and unfamiliar growth management issues. Though the presence of natural amenities, the supply of recreational sites, and the promotion of recreation as a means of economic growth have benefited the economies of many communities, tourism is rarely a developmental panacea and the influx of visitors and increase in recreational land may have adverse effects on income equality, social systems, and environmental health.

Table 5-5: **Recreation Location Quotients by Supply Type for Wisconsin SCORP Planning Regions**

Population-Based RLQ Recreation Topology	Great Northwest	Northwoods	Upper Lake Michigan Coastal	Lower Lake Michigan Coastal	Southern Gateways	Mississippi River Corridor	Western Sands	Lake Winnebago Waters
Developed Land	2.54	3.44	1.28	0.51	0.94	1.15	1.18	1.03
Nature-Based Land	3.52	7.01	0.56	0.17	1.02	1.61	1.05	1.06
Water-Based	4.71	6.50	1.65	0.27	0.59	0.78	1.05	0.86
Snow and Ice	3.25	5.45	0.67	0.44	0.85	0.86	1.68	0.79
Viewing/Learning	1.99	1.93	1.76	0.55	1.24	1.69	0.71	0.78
Sports – Individual	1.84	2.35	1.09	0.53	0.99	1.54	1.50	1.05
Sports – Team	0.71	0.94	2.61	0.87	0.87	0.83	0.70	0.97
Private Clubs	2.25	2.83	1.23	0.81	0.73	0.95	1.12	0.84
Private Retail	1.66	3.44	1.68	0.61	1.10	0.85	0.72	1.11
Sports – Instruction	1.34	1.37	0.82	0.88	1.01	1.24	1.10	1.03
OVERALL	**2.38**	**3.53**	**1.34**	**0.56**	**0.93**	**1.15**	**1.08**	**0.95**

Area-Based RLQ Recreation Topology	Great Northwest	Northwoods	Upper Lake Michigan Coastal	Lower Lake Michigan Coastal	Southern Gateways	Mississippi River Corridor	Western Sands	Lake Winnebago Waters
Developed Land	0.60	0.78	0.83	1.89	1.43	0.80	0.83	1.30
Nature-Based Land	0.83	1.59	0.36	0.61	1.56	1.12	0.75	1.34
Water-Based	1.11	1.47	1.07	1.00	0.90	0.54	0.74	1.09
Snow and Ice	0.76	1.24	0.43	1.63	1.29	0.59	1.19	0.99
Viewing/Learning	0.47	0.44	1.14	2.03	1.88	1.18	0.50	0.98
Sports – Individual	0.43	0.53	0.70	1.95	1.50	1.07	1.06	1.32
Sports – Team	0.17	0.21	1.69	3.22	1.32	0.58	0.50	1.23
Private Clubs	0.53	0.64	0.80	3.00	1.11	0.66	0.79	1.06
Private Retail	0.39	0.78	1.09	2.24	1.67	0.59	0.51	1.41
Sports – Instruction	0.32	0.31	0.53	3.25	1.54	0.86	0.77	1.30
OVERALL	**0.56**	**0.80**	**0.86**	**2.08**	**1.42**	**0.80**	**0.76**	**1.20**

Land Legacy sites should be considered the highest priority recreation areas to preserve and protect within each region.

Regional Land Legacy Areas for High Recreation Demand

Another important consideration for future recreational needs is the preservation and protection of the larger areas that provide space for popular regional activities. As part of the of the recreational Land Legacy process described in Chapter Three, Land Legacy sites were also identified within each region. These sites were chosen to provide recreational opportunities that could serve the recreational needs of an entire region. Table 5-6 lists the top five Land Legacy sites in each of the eight SCORP regions. These sites should be considered the highest priority recreation areas to preserve and protect within each region.

Table 5-6: **Regional Land Legacy Areas for High Recreation Demand**

Great Northwest
1. Balsam Branch Creek and Woodlands
2. Chequamegon-Nicolet National Forest
3. Bois Brule River
4. Crex Meadows
5. Upper Red Cedar River
Northwoods
1. Chequamegon-Nicolet National Forest
2. Northern Highland-American Legion State Forest
3. Upper Wolf River
4. Upper Forks of the Flambeau River
5. Black River
Upper Lake Michigan Coastal
1. Niagara Escarpment
2. Point Beach and Dunes
3. Chequamegon-Nicolet National Forest
4. Peshtigo River
5. Manitowoc-Branch River

Lower Lake Michigan Coastal
1. Kettle Moraine State Forest
2. Kohler-Andrae Dunes
3. Middle Kettle Moraine
4. Bong Grassland
5. Illinois Fox River
Southern Gateways
1. Crawfish River-Waterloo Drumlins
2. Baraboo Hills
3. Lower Wisconsin River
4. Blue Mound State Park
5. L. Koshkonong to Kettle Moraine (tie)
5. Baraboo River (tie)
5. Middle Wisconsin River (tie)
5. Sugar River (tie)

Mississippi River Corridor
1. Kickapoo River
2. Upper Mississippi River National Fish and Wildlife Refuge
3. Lower Chippewa River and Prairies
4. Coulee Coldwater Riparian Resources
5. Black River
Western Sands
1. Black River
2. Upper Chippewa River
3. Central Wisconsin Grasslands
4. Robinson Creek Barrens
5. Yellow (Chippewa) River
Lake Winnebago Waters
1. Niagara Escarpment
2. Lakes of the Winnebago Pool
3. Sand Country Trout Streams
4. Oxford Savanna
5. Portage to Buffalo Lake Corridor

Common deficiencies within the nature-based category include a shortage of parks, camping, carry-in boat launches, and certain trail types.

Within the developed setting category, local shortages such as basketball courts, ice skating rinks, trailerable boat launches, and dog parks are the most common.

Summary – Regional Recreation Needs

One of the primary purposes of the SCORP is to identify shortfalls in recreation facilities (supplies) across the state. This identification process relies on both primary data gathering techniques such as surveys, as well as anecdotal comments on recreation user perceptions. By making use of both of these techniques, this SCORP has developed a comprehensive summary of recreation needs across the State of Wisconsin. For this SCORP, targeting was done at the regional level, using regional demand, regional supply (RLQs), local park and recreation plans, and public comment data to determine which recreation supplies are, in a relative sense, in short supply. In addition, future trends were also considered through a process discussed in Chapter Three. The combining of these methods and techniques has resulted in a summary presented in Table 5-7. To simplify the targeting technique, recreation needs were divided into nature-based and developed setting categories. This division allows for a clear distinction between recreation niches such as a state parks and urban trails.

As Table 5-7 indicates, several recreation needs are common throughout the state. Common deficiencies within the nature-based category include a shortage of parks, camping, carry-in boat launches, and certain trail types. These elements are, for the most part, provided at a federal, state, or county level of development. Within the developed setting category, local shortages such as basketball courts, ice skating rinks, trailerable boat launches, and dog parks are the most common.

As funding for recreation land acquisition and facility development dwindles, this type of regional profiling will aid in the wise allocation of limited financial resources.

Table 5-7: **Wisconsin SCORP Regional Recreation Supply Shortages**

SCORP Region	Nature-based	Developed Settings
Great Northwest	Boat launches – carry-in Campgrounds Parks Trails – ATV Trails – cross-country ski Trails – dogsled Trails – hiking Trails – horseback riding Trails – off-road truck and motorcycle Trails – snowmobile Trails – snowshoe Trails – water	Camps – educational Ice skating rinks Marinas Paintball game areas Picnic areas Sailboat clubs/rentals Shooting ranges Soccer fields Softball diamonds Tennis courts Trails – bicycle Volleyball courts
Northwoods	Campsites – electrical Parks	Basketball courts Bicycling clubs Boats/sailboat rental Dog parks (urban areas) Playground facilities Horseback riding clubs Ice skating rinks Marinas Outdoor swimming pools Soccer fields Softball diamonds Tennis courts Trails – inline skating Volleyball courts
Upper Lake Michigan Coastal	Campsites – non-electrical Parks Trails – cross-country ski Trails – hiking Trails – horseback riding Trails – mountain biking	Basketball courts Boat equipment providers Dog parks (urban areas) Playground facilities Horseback riding clubs Shooting ranges Soccer fields Tennis courts Volleyball courts Water parks
Lower Lake Michigan Coastal	Campgrounds Parks Trails – ATV Trails – mountain biking Trails – off-road motorcycle Trails – off-road truck Trails – water Wildlife areas	Baseball diamonds Basketball courts – outdoor Boat launches Disc golf courses Dog parks Fishing piers Golf courses Horseback riding stables Ice skating rinks Miniature golf courses Nature centers Outdoor swimming pools Playground facilities Shooting ranges – archery Shooting ranges – gun

Table 5-7: **Wisconsin SCORP Regional Recreation Supply Shortages** (continued)

SCORP Region	Nature-based	Developed Settings
Southern Gateways	Backcountry/walk-in camping Boat launches – carry-in Natural areas Parks Public water access Trails – hiking Trails – horseback riding	Boat launches – trailerable Camps – educational Dog parks Ice skating rinks Nature centers Picnic areas Sailboat clubs/rentals Tennis courts Tennis programs Trails – bicycle
Mississippi River Corridor	Boat launches – carry-in Horseback riding and rentals Parks ATV parks Campgrounds – electrical Trails – cross-country ski Trails – horseback riding Trails – water Trails – ATV	Boat launches – trailerable Nature centers Picnic areas Ski hills Soccer fields Water parks
Western Sands	Beaches Fishing piers Parks	Basketball courts – outdoor Boat launches – trailerable Dog parks Golf courses Marinas Nature centers Outdoor theme parks Soccer fields Tennis courts
Lake Winnebago Waters	Boat launches – carry-in Campgrounds Trails – cross-country ski Trails – mountain biking Trails – snowmobile	ATV parks Basketball courts – outdoor Dog parks Golf courses – 9-hole Horseback riding stables Trails – bicycle Ski hills

As funding for recreation land acquisition and facility development dwindles, regional profiling will aid in the wise allocation of limited financial resources.

CHAPTER 6

Wisconsin Outdoor Recreation Participation Trends and Observations

While recreation participation trends may be useful in anticipating future recreation programming or facility needs, the use of these trends must be tempered by an understanding of the priorities and policies (such as fitness of equity goals) of park and recreation service providers. This chapter focuses on seven key indicators that alert decision-makers to shifts in recreation participation and demand. Understanding these indicators will aid recreation providers in evaluating the impacts a given trend will have on the diverse elements of parks and open space.

Key Indicators and General Trends

The seven indicator areas relevant to the task of evaluating future recreation demands are:

- Demographics
- Health and Wellness
- Environment
- Technology
- Economics
- Government
- Changing Land Use

These indicators are discussed below in sequence.

Demographics

One of the most important indicators of future recreational demand and interest is the forecast for demographic change. Presently, the aging of the baby boom generation is one of the most significant trends affecting outdoor recreation. During the years 1946–1964, millions of infants were born. After 1964, birth rates fell abruptly and did not rise again until after 1980 when the baby boomers became parents themselves. Because of improved health, fitness, and lifestyle changes, many members of the boomer generation are participating in recreational activities at ages well past those in previous generations. Boomers are also retiring with relatively high disposable incomes, allowing them to travel and participate in a diverse range of recreational activities. As this population continues to age, the demand for less active outdoor recreation pursuits and facilities—walking, gardening, and birding, for example—has become an increasingly important factor in state recreation demand. As more members of this demographic retire, one would expect a higher level of marginally fit recreation users, and more demand for mid-week recreation programs.

While the baby boom generation is important in predicting future recreation demand, Generation Y is also becoming an important group to watch. Members of this generation, born between 1981 and 1995, make up the largest consumer and recreation group in the nation. As Generation Y begins to enter the workforce and have families of their own, their specific demands will increasingly shape recreation supply and demand. Although we will not know the true profile of this generation for another 10-15 years, every indication suggests that their values and desires are very different from those of their parents' generation. Tendencies within this group include a demand for instant access to information, high levels of multitasking, and low rates of physical activity. These characteristics will provide challenges to recreation planners and providers in the future.

Other segments of the population have also been shifting. Recent census data shows a rapid change in racial and ethnic diversity and population growth in immigrant communities within the state. Immigrant populations are typically family-oriented and have children, but their recreational interests and needs are different than those provided in traditional park and recreation programs. For example, in areas with larger Hispanic populations, parks and recreational areas have experienced an increased demand for picnic areas to accommodate large family gatherings. As immigrant communities continue to grow, future park and recreation needs are expected to change in response to this population's demands.

While age structures and immigrant populations have changed in recent years, a variety of new and non-traditional family structures have also emerged. These new family types have created many new and different leisure patterns and recreation demands. More adults now remain single until their 30s and 40s, with many of those that do marry either postponing having children until later in their lives, or choosing to not have children at all. At the same time, single-parent families have also increased. For all of these groups, free time is perceived as an opportunity to spend time with family and friends and as such, they often seek out recreation activities that allow group participation.

While group activities are popular among single-parent and no-children families, members of these demographics are often also interested in the more active and unusual recreation available in experiential trips an other non-traditional recreation activities. Traditional team sports such as football have reached a plateau in their growth, while more modern activities such as geocaching and disc golf continue to rise in popularity.

Recreation demand has also been affected by changes in work and leisure trends. Data from this SCORP indicates that Wisconsinites consider time to be their scarcest resource. While dual-income households

and flexible work schedules create more flexible recreation and travel patterns, the increasing demands of work often prevent people from participating in recreation as often as they would like. Work hours are longer, leisure hours less. Dual-income households in particular have felt the pinch of increased work hours as many American women (over 50%) now work outside the home. With all adults in a household working, free time available for recreating diminishes significantly. Because of these increased demands on limited spare time and the fact that households are generally busier with work and home life responsibilities, discretionary activities (activities that do not require scheduling) are expected to become increasingly popular in the coming years.

Given the significant and diverse ways that demographic trends impact recreation, it is important that any projection of future recreation demand incorporate demographic data into its findings. Projections of recreational participation that are based on total population, however, do not effectively consider changing demographics. Population has a limited impact on recreation demand because recreational activities and interests vary significantly over a person's lifetime. Rather than examine total populations, it is more useful to examine the profile, size and participation rates within actual user groups to determine future recreation needs. Certain population groups representing potential service needs or demands may be divided into specific user categories called market groups. Once these market groups are defined, additional research can reveal the specific needs and demands of each group.

Health and Wellness

Outdoor recreation is a component of physical fitness and a major focus of preventative care. Activity done as a part of outdoor recreational activities leads to a better quality of life physically, mentally, and socially. An examination of the current outdoor recreation industry reveals several trends: increased equipment sales, development of new activities, and growth in activities at both ends of the recreation spectrum. These activities include both those that are close to home and require little gear, such as walking, and those that require a large time commitment, a more adventurous attitude, and more technical gear, such as climbing, kayaking, and backpacking. The exact role public lands, recreational facilities, and outdoor activities will have in the future of health and wellness care is uncertain. It is undeniable that recreation can help maintain wellness. Over time, it is expected that the health benefits of recreation will become a constant feature of programming and investment in park facilities.

Environment

As the general public becomes more aware of environmental issues, concern over environmental quality is growing. Citizen expectations are also evolving with regards to the role regional and national environmental agencies play in local recreation and planning. More citizens are seeking an active role for themselves in environmental protection and conservation, a role that is creating a community-wide revitalization in environmental preservation and the provision of open space. This increased interest in the environment has also affected recreation participation rates as more people visit areas of minimally altered environments and trails.

Although environmental awareness is growing, environmental degradation continues. Global warming has begun to impact outdoor recreation, creating longer warm seasons, shorter cold seasons, and unpredictable climatic conditions. In the future, these changes will create an extended season for warm weather activities and a shortened season for cold weather activities. Changes to the landscape resulting from less dependable weather patterns will make seasonal recreation less reliable and planning for this type of recreation more difficult.

Technology

Electronic communication innovations have created interactive opportunities for recreation through the Internet, computer simulated games and sports, and other electronic sources. Although this new technology has increased and diversified the overall pool of recreational opportunities for users to choose from, it has also detracted from participation in more traditional recreation activities. In order to compete with non-traditional activities, providers of outdoor recre-

ation must continue to provide and maintain high quality service in all their recreational programming and facilities.

Economics

Increasingly, there is a rift between those that have access to recreation and those that do not. While household income is increasing, individual income in real growth terms is expected to decline. The fact that most homes are now two-income households results in two primary challenges. For affluent households with more discretionary income, additional resources from dual-incomes are often used for leisure activities including travel and entertainment. This affluent population has a greater ability to participate in a broader spectrum of recreation. At the same time, however, there has been an increase in the percentage of the population that falls within poverty guidelines. This growing gap between the rich and the poor has prompted an interest in developing separate strategies for the provision of leisure services for these two populations.

This disparity in income levels has created new demands for outdoor recreation as affluent families seek out new and exciting forms of recreation and less affluent families seek out high-quality, low-cost forms of recreation. As recreation activities compete for household recreation dollars and available time, there has been an increased emphasis on value and diversity of choices in recreational activities. To remain competitive with other facilities and to appeal to family households, facilities such as swimming pools must now have the most modern equipment and technologies such as water slides and interactive play areas.

Government

Whether state or locally owned, a large percentage of recreation lands are government owned and managed. Pressures on government lands—greater scarcity and high cost of land, rising operating costs and revenue limits, and increasing anti-taxation sentiment—will all affect the operation and development of recreational facilities and programs on these lands. Recreation is also becoming more market driven, meaning that activities are increasingly subject to competition between private, public, and non-profit recreation providers. A broad issue of what constitutes public access to public sponsored facilities and programs may challenge the financial feasibility of building new facilities and maintaining existing ones. Subsidized programs and minimal use fees could be difficult to maintain in light of these conditions.

Changing Land Use

Over time, Wisconsin's population has shifted from a predominantly rural population to a predominantly urban population. Today, roughly two-thirds of the state's population lives in urban areas, with more people migrating to these areas every year. Because of this shift, urban fringe areas are becoming an increasing hotbed for recreation activities. Facilities and spaces such as local dog parks, urban trails, and green space allocations, are all reflections of this increasing urban/suburban demand. Residential development in rural areas has continued as better highway networks provide for easy access to urban services and workplaces. Regional land use planning will continue be a primary component in the provision of recreational activities within an ever-changing suburban environment.

Wisconsin Trends and Observations

Wisconsin's population grew 7.3% between 1994 and 2004 and is expected to grow another 3.3% by 2010. This growth, along with the state's sizeable population of baby boomers now reaching retirement age, will create a larger demand for passive recreational activities. As Table 6-1 indicates, land resource-based activities have increased just over 27% in a ten year period. Much of this increase has occurred in the areas of wildlife viewing and off-road driving, both relatively inactive activities. While not generally popular among older participants, the biggest change in recreation participation has been in the area of snow- and ice-based activities. Much of this change may be attributed to recent advancements in equipment technology and an increased interest in snowboarding and ice skating.

The biggest change in recreation participation has been in snow- and ice-based activities.

Table 6-2 lists the activities with the highest percentage of participation change between 1995 and 2004. Overall, kayaking experienced the highest percentage change, growing 413.7%. Horseback riding also gained in popularity, participation rising 199.35%, and the use of personal water craft such as Jet Skis grew 196.3%. Activities with the highest growth rates over this period are generally those which are considered risky or adventure-type activities. Part of this growth is due to technological innovations such as lighter equipment, improved protective clothing, and navigation tools like GPS devices. Growth in specialized teaching programs has also advanced the popularity of these activities, many of which were once seen as elitist or requiring of advanced skills. With facilities and specialists now found across all regions of the state, these activities have become accessible to anyone with an interest.

Table 6-1: **Wisconsin Participation Trends by Resource Type • 1994–2004**

	Number of Participants in Millions		Percent Change
Resource Type	1994*	2004**	1994-2004***
Snow- and ice-based activities	1.29	1.84	43.1
Land resource-based activities	3.15	4.02	27.3
Water resource-based activities	2.77	2.98	7.8

*1994 population = 5,133,678; ** 2004 population = 5,509,026; *** % growth = 7.3%

Table 6-2: **Wisconsin Participation Trends by Activity • 1994–2004**

	Number of Participants in Millions*		Percent Change
Activity	1994	2004	1994-2004
Kayaking	0.051	0.262	413.7
Horseback riding	0.136	0.407	199.3
Personal water craft use	0.136	0.403	196.3
Snowboarding	0.074	0.195	163.5
Rock climbing	0.097	0.245	152.6
Soccer outdoors	0.175	0.407	132.6
Driving off-road	0.513	1.073	109.2
Orienteering	0.054	0.112	107.4

*Data from NRSE

Recreation projections can be examined in two ways. The first is simply participation as a numerical total. For the vast majority of recreation activities, this number will increase as the state's population does. To gauge a more accurate view of future participation, it is far more useful to examine a given activity's participation rate as a percentage of the total population. This number gives a better understanding of population growth vs. participation change in an activity. Table 6-3 considers the percentage changes in recreation participation rates, as well as industry forecasts and opinions from recreation professionals, to suggest which activities will be popular in the future. These observations are made for a five year period, and therefore reflect the most pressing demands on recreation in the immediate future. Some of these activities such as ATVing, RV camping, and geocaching are expected to grow in popularity. Other activities such as swimming, day hiking, and fishing, are expected to remain stable in their popularity. Still others such as downhill skiing and mountain biking are expected to decrease in popularity.

Kayaking experienced the highest percentage change in participation from 1994 to 2004, growing 413.7%.

Table 6-3: **Projected Trends in Wisconsin Outdoor Recreation Activities • 2005–2010**

Increasing Demand

Activity	Comment
ATV	Market saturation may occur by 2010, causing this use to level off.
Birdwatching	A popular activity for an aging baby boom population.
Canoeing	Cheap, easy water access for all generations.
Driving for Pleasure	An easy activity for all generations.
Gardening	On the rise with the baby boom population.
Geocaching	Popular both with families and members of the Y Generation.
Kayaking	Better technology has made this an affordable sport for the general public.
Motorboating	Costs have decreased enough to continue to make this a popular activity.
Off-road Motorcycling	Record sales of off-road vehicles continues to fuel this demand.
Paintball Games	Better and cheaper technology attracts the Y Generation.
Picnic	A family activity crossing generation gaps.
Road Biking	Increases will slow due to the retirement of Lance Armstrong and the effect that was felt from his Tour de France wins.
RV Camping	The baby boom population continues to change from tent to RVs, but increasing fuel prices may slow this.
Skateboarding	Popular with urban youth and the Y Generation.
Snowboarding	This may start to level off by 2010 as the next generation looks towards newer technology.
Snowshoeing	Not growing as fast since 2002.
Visit a Dog Park	Urban residents continue to demand more of these areas.
Walking	Popular among all ages, though especially aging baby boomers.
Water Parks	Construction of new water parks continues to fuel the increasing demand for this activity.
Wildlife Viewing/Photography	Often done in conjunction with driving for pleasure, making this activity very popular.

Stable Element

Activity	Comment
Cross-Country Skiing	Stable at this time but mainly driven by baby boomers. Declines may start by 2010.
Day Hiking	An easy, popular activity for all generations.
Disc Golf	Popular with younger urban generations.
Fishing	Very popular with all generations.
Horseback Riding	Continues to be popular with baby boomers, but may not be popular with the Y Generation.
Ice Skating	An easy, cheap activity for the mass public.
Inline Skating	After a quick rise in the 1990s this activity has leveled.
Personal Watercraft	Market saturation occurred in the 1990s with this use leveling off.
Rock Climbing	A small but stable Y Generation niche.
Rowing	A small niche activity with simple equipment.
Run/Jog	The baby boomer generation continues to run/jog, but Y Generation may not.
Sailing	Equipment demands and skill requirements prevent this from growing.
Scuba/Snorkel	A niche sport that attracts a younger generation.
Swimming	Always popular – water quality issues have caused growth in this activity to stagnate.
Tennis	A recent resurgence has stabilized this activity.
Tent Camping	Still popular but may start to lose ground to the RV trend.

Decreasing Demand

Activity	Comment
Backpacking	A popular baby boomer activity not as popular with the Y Generation.
Downhill Skiing	Continues to struggle with attracting the Y Generation.
Golf	Time and expense continue to push players to other recreation.
Hunting	Continues to struggle with generational loss and access issues.
Mountain Biking	Baby boomers that made the sport popular in the 1990s have switched to road bikes.
Snowmobile	The industry struggles with how to attract more people with less snow.
Team Sports	Except for soccer, all other sports have declined.

ATVing, RV camping, and geocaching are expected to grow in popularity.

CHAPTER 7

Wisconsin SCORP Outdoor Recreation Goals and Actions

The goals and actions listed in this chapter represent a summation of targeted elements to encourage Wisconsinites to enjoy more of the state's great outdoors. These goals and actions were developed through the input of the SCORP External Review Panel, internal WDNR groups, and the citizens of Wisconsin. For the most part, these actions take a broad approach to expanding outdoor recreation, and will require the involvement of many individuals and agencies working collaboratively to accomplish their outlined objectives.

Goal: Protect, Restore, and Enhance Wisconsin's Natural Resources for Outdoor Recreation

Wisconsin's lands and waters are a natural draw for outdoor recreation. Those who use the state's environments expect clean waters to paddle on and healthy forests to hike in. Increasingly, however, these natural resources are being menaced by threats such as invasive species, environmental degradation, and the continued fragmentation of forest and other natural areas. Left unmanaged, these threats will contribute to a diminished quality of outdoor recreation within the state. Wisconsinites are aware of the danger in these threats and have identified two issues—control of invasive species and poor water quality—as matters of high importance for state management.

Actions and Recommendations

1. *Continue to provide protection to lakes, rivers, and streams to improve aquatic habitat, water quality, and fisheries.*
2. *Continue to provide programs and funding for access to industrial forestry lands for outdoor recreation activities.*
3. *Continue to implement an invasive species control program on Wisconsin lands and waters.*
4. *Increase protection to wetlands, thereby benefiting the ecological and recreational resources of the state.*
5. *Continue to provide funding and assistance for the restoration of native prairies and grassland ecosystems.*
6. *Continue to support and fund the Smart Growth Planning process to help stop the fragmentation of open spaces while also allowing for development.*

Goal: Continue to Improve and Develop Wisconsin Outdoor Recreation Facilities

Upkeep and development of outdoor recreation facilities continues to be a central component of providing a quality outdoor recreation experience. Without proper facilities—an ice rink to skate on or an outdoor pool to swim in, for example—recreating outdoors becomes a challenge. A variety of publicly funded programs such as the Stewardship 2000 Program and the Federal Land and Water Conservation Fund are important partners in the funding and support of these developments.

While development helps expand the recreational resources and facilities of an area, maintenance sustains the resources already developed within a region. This efficient use of existing resources allows more money and time to be directed towards development of new facilities. Upkeep can be as simple as painting a building or as complicated as upgrading a water and sewage system within a state park. Because of its important role within any park system, it is important that providers allocate enough resources to support facility maintenance. The State Park system alone has a $90 million backlog of maintenance projects, all of which are important to the continued health of the system. As this backlog continues to grow, more recreationalists are noticing the effects of limited upkeep: less signage, less restroom monitoring, un-maintained grounds, and earlier seasonal closings.

Actions and Recommendations

1. *Continue to maintain and renovate outdoor recreation facilities for future generations.*
2. *Provide for continued development and enhancements of urban outdoor recreation facilities such as soccer fields and playground equipment.*
3. *Provide for expansion of the following trail systems: hiking, biking, horse, and water.*
4. *Enhance and upgrade signage and maps for all outdoor recreational lands and waters.*
5. *Continue to acquire lands for outdoor recreation at all levels of government.*
6. *Support publicly funded programs that provide financial assistance for the actions listed above.*

Goal: Understand and Manage the Growing Issue of Wisconsin Outdoor Recreation Conflicts

As demand for different outdoor recreation activities grows, managing the conflict that develops between these uses will become an increasingly important issue of public policy. Two conflict arenas merit continued creative management from those charged with prioritizing public resources. The most obvious conflict arena is that which develops between different users of Wisconsin's finite land and water base. This conflict has developed as a result of both an increased demand for outdoor recreation activities and the development of new recreation technologies that have facilitated activities such as geocaching and ATVing. The second conflict arena is that which develops between outdoor recreation and other forms of land use. This conflict has impacted the development and maintenance of open space, creating struggles in the development of residential, agricultural, and managed forest areas. These conflicts have not gone unnoticed by state residents who have witnessed a rise in noise pollution, an overcrowding of public lands and waters, and increased development pressures on parks and open spaces.

Actions and Recommendations

1. *Proactively plan for increased user conflicts and provide for increased recreation uses consistent with the state's growth in population.*
2. *Develop public and private management tools for addressing user conflicts.*
3. *Increase funding for outdoor recreation law enforcement authorities to the nationwide average, so that they may better enforce outdoor rules and regulations.*
4. *Examine and understand Wisconsin's capacity for local and state recreation growth according to the state's natural resource base.*
5. *Designate more public land for recreational use to better meet the increasing demand for outdoor recreation.*
6. *Examine options such as private landowner incentive programs, which would allow public access to private lands.*

Goal: Continue to Provide Wisconsin Outdoor Recreation Education and Programming

Outdoor education and programming continue to be in high demand among Wisconsin citizens. These programs are particularly important for urban populations who have lost opportunities to practice outdoor skills on a regular basis. By providing for structured recreational opportunities such as kayaking and outdoor sports, recreation providers will establish a base user population that will carry the activity into the next generation. Equally important to this programming is the teaching of environmental ethics. As our society continues to use land in ever more intrusive and environmentally degrading ways, there is a real need to instill the "land ethic" philosophy in all outdoor users.

Actions and Recommendations

1. *Provide funding and support for joint outdoor recreation programs between schools, government, and communities.*
2. *Provide funding and support for more outdoor recreation skills courses.*
3. *Develop programs that begin to address the state's diversifying urban populations.*
4. *Develop and support programs that bring nature-based experiences close to home for urban, low income youth.*
5. *Provide more courses in environmental education and ethics.*

Goal: Continue to Provide and Enhance Public Access to Wisconsin Recreational Lands and Waters

As recreation continues to place demands on public lands and waters, the lack of public access to these areas has become an increasing concern among many state citizens. In some cases this perception is true; more water/boating access is needed in certain areas of the state. In many cases, however, public access to recreational resources does exist, the public is simply not aware of it. Improved and easily accessible maps and signage would aid the public in locating access points.

Actions and Recommendations

1. *Develop a statewide interactive mapping system showing all public lands and water access points across the state.*
2. *Continue to acquire and develop boating access sites to meet public boating needs.*
3. *Promote awareness of the location of existing recreation lands, facilities, and opportunities available within a given region.*
4. *Continue to increase public access to Wisconsin waterways.*
5. *Continue to improve disabled accessibility for outdoor recreation facilities, and promote the development of facilities using universal design standards.*

Goal: Understand the Threats and Opportunities of Wisconsin's Developing Urban Areas and Areas of Rapid Population Growth

While most of Wisconsin's landscape is rural, most people in Wisconsin (68%) live in a relatively small urbanized area of the state. This population is concentrated in the southern and eastern portions of the state, especially in the Lower Lake Michigan Coastal Region (home to Milwaukee and expanding Chicago suburbs). Urbanization has proved to be a double-edged sword for recreation; it provides many opportunities for diverse recreational opportunities, but it also poses a threat to the environmental and recreational resources of the state. Threats from urbanization include the continued loss of agricultural/outdoor recreation lands, the increasing tension of urban populations recreating in urban/rural fringe areas, and decreasing water quality and habitat availability.

Actions and Recommendations

1. *Continue to protect prime recreation lands through the use of publicly funded programs such as the Stewardship 2000 Program.*
2. *Develop trail networks that offer easy access from urban/suburban areas to rural areas.*
3. *Encourage communities to develop park and open space plans that allow for balanced growth while also providing land and facilities for outdoor recreation.*
4. *Continue to develop and provide active outdoor sports facilities such as soccer fields and tennis courts.*
5. *Continue to provide and expand community and neighborhood parks for multiple forms of outdoor recreation.*

Goal: Maintain and Enhance Funding Opportunities for Wisconsin Outdoor Recreation

From its early years establishing the original state parks, Wisconsin has had an active program of state land acquisition. The latest iteration of these programs is the Warren Knowles–Gaylord Nelson Stewardship 2000 Program. Under this program the state may issue bonds in a total not to exceed $572 million spread over a ten year period. The Stewardship Program is biased towards land acquisition, with lesser amounts provided for property development and local assistance. These funding programs have provided vital support to outdoor park and recreation lands and facilities.

Actions and Recommendations

1. *Renew the Warren Knowles–Gaylord Nelson Stewardship 2000 Program.*
2. *Encourage all local governments to develop park and recreation plans for participation in state and federal cost share programs.*
3. *Provide more cost share opportunities for local governments to acquire, develop, and maintain recreational lands and facilities.*
4. *Increase Wisconsin State Parks funding to the nationwide average.*
5. *Explore new and innovative funding methods for outdoor park and recreation facilities. These methods may include public/private partnerships or cost sharing among multiple government agencies.*
6. *Increase revenue generating capabilities for outdoor recreation by continuing to update and improve technologies such as automated fee collection systems.*
7. *Explore the option of an exercise tax on outdoor recreational equipment to help fund park and recreation developments.*

Goal: Promote Wisconsin Outdoor Recreation as a Means to Better Health and Wellness for State Citizens

The United States as a whole is in the midst of an overweight and obesity epidemic brought on by increasingly sedate and inactive lifestyles and higher caloric intakes. This epidemic has profound consequences in terms of increased health care costs and shortened life expectancies. Outdoor park and recreation areas can be key partners in reversing this trend as they provide the type of active recreational opportunities that promote physical fitness. Encouraging Wisconsinites to use recreation lands and facilities will benefit not only park and recreation areas, but also the state citizens themselves who receive the health benefits of increased activity—a true win-win proposal.

Actions and Recommendations

1. *Encourage individuals, workplaces, community groups, and schools to become physically active by promoting programs such as the Governor's Wisconsin Challenge program.*
2. *Develop a "Get Fit with Wisconsin" campaign for public lands and waters that touts the health benefits of recreation and reaches a wide audience of potential users.*
3. *Educate the public about the health benefits of moderate and enjoyable physical activities such as walking, biking, nature study, etc.*
4. *Integrate opportunities and incentives for exercise during the workday—giving employees 30 minutes a day for exercise, providing exercise equipment and changing rooms, etc.*
5. *Start a dialogue between public outdoor recreation providers and health agencies to identify other (non-traditional) funding sources for recreational facilities and development.*

SCORP

The 2005–2010 Wisconsin Statewide Comprehensive Outdoor Recreation Plan

APPENDIX A

Outdoor Recreation Grant Programs Administered by the WDNR

Detailed information, application forms, and WDNR staff contacts are available on the WDNR Bureau of Community Financial Assistance website – *www.dnr.wi.gov/org/caer/cfa*, or by calling the WDNR region office nearest you.

All Terrain Vehicle (ATV)

Section 23.33, Wis. Stats.; Ch. NR 64, Wis. Admin. Code

Counties, cities, villages, and towns are eligible for up to 100% (including $ per mile caps) of the costs of maintenance, development, rehabilitation, insurance, and acquisition of ATV trails and intensive use areas. Applications are due to the DNR by April 15 each year. For the 2004-5 fiscal year, over $2.7 million was available for eligible projects through ATV registration funds and motor fuel tax funds.

ATV Enforcement Patrol

Section 23.33 (9), Wis. Stats.; s. NR 64.15, Wis. Admin. Code

County Sheriff Departments are eligible for up to 100% of their net costs (salaries, fringe benefits, travel, materials, and supplies, etc.) associated with all-terrain vehicle patrols and enforcement. A county must file a Notice of Intent to Patrol form with the DNR on or before June 1 of each year. Claim forms shall be filed with the DNR on or before June 1. For the 2004-5 fiscal year, $200,000 was available.

County Conservation Aids

Section 23.09 (12), Wis. Stats.; Ch. NR 50, Wis. Admin. Code

Counties or recognized Indian tribes are eligible for 50% of the costs of carrying out fish or wildlife management projects that enhance fish and wildlife habitat or are related to hunter/angler facilities. Applications are submitted throughout the year until funding is depleted. For the 2004-5 fiscal year, $150,000 was available.

Federal Aid in Sport Fish Restoration

16 U.S.C. 777-777k, 64 Stat. 430 (also known as Federal Aid in Sport Fish Restoration Act)

The Department of Natural Resources (DNR) prioritizes fisheries related projects (sport fish restoration, boating access, fishing piers) biennually to identify projects eligible for a 75% cost share; the DNR sometimes negotiates contracts and use agreements with counties, villages, and towns for use of this funding for construction of boat landings and fishing piers. The amount of funding available varies depending upon excise tax collection by US Treasury.

Land and Water Conservation Fund (LWCF)

LWCF Act of 1965, Public Law 88-578, 78 Stat. 897; 36 CFR Ch 1, Part 59

Qualified towns, villages, cities, counties, Indian tribes, and school districts are eligible for up to 50% of the costs of acquisition of land and the development of facilities for public park and recreation areas. Applications are due to the DNR by May 1 each year. The amount of funding available varies depending upon the amount appropriated by Congress to the program within the Department of Interior's budget each year.

Municipal Water Safety Patrols State Assistance

Section 30.79, Wis. Stats.

Municipalities, tribes, inland lake rehabilitation and protection districts, and sanitary districts are eligible to receive up to 75% of the costs (salaries, supplies, and equipment) of operating a Boating Law Enforcement program, including conducting boating education programs, providing professional enforcement of boating laws and local regulations, and providing search and rescue for live persons. Applicants must file an Intent to Patrol form with the DNR on or before March 1 of each year. Claim forms shall be filed with the DNR on or before January 31. For the 2004-5 fiscal year, $1.4 million was available.

Recreational Boating Facilities

Section 30.92, Wis. Stats.

Counties, cities, villages, towns, sanitary districts, public inland lake, protection and rehabilitation districts, and qualified lake associations are eligible for up to 50% of the costs of feasibility studies and the construction of capital improvements related to the development of safe recreational boating facilities, purchase of aquatic weed harvesting equipment, purchase of navigation aids, dredging of channels of waterways, and chemical treatment of Eurasian watermilfoil. An additional 10% may be available if a municipality conducts a boating safety enforcement and education program approved by the DNR. Projects of statewide or regional significance may be eligible for an additional 30% cost-sharing assistance. Applications are

due to the DNR and reviewed and recommended quarterly by the governor-appointed Wisconsin Waterways Commission. For the 2004-5 fiscal year, over $4.4 million was available for eligible projects.

Recreational Trails Program

The Safe, Accountable, Flexible, Efficient Transportation Equity Act - Title 23 United States Code (23 U.S.C.).

Towns, villages, cities, counties, tribal governing bodies, school districts, state agencies, federal agencies, and incorporated organizations are eligible for up to 50% of the costs of maintenance and restoration of existing trails, development and rehabilitation of trailside and trailhead facilities and trail linkages, construction of new trails (with certain restrictions on federal lands), and acquisition of easements or property for trails. Funds are available for both motorized and non-motorized trails. Applications are due to the DNR by May 1 each year. The amount of funding available varies depending upon federal gas excise taxes paid on fuel used by off-highway vehicles.

Snowmobile Trail Aids

Section 23.09(26) and ch. 350, Wis. Stats.

Counties are eligible for 100% (including $ per mile caps) of the cost of approved trail maintenance, development, major bridge rehabilitation, and trail rehabilitation. Applications are due to the DNR by April 15 each year. For the 2004-5 fiscal year, over $7.7 million was available for eligible projects through snowmobile registration, motor fuel tax, and nonresident trail pass funds.

County Snowmobile Enforcement Patrols

Sections 350.12(4)(a)(4) and 20.370(4)(ft), Wis. Stats.; s. NR 50.12, Wis. Admin. Code

County Sheriff Departments are eligible for up to 100% of their net costs (salaries, fringe benefits, travel, materials, and supplies, etc.) associated with snowmobile patrols and enforcement. A county must file a Notice of Intent to Patrol form with the DNR on or before June 1 of each year. Claim forms shall be filed with the DNR on or before June 1. For the 2004-5 fiscal year, $400,000 was available.

Knowles-Nelson Stewardship 2000 Local Assistance Programs: Acquisition and Development of Local Parks

Section 23.09(20), Wis. Stats.; ch. NR 51, subchapter XII, Wis. Admin. Code

Qualified towns, villages, cities, counties, Indian tribes, and nonprofit conservation organizations as defined under s. 23.096, Wis. Stats., are eligible for up to 50% of the costs of acquisition of land or conservation easements, and the development of facilities for public park and recreation areas used for nature-based outdoor recreation purposes. Applications are due to the DNR by May 1 each year. For the 2004-5 fiscal year, $4 million was available for eligible projects.

Knowles-Nelson Stewardship 2000 Local Assistance Programs: Urban Rivers

Section 30.277, Wis. Stats.; ch. NR 51, subchapter XIV, Wis. Admin. Code

Qualified towns, villages, cities, counties, Indian tribes, and nonprofit conservation organizations as defined under s. 23.096, Wis. Stats., are eligible for up to 50% of the costs of acquisition of land or conservation easements, and the development of facilities for public park and recreation areas, including shoreline enhancements, for nature-based outdoor recreation purposes along urban waterways and riverfronts. Applications are due to the DNR by May 1 each year. For the 2004-5 fiscal year, $1.6 million was available for eligible projects.

Knowles-Nelson Stewardship 2000 Local Assistance Programs: Urban Greenspace

Section 23.09(19), Wis. Stats.; ch. NR 51, subchapter XIII, Wis. Admin. Code

Qualified towns, villages, cities, counties, Indian tribes, and nonprofit conservation organizations as defined under s. 23.096, Wis. Stats., are eligible for up to 50% of the costs of acquisition of land and conservation easements for nature-based outdoor recreation purposes that will protect open natural space and land with scenic, ecological, or natural values in urban areas. Applications are due to the DNR by May 1 each year. For the 2004-5 fiscal year, $1.6 million was available for eligible projects.

Knowles-Nelson Stewardship 2000 Local Assistance Programs: Acquisition of Development Rights

Section 23.09(20m), Wis. Stats.; ch. NR 51, subchapter XV, Wis. Admin. Code

Qualified towns, villages, cities, counties, Indian tribes, and nonprofit conservation organizations as defined under s. 23.096, Wis. Stats., are eligible for up to 50% of the costs to acquire development rights (conservation easements) in areas where restrictions on residential, industrial, or commercial development would provide or enhance nature-based outdoor recreation. Applications are due to the DNR by May 1 each year. For the 2004-5 fiscal year, $800,000 was available for eligible projects.

APPENDIX B

Park and Recreation Designs

THIS SECTION IS PRESENTED IN THE INTEREST OF ASSISTING PARK AND RECREATION AGENCIES IN THE DEVELOPMENT OF A SYSTEM OF PARKS AND RECREATION AREAS. A RECREATION SYSTEM IS COMPOSED OF MANY DIFFERENT COMPONENTS, THE COMBINATION OF WHICH PROVIDE FACILITIES AND LANDSCAPES FOR OUTDOOR RECREATION. MANY ENTITIES ARE INVOLVED IN THE DEVELOPMENT AND MANAGEMENT OF RECREATIONAL AREAS AND FACILITIES FOR A COMMUNITY OR REGION. FACILITIES PROVIDED BY THESE ENTITIES SHOULD BE COMPLEMENTARY AND SERVE A PARTICULAR GEOGRAPHIC AREA OR RECREATIONAL NEED. FOR THIS PLAN, PARKS AND RECREATION AREAS HAVE BEEN CLASSIFIED ON THE BASIS OF THEIR SERVICE AREAS. THEY ARE DESCRIBED AS THE FOLLOWING:

- MINI PARK
- NEIGHBORHOOD PARK
- COMMUNITY PARK
- SPECIAL USE PARK
- SCHOOL PARK
- COUNTY PARK
- STATE PARK
- STATE FOREST

Mini Park

1. Definition Summary:
A play lot or playground provides space for parental supervised recreation of toddlers and young children within a neighborhood, or as part of a larger neighborhood or community park and urban center, including retail shopping areas.

2. Size Objectives:
0.5 to 1.5 acres.

3. Service Area Objectives:
Generally within a neighborhood of a half mile radius or population of 2,000-3,000. Mini parks may be included in parks that serve a larger population or service area.

4. Location Objectives:
Located in protected areas with separation from street traffic and high visibility; serving local neighborhoods and adjoining schools, libraries, or police and fire facilities.

- *Population Ratio to Acreage:* .25 to 0.5 acre per 1,000 population to achieve a park unit size that serves 2,000 to 3,000 people.

5. Space, Design, and Service Area:
The size of a play lot or playground may range from as small as 2,500 sq. ft. to 1.5 acres.* Amenities offered by these facilities generally include sand play areas, play apparatus, play equipment, and other special child-oriented features. The service radius for these parks in terms of distance from population served is limited to less than a quarter mile, or within a super block space, unless the playground is incorporated into a larger park.

6. Orientation:
Small geographic areas, sub-neighborhoods, or neighborhoods, when combined with a larger park unit. Serves youth ranging in age from toddler to 12 years, with adult supervision. Playgrounds also serve important needs in city business districts and inner city areas where a mix of commercial and recreation activity is desired.

7. Function:
Provides outdoor play experiences for youth under parental supervision. Generates neighborhood communication and provides diversion from work and domestic chores. Promotes neighborhood solidarity.

**Stand-alone play lots require more land area than play lots incorporated into larger parks.*

Neighborhood Park

1. ***Definition Summary:***
   A neighborhood park, by size, program, and location, provides space and recreation activities for the immediate neighborhood in which it is located. It is considered an extension of neighborhood residents' "out-of-yard" and outdoor use area.

2. ***Size Objectives:***
   5 to 25 acres.

3. ***Service Area Objectives:***
   Generally a one mile radius, but actually defined by collector street patterns which form the limits of a neighborhood or recreation service area. Population served may range from 2,000 up to 5,000.

4. ***Location Objectives:***
   Centrally located for equitable pedestrian access within a definable neighborhood service area. Adjoining or adjacent to an elementary, middle school or high school, fire station, or library, if possible.

5. ***Program Objectives:***
   Compatible with the neighborhood setting and park site constraints. Generally includes the following facilities, which are determined with public input as to use and activities:
   a. Parking for 10 to 20 vehicles.
      1) On-street parking is acceptable if negative impact to residential units can be mitigated. On-site parking is preferable as a planning objective.
      2) Bike racks with Class II trail connections where possible.
   b. Restrooms
      1) Men's restroom with 2 water closets, 2 urinals, 2 lavatories.
      2) Women's restroom with 3 water closets and 2 lavatories.
      3) Utility and minimum park janitorial storage space.
   c. Tot lot/children's play area
   d. Family event/group picnic facility
   e. Informal family picnic area with benches and tables
   f. Unstructured turf grass play area/play or practice field for children, young adults, and families.
   g. Sport facilities—compatible with neighborhood setting and park site constraints.
      1) Basketball—half court, full court, or tri-court configuration
      2) Volleyball area
      3) Softball field/soccer practice or game overlay
      4) Other features as needs or site conditions allow

6. ***Orientation:***
   Serves all age groups, with an emphasis on youth and families in neighborhood settings.

7. ***Function:***
   To provide a combination of active recreation and passive activities, both outdoor and indoor facilities, and special features as required or needed.

8. ***Space, Design, and Service Area:***
   A minimum size of 5 to 25 acres with amenities including sports facilities, picnic areas, swim facilities, cultural activities, arts, crafts, and individual passive activities. The park should primarily serve a defined neighborhood area population of 2,000-5,000. Distance from this neighborhood will vary depending on urban development pattern, zoning, and densities in the respective neighborhoods being served. Efforts should be made to allow easy pedestrian access to the park.

Community Park

1. ***Definition Summary:***
   A community park, by size, program, and location, provides space and recreation activities for a defined service area, the entire city, or significant geographic segment of the city's population.

2. ***Size Objectives:***
   Usually more than 25 acres.

3. ***Service Area Objectives:***
   Generally a 2 to 5 mile radius within the city and adjacent neighborhoods outside of city limits.

4. ***Location Objectives:***
   Centrally located if planned to serve a particular geographic segment of the city. Located adjoining or immediately adjacent to a collector street providing community-wide vehicular access, thereby reducing neighborhood traffic impacts. Connected with Class II on-street and/or off-street community trail and bike lane system. Adjoining or adjacent to an elementary, middle, or high school if possible.

5. ***Program Objectives:***
   Elements that fulfill the service area, park facilities and recreation program demands. The following facilities may be compatible with community setting and park site constraints:
   a. Off-street parking calculated to satisfy demand of park and recreation activities provided. Includes

bike racks and a public transit station at the site as well as both on-site and street parking.

b. Restrooms designed to accommodate the level of park and recreation activities provided and the number of people served. Restrooms should be located within a reasonable walking distance from children's play equipment and other high-use areas.

c. Community recreation center

d. Park maintenance and equipment storage building

e. Tot lot/children's play area

f. Group picnic shelters

g. Family picnic facilities

h. Sport/recreation facility fulfilling the overall city demand

Appropriate program elements include:

1) Community pool/water feature
2) Soccer fields
3) Softball, little league baseball, junior pony league baseball
4) Football
5) Roller hockey/skateboard area
6) Tennis courts
7) Basketball courts
8) Amphitheater/performing arts center
9) Volleyball (indoor and outdoor)
10) Jogging trails
11) Other facilities as desired and as permitted under park site plan
12) Concessions (food and beverage)

6. Orientation:
Multi-purpose service area or community-wide recreation resource serving most or all of the population.

7. Function:
Provides opportunities for a diverse mix of indoor and outdoor recreation, including walking and bicycling, outdoor performances, various programmed and non-programmed field sports, swimming, and special events.

8. Space, Design, and Service Area:
The minimum space for a community park is 15 acres. Facilities typically provide for some sports activities, though emphasis is on passive cultural and community centers with recreational programming and organized activities. The community park may serve populations within a 2 to 5 mile radius, a scope that would allow residents of other communities to use the park as well.

Special Use Park

1. Definition Summary:
A special use park is often designed as a revenue-generating enterprise created to satisfy demand for a particular sport, recreational activity, or special event. A special use park may also be a sports park combined with enterprise activities and administered as a community recreation resource.

2. Size Objective:
The actual size of a special use park is determined by land availability and facility/market demand for special uses or recreation programs.

3. Service Area Objectives:
Community or area-wide and determined by the type of recreation program, special events or use activities.

4. Location Objectives:
Determined by the property opportunity, service area and size objectives.

5. Program Objectives:
Special use parks require facility programming that is user- or market-driven and based on community needs or economic and service principles for public and private partnerships. The magnitude and type of special use facilities may include:

a. Water play park

b. Amphitheater

c. Festival/swap meet/farmers market

d. League/individual sports complex

e. Fitness/entertainment center

f. Skateboard/in-line hockey park

g. Recreation programs and classes

6. Orientation:
Provides recreation programming, sports and special event attractions and activities for all age groups.

7. Function:
Special events, fairs, festivals, expositions, symposiums, sports, community gatherings, ethnic/cultural celebrations, plays and numerous other recreational programs and activities.

8. Space, Design, and Service Area:
The minimum size for special parks varies depending on intended use and programming.

School Park

1. Definition Summary:

By combining the resources of two public agencies, the school park classification allows for expanding the recreational, social, and educational opportunities available to the community in an efficient and cost-effective manner.

Depending on the circumstances, school park sites often complement other community recreation or open lands. As an example, an elementary/middle school site could also serve as a neighborhood park. Likewise, middle or high school sports facilities could do double duty as a community park or as youth athletic fields. Depending on its size, one school park site may serve in a number of capacities, such as a neighborhood park, youth athletic fields, and a location for recreation classes. Given the inherent variability of type, size and location, determining how a school park site is integrated into a larger park system will depend on case-by-case circumstances. The important outcome in the joint-use relationship is that both the school district and park system benefit from shared use of facilities and land area.

2. Size Objective:

The optimum size of a school park site depends on its intended use. The size criteria established for neighborhood park and community park classifications may apply.

3. Service Area Objectives:

Neighborhood park and community park classifications criteria should be used to determine school park functions and area served. For planning purposes, the degree to which school lands, including buildings or facilities, meet community needs depends on the specific inter-local agreements formed.

4. Location Objectives:

The location of a school park site will be determined by the school district based on district policy. Coordinated city and school district planning allows for siting, acquisition, and facility development to be responsive to community needs. Service areas for school park sites will depend on the type of use and facilities provided.

5. Program Objectives:

The criteria established for neighborhood parks and community parks should be used to determine how a school park site is developed and programmed. If athletic fields are developed at a school park site, they should, where feasible, be oriented toward youth rather than adult programs. Establishing a clearly defined joint-use agreement between involved agencies is critical to making school park relationships workable. This is particularly important with respect to acquisition, development, maintenance, liability, use, and programming of facility issues.

The orientation of school park projects is typically for neighborhood and community recreation services. The functions may include sports, recreation classes, passive recreation activities, and other recreation programs suitable to an elementary or secondary education school.

County Park

1. Definition Summary:

A county park provides sufficient park and recreation area to meet the needs of county residents. County parks consist of land that is specifically set aside for active and passive recreation uses, and that accommodates large gatherings, special events, and individual users. County parks offer a wide variety of compatible outdoor recreation activities, and may provide areas that do not primarily serve a recreational purpose such as protected natural areas, historic areas, and special use areas.

2. Size Objectives:

The size of recreation parks varies greatly from park to park, but with the exception of those parks that serve a special use or are trail corridors, a recreation park should consist of a minimum of 100 acres of land. Each park should be of sufficient size to accommodate the estimated use and to allow for the operation and maintenance of planned recreational facilities.

3. Service Area Objectives:

County parks provide for a regional user group and serve primarily county residents. Special facilities like camping and trails are also used by tourists and visitors to the county.

4. Location Objectives:

The land should have high recreational potential and be able to withstand intensive and extensive recreational activities. Land should have potential to accommodate large groups of people. Land for corridors should be located so as to connect to communities, parks, and open spaces. The potential for future land acquisition should be taken into account.

5. Program Objectives:

Development should be appropriate for intended use and should accommodate moderate to high use. Development and planning should consider the physical condition and characteristics of the land and recognize potential environmental or structural limita-

tions that might require intensive maintenance. County parks may include the following facilities:

a. Camping/group camping
b. Picnic areas
c. Recreational trails (hiking, bicycling, mountain biking, equestrian, cross-country ski, snowmobile, etc.)
d. Play areas
e. Swimming beaches
f. Water access
g. Fishing access
h. Shelters
i. Restrooms
j. Shower facilities
k. Sport fields (basketball, volleyball, softball, etc.)
l. Pet exercise area

6. Orientation:
Multi-purpose service area and regional recreation resource serving a significant portion of a county or multi-county population.

7. Function:
To provide sufficient parks and recreation areas to meet the needs of the people of the county.

8. Space, Design, and Service Area:
The size of a county park should be a minimum of 100 acres. Facilities vary by park; some parks offer active recreation (camping, recreational trails, etc.), while others provide passive recreation (scenic lookouts, picnic areas, beaches, etc.). Most parks provide both active and passive recreation. County parks provide for a regional user group and serve primarily county residents, though special facilities also serve tourists and visitors to the county.

State Forest

1. Definition Summary:
A state forest consists of well blocked areas of state-owned lands which are managed to benefit present and future generations of residents, recognizing that forests contribute to local and statewide economies and to a healthy natural environment. State forests practice sustainable forestry. The management of state forests is consistent with the ecological capability of state forest land and with the long-term goal of maintaining sustainable forest communities and ecosystems. Benefits of maintaining these ecosystems include soil protection, public hunting, protection of water quality, production of recurring forest products, outdoor recreation, native biological diversity, aquatic and terrestrial wildlife, and aesthetic value. The range of benefits provided in each state forest reflect its unique character and position in the regional landscape.

2. Size Objectives:
Typically between 1,000 and 250,000 acres, but can be larger or smaller.

3. Service Area Objectives:
Generally a 100 mile radius. State forests typically provide close-to-home recreational areas. Day users typically travel approximately 50 miles one-way to reach state forests, while overnight users tend to travel further, approximately 100-150 miles one-way. Travel to state forests can, however, exceed 160 miles for longer vacation stays and travel to "destination areas."

4. Location Objectives:
Areas with large blocks of land.

5. Program Objectives:
State forests must meet ecological, economic, social, and cultural needs. Elements are compatible with the natural resource setting and park site constraints. Facilities may include the following:

Current Level of Supply:

Hiking trails	1,256 acres per linear mile of trail
Cross-country ski trails	2,551 acres per linear mile of trail
Snowmobile trails	639 acres per linear mile of trail
Equestrian trails	559 acres per linear mile of trail
ATV trails	1,795 acres per linear mile of trail
Camping sites	1 campsite per 265 acres

6. Orientation:
Multi-purpose service area and regional recreation resource serving a significant portion of a state or regional population.

7. Function:
To provide for nature conservation, provide income to forest owners, supply raw materials to the wood processing industry, and provide public recreation.

8. Space, Design, and Service Area:
The size of a state forest is determined by the extent of the area's natural resources and recreation capabilities. There is no minimum or maximum size for a state forest. Facilities are not universal and vary by forest. The geographic location of the forest and the natural resources present dictate recreation available at the site. State forests serve large geographic areas of a state or region.

State Park

1. Definition Summary:

A state park, by size, program, and location, provides space for outdoor recreation and education about nature and conservation. These parks serve a significant geographic segment of a state or regional population. State parks aim to preserve, protect, interpret and enhance the scenic and cultural resources of the state.

2. Size Objectives:

Parks must be large enough to accommodate a reasonable mix of outdoor recreational activities. Typically, parks are between 500 and 3000 acres, but can be smaller (<20 acres) or larger (>10,000 acres).

3. Service Area Objectives:

Generally a 100-mile radius. State parks typically provide close-to-home recreational areas. Day users generally travel approximately 50 miles one-way to reach state parks, while overnight users tend to travel further, approximately 100-150 miles one-way. Travel distances to state parks can often exceed 160 miles for longer vacation stays and trips to "destination areas."

4. Location Objectives:

Siting of Wisconsin State Parks is typically based on five criteria developed by John Nolen. These criteria are: 1) large size to serve a large number of citizens, 2) accessibility to major population areas, 3) a healthful, natural setting, 4) reasonable cost for land acquisition, 5) land possessing "decidedly uncommon charm and beauty." All, or a combination of these criteria are used to determine where to site a state park.

5. Program Objectives:

Elements that fulfill the service area, park facilities and recreation program demands. Elements are compatible with the natural resource setting and park site constraints. Developments may include the following facilities:

Current Level of Supply:

Hiking trails	196 acres per linear mile of trail
Surfaced bicycle trails	860 acres per linear mile of trail
Mountain bike trails	549 acres per linear mile of trail
Nature trails	1,871 acres per linear mile of trail
Cross-country ski trails	430 acres per linear mile of trail
Snowmobile trails	426 acres per linear mile of trail
Equestrian trails	400 acres per linear mile of trail
Picnic sites	0.05 acres per picnic table
Camping sites	1 campsite per 29 acres
Parking stalls	Year-Round = 1 stall for every 3 visitors
Swimming beaches	17 linear feet per 1,000 users

5. Orientation:

Multi-purpose service area and regional recreation resource serving a significant portion of a state or regional population.

6. Function:

To provide for public recreation and education of conservation and nature study. To preserve, protect, interpret and enhance the scenic and cultural resources of the state.

7. Space, Design, and Service Area:

The size of a state park is determined by the extent of the area's natural resources and recreation capabilities. There is no minimum or maximum size for a state park. Facilities are not universal and vary by park. Some parks offer active recreation (camping, boating, mountain biking trails, hunting etc.), while others offer passive recreation (scenic lookouts, picnic areas, beaches, etc.). Most provide both active and passive recreation. The geographic area and the natural resources present dictate recreation uses and facilities present in the park. State parks serve large geographic areas of a state or region.

APPENDIX C

Outdoor Recreation Demand Survey Methodology

This appendix describes the results of the 1999-2004 National Survey on Recreation and the Environment (NSRE) and version 18 of the NSRE (called Wisconsin Survey), which was conducted September to November, 2004. In addition, this appendix includes two other sources: the Outdoor Industry Foundation (OIF) 2002 Outdoor Recreation Participation & Spending Study, A State-by-State Perspective; and the Department of Tourism 2004 Wisconsin Advertising Awareness and Competitive Analysis Wave VIII Study.

The National Survey on Recreation and the Environment (NSRE)

The NSRE, was conducted to discover and describe: (1) participation by Americans in outdoor recreation activities, (2) opinions concerning management of both public and private forests and grasslands, (3) the importance and value of our natural environment, (3) uses and values of wildlife and wilderness, (4) people's lifestyles, and (5) recreational trips people take away from home. The NSRE data is be used by a variety of public and private organizations for both management and research purposes.

History of the NSRE

The 1999-2004 National Survey on Recreation and the Environment (NSRE) is the latest in a series of national surveys started in 1960 by the Outdoor Recreation Resources Review Commission (ORRRC). The federal government (through ORRRC) initiated this National Recreation Survey (NRS) to assess outdoor recreation participation in the United States. Since the first survey in 1960, six additional NRSs have been conducted: 1965, 1970, 1972, 1977, 1982-83 and 1994-95. Over the years, NRS surveys have changed in their methodology, composition, funding, and sponsorship.

In the 1960 NRS, interviews were conducted in person over the four seasons of the year. In 1965, interviewing was done only in the early fall. The 1970 survey instrument was a brief supplement attached to the mailed National Fishing and Hunting Survey. The 1982 survey was conducted in person in cooperation with the National Crime Survey, and the 1977, 1994, and 1999-2002 surveys were conducted by telephone.

In 1994 the NRS was renamed the National Survey on Recreation and the Environment (NSRE). This new name was introduced to reflect the growing societal interest and emphasis on the natural environment. Accordingly, the NSRE was expanded to include questions concerning peoples' wildlife and wilderness uses, environmental values, and attitudes regarding management issues. Additional information pertaining to the recreational needs of people with disabling conditions was also included.

The NSRE is the eighth in a continuing series of U. S. National Recreation Surveys. Although similar to previous national surveys, NSRE explores the outdoor recreational needs and environmental interests of the American people in greater depth than any previous study. The growth of the NSRE reflects the continuing interest in outdoor recreation and the natural environment.

NSRE was conducted as an in-home phone survey of over 90,000 households across all ethnic groups throughout the United States. Questions from the NSRE broadly address such issues as outdoor recreation participation, demographics, household structure, lifestyles, environmental attitudes, natural resource values, constraints to recreation participation, and public attitudes toward management policies.

The funding and responsibility of the NRS have also changed quite considerably over the years. Initially, the Outdoor Recreation Resources Review Commission,

the organization which completed the first survey in 1960, recommended that subsequent surveys be completed at five-year intervals. Consistent funding and responsibility, however, were not created. From 1965 through 1977, research for the survey was done by the Bureau of Outdoor Recreation and its successor, the Heritage Conservation and Recreation Service. When both of these agencies were abolished in 1981, responsibility fell to the National Park Service in the U.S. Department of the Interior (USDI). The National Park Service coordinated the development of a consortium that included itself, the Forest Service in the U.S. Department of Agriculture (USDA), the Department of Health and Human Service's Administration on Aging, and the USDI's Bureau of Land Management.

By the late 1980's, it was clear that the National Park Service could no longer assume the financial and organizational demands of such a large survey. Park Service officials therefore asked the Forest Service to assume its coordinating role for the next National Recreation Survey. The Outdoor Recreation and Wilderness Assessment Group, a part of the research branch of the Forest Service, assumed this role jointly with the National Oceanic and Atmospheric Administration (NOAA). This partnership between the Forest Service Outdoor Recreation and Wilderness Assessment Group in Athens, Georgia and NOAA has continued to the present day with the organizations holding joint responsibility for the current NSRE survey.

The present list of sponsoring agencies for the 1999-2004 NSRE effort includes the USDA Forest Service, NOAA, the USDA's Economic Research Service, the U.S. Environmental Protection Agency, USDI Bureau of Land Management, the National Park Service, the University of Georgia, and the University of Tennessee. In addition, valuable assistance and resources were also provided by the American Horse Council, the American Motorcyclist Association, the American Recreation Coalition, B.A.S.S., Inc., the Carhart Wilderness Training Center, the Corps of Engineers, the Forest Service (specifically the Carhart Wilderness Training Center, Ecosystem Management Coordination, recreation staff, the Rocky Mountain Research Station, and Wildlife staff), the Motorcycle Industry Council, the National Association of Recreation Resource Planners, the National Association of State Outdoor Recreation Liaison Officers, the National Environmental Education & Training Foundation, the Natural Resources Conservation Service, the Outdoor Recreation Coalition of America, the Rails-to-Trails Conservancy, the Recreation Vehicle Industry Association, the Snow Sports Industries of America, the U.S. Orienteering Federation, and the Wilderness Society.

Instrumentation

The NSRE is not one survey but several smaller versions of surveys combined. For instance, each version of the NSRE consists of approximately five modules of questions. In each version of the NSRE, one module of questions always pertains to people's participation in recreation activities and a second module always pertains to their social-demographic characteristics (i.e., age, income, education level, etc). The three remaining modules of questions in each version could pertain to a myriad of topics from wilderness use, environmental opinions, attitudes to land management policies, wildfires, private lands, etc. Each version of the NSRE has a target of 5,000 completed interviews. Once these interviews have been collected, a new version of the NSRE (with a recreation participation, demographic, and three other modules) is constructed and conducted. Please see appendices for Version 18 of the NSRE (the Wisconsin survey).

Survey Methods

Computer-Aided Telephone Interviewing System(CATI):

The CATI system has two primary functions: (1) it facilitates the dialing and interviewing process of the NRSE; and (2) it manages the administrative functions associated with interviewing. For each interview, the CATI system randomly selects numbers for an interviewer, who then instructs the computer to dial that number.

The phone numbers for the NSRE survey were obtained from Survey Sampling, Inc (SSI). SSI updates and validates their inventory of phone numbers regularly, ensuring that all interviews are currently valid. SSI provided the NSRE with a random-digit-dial (RDD) sample using a database of "working blocks." A block is a set of 100 contiguous numbers identified by the first two digits of the last four numbers (e.g., in number 559-4200, "42" is the block). A block is termed to be working if one or more listed telephone numbers are found in that block. Numbers are generated from all eligible blocks in proportion to their density of listed telephone households. As numbers are pulled, they are marked as used and are not available again during a nine-month period. Once numbers are selected, they are entered into the computer-aided telephone interviewing system (CATI).

Once the CATI system has randomly selected and dialed a telephone number, the interviewer explains the survey, its main purpose, and the name of the research laboratory conducting the survey (Presser, Blair, & Triplett, 1992). The interviewer then inquires how many people in the household are 16 years or older, and asks to speak to the person 16 or older who had the most recent birthday (Link & Oldendick, 1998; Oldendick, Bishop, Sorenson, & Tuchfarber, 1988). Upon reaching an appropriate person and receiving agreement to an interview, the interviewer reads the survey questions as they appear on the computer screen. Using a computer to control the survey, skip patterns are executed as intended, responses are within range, there are no missing data, and data entry occurs as the survey is administered. As responses are fed through the programmed data entry and management system, they are reviewed to assure they are within the permissible range of values and missing data problems are resolved. If no person is contacted or an answering machine is obtained, the interviewer enters a code (e.g., busy or no answer). If the timing of the call is inconvenient, a call back is scheduled for another date and time (Presser et al., 1992).

Sampling

Sampling was designed to sample across the country's populations and regions, providing a minimum number of interviews for each state so that individual state reports on participation across all activities could be generated and so that reliable estimates of activity participation could be computed for activities with less than a 10% national participation rate. To achieve these objectives, an initial sampling strategy for a national sample of 50,000 completed interviews was developed. The strategy combined proportional nationwide population sampling aiming for 29,400 completed interviews and a quota sample (i.e., 65% urban, 25% near urban, and 10% rural). 400 interviews were distributed to each state, totaling 20,600 completed interviews. The remaining 40,000 completed interviews were obtained using a national sampling strategy. Sampling occurred throughout the year(s) during which the NSRE was being conducted to minimize seasonal recall bias to the extent possible. For the 1,400 additional completed interviews collected in version 18 (i.e., the Wisconsin survey), a random statewide sampling strategy was employed.

General Overview of Methods Used to Maximize Response Rates and Control for Non-Response Bias

Carefully Design, Test, and Revise the Survey Contents

In order to maximize response rates, the NSRE phone survey was carefully designed and refined through careful attention to input from experienced phone interviewers at the University of Tennessee. Wording and ordering of questions was designed to ease flow, maximize interest in the questionnaire subject matter and maintain consistency over time.

Scheduling Callbacks

In order to maximize the opportunity of interviewing an eligible member of an eligible household, each eligible number was attempted a minimum of 15-20 times at various time intervals of the day and on different days of the week. To minimize respondent burden and encourage full involvement in the survey, each person was asked, "Is this a good time to answer a few questions or would another time be better for you?" The Computer Aided Telephone System (CATI) facilitated the scheduling of callbacks at a specific time if requested by the respondent. The computer managed the database of telephone numbers so that scheduled callbacks were distributed to the first available interviewer at the designated time and date.

Training

Interviewer training was a vital part of achieving maximum response rates. All interviewers underwent intensive and detailed training to ensure a high level of familiarity and practice with the survey. Each interviewer was monitored regularly for quality control purposes and additional training was provided as needed.

Minimize Language Barriers

In order to maximize response rates, the NSRE was also administered in Spanish.

Interviewers screened for Spanish-speaking people at the beginning of the survey and transferred them to a Spanish-speaking interviewer as needed.

Meet AAPOR Quality Standards

Similar surveys repeated over a five-year period at the Human Dimensions Research Lab used the same methods as the NSRE and have been shown to produce very reliable results. (See Table C-1 for the contact, cooperation, and response rates for the NSRE 2000 sur-

vey). Response rates were calculated using the definitions of response rates established by the American Association of Public Opinion Research. The Lab followed the code of ethics set by the American Association of Public Opinion Research and upheld AAPOR quality standards. Adherence to ethics and quality standards were crucial to maintaining interviewee confidence and achieving adequate response rates.

Attempt to Convert Refusers

To help deal with non-response, a random sample of immediate ("soft refusals," including those who hung up immediately) and a sample of those not ever contacted were selected at the end of each version. These samples of refusals and non-contacts were limited to those for which an address could be obtained. Residents of these households were sent an explanatory letter indicating the nature of the survey and its importance. The letter notified the household that a further callback would be made to solicit their participation. Their numbers were then attempted again, and the results of completed surveys from converted refusers were compared with the results from those who accepted the survey during the first round of calling. Any significant differences between acceptor and refuser/non-contact responses to the primary variables of this study, i.e., recreation participation rates, were compared. If there were sufficient sample sizes for developing independent estimates of refuser/non-contact activity participation rates, weighting ratios were also calculated. These weights were used to adjust estimates of acceptor activity participation rates for analysis and reporting.

Weight to Correct for Over or Under Representation of Population Strata

Survey respondents were weighted so that their distribution across socio-demographic strata mirrored the distribution of the U. S. population across the same strata. This is a widely accepted, non-controversial and necessary method for addressing non-response issues. The weights computed and applied to the NSRE 2000-04 survey were small, indicating good sample distribution from the 19-20% response rates attained (see response rates in Table C-1 and a comparison of sample and population distributions in Table C-2). In addition, NSRE 2000-04 estimates of participation rates were generally in the same range of the estimates obtained from the 1994-95 NSRE. In neither survey did non-response bias seem to be significant. A sizeable number of referred journal articles have been published using both the 1995 and 2000-04 NSRE surveys and in all cases peer reviews were favorable and the articles accepted.

The U.S. Census Bureau advised that the civilian non-institutionalized population was the best estimated population distribution for validating telephone-sampling frames. Table C-3 compares the percentage distributions of the civilian non-institutionalized population aged 16 and older based on Census Bureau estimates with the NSRE sample distributions for Versions 1 through 6. Strata included sex, race/ethnicity, age, education level, and urban/rural residence. Response rates were higher for females, non-Hispanic whites, and for those ages 25-34, 45-54, and 55-64. Response rates were slightly lower for those aged 35-44. Response rates were generally higher among those with higher levels of education. Differences between urban/rural strata were more related to intentional over-sampling (to meet different research needs) than to differences in response rates.

Weighting Based on Multiple Regression Estimates of Coefficients

The primary approach to weighting and adjusting estimated marine recreation participation was development of multivariate models where estimated coefficients were used as weights for sex, race/ethnicity, and age strata. Results are summarized in Table C-3. Since the survey was designed so that, for some applications (modules), a version could be a stand-alone survey, there were constraints on how many cells could implement using multivariate weighting. For education level and urban/rural residence, multiplicative weights were utilized.

Table C-4 shows the effects of sample weighting of marine recreation activities. Comparison of the unweighted and weighted sample estimates of participation rates shows the potential extent of over- or under-representation of samples on estimated participation rates. Of the 19 activities/settings shown, 11 were corrected for over-representation, 7 were corrected for under-representation, and one remained uncorrected because sample and population percentages were the same. Given the small differences between weighted and unweighted estimates, it was concluded that the sample distribution generally represents the distribution of the population. However, weighting was undertaken as one means for adjusting for potential non-response bias. The large sample sizes of the NSRE help make this approach to sample weighting more reliable.

Table C-1: **Types of Response Rates for NSRE 2000–04**

Type		ALL – Version 1 thru Version 13
Response Rate 1	I/(I+P) + (R+NC+O) + (UH+UO)	0.191868
Response Rate 2	(I+P)/(I+P) + (R+NC+O) + (UH+UO)	0.200296
Response Rate 3	I/((I+P) + (R+NC+O) + e(UH+UO))	0.192627
Response Rate 4	(I+P)/((I+P) + (R+NC+O) + e(UH+UO))	0.201088
Cooperation Rate 1	I/(I+P)+R+O)	0.210388
Cooperation Rate 2	(I+P)/((I+P)+R+0))	0.219629
Cooperation Rate 3	I/((I+P)+R))	0.215806
Cooperation Rate 4	(I+P)/((I+P)+R))	0.225286
Refusal Rate 1	R/((I+P)+(R+NC+O) + UH + UO))	0.688781
Refusal Rate 2	R/((I+P)+(R+NC+O) + e(UH + UO))	0.691505
Refusal Rate 3	R/((I+P)+(R+NC+O))	0.697108
Contact Rate 1	(I+P)+R+O / (I+P)+R+O+NC+ (UH + UO)	0.911975
Contact Rate 2	(I+P)+R+O / (I+P)+R+O+NC + e(UH+UO)	0.915582
Contact Rate 3	(I+P)+R+O / (I+P)+R+O+NC	0.923001

An Additional Step for Identifying and Comparing Refusers

An additional step taken with regard to non-response effects was to include a follow-up to refusals to ask a very limited number of questions (e.g., age, sex and participation in any outdoor recreation). One could then analyze this information to suggest something about the extent of non-response bias on estimates of participation. This approach was also attempted in the 1994-95 NSRE not as a way to address non-response bias, but to reduce the burden on people that did not participate in outdoor recreation through the use of a screening question. A sample of 1,000 participants was chosen and the screening question was used. A significantly smaller proportion of people participated in outdoor recreation when the screening question was used. People did not understand the definition of outdoor recreation unless the entire list of activities was explained. Any attempt to analyze non-response bias from a sample of refusals that employs a screening question would be therefore be invalid. Significantly lower participation rates would also be expected amongst those receiving a screening question regarding outdoor recreation participation.

A similar experiment was used in NSRE 2000-04. Attempts were made to use various screening questions for different groups of activities as an alternative to going through each separate activity with every participant. Again, the objective was to reduce burden and costs by shortening survey time. The screening question worked for boating activities (i.e., no significant differences in estimates of participation in boating), but it did not work for wildlife viewing activities (i.e., there were significant differences in participation rates for wildlife viewing using a screening question). The screening question was therefore used for boating activities, but not for wildlife viewing activities.

Our approach for addressing refusals was to ask for age and sex (recorded according to interviewer's judgement). Analysis with respect to participation was then accomplished by relating age and sex, along with other factors, to participation. If there were different response rates by age and sex for the soft refusals sample versus the sample of complete surveys, and there was a significant relationship between age, sex, and participation in outdoor recreation, one might infer some level of non-response bias. However, the question addressed extent of the bias, a number that, as previous analysis has demonstrated, was relatively small and could be adjusted for by sample weighting. To further analyze non-response bias, two additional activity questions were used to ascertain some indication of recreation participation by soft refusals.

Table C-2: **Population and Sample Comparisons—Demographics for Weighting**

Demographic Characteristic	Census[1]	NSRE
Sex		
Male	47.8	43.6
Female	52.2	56.4
Race/Ethnicity		
White, Non-Hispanic	74.2	83.0
Hispanic	10.2	6.6
Black, Non-Hispanic	11.2	7.5
Other, Non-Hispanic	4.3	2.9
Age		
16 – 24	16.1	14.0
25 – 34	17.9	18.5
35 – 44	21.4	21.0
45 – 54	17.4	19.6
55 – 64	11.3	12.8
65 +	15.9	14.1
Education Level		
8th Grade or less	7.56	2.22
9th – 11th Grade	14.71	8.26
High School Graduate or GED	31.49	26.50
Some College or Technical School	18.17	22.80
Associate's Degree or Technical School	6.64	7.70
Bachelor's Degree	14.35	19.83
Master's Degree	4.41	8.92
Professional Degree	1.23	1.54
Doctorate Degree	0.89	1.67
Other	0.56	0.56
Urban/Rural Residence		
Urban	80.04	65.68
Rural	19.96	34.32
Total Population/Sample	206,171,709	27,854

[1] U.S. Department of Commerce, Bureau of the Census, Civilian noninstitutionalized population 16 years of older, Sept. 1999, (http://www.census.gov) for multivariate on sex, age and race/ethnicity.

Sample Proportionate to the Geographic and Demographic Distributions of the Population

RDD sampling was conducted proportionate to the distribution of the national population both geographically and demographically. Data was collected from a random sample of the population of individuals 16 years of age or older residing in the United States and the District of Columbia at the time of survey implementation. Sample households were selected by means of a Random Digit Dialing (RDD) technique, permitting a natural stratification of the sample by state, county, and area code (Frey, 1989; Groves and Kahn, 1979). RDD samples theoretically provided an equal probability sample of all households in the nation with a telephone access line (i.e., a unique telephone number that rings in that household only). This equal-probability sample included all households with telephones regardless of whether a phone number was published or unlisted (Lavrakas, 1987).

Response Rates

A necessary but not sufficient condition for non-response bias was that there is (are) a (some) factor(s) for which response rates in the sample were not proportional to their representation in the population surveyed. The U.S. Census Bureau advised that the civilian non-institutionalized population best represents telephone-sampling frames. Table C-2 compares the civilian non institutionalized population years 16 and older with the NSRE 2000-04 sample for Versions 1 through 6 for sex, race/ethnicity, age, education level, and urban/rural residence. Response rates were higher for females; those who were White, not Hispanic; and those aged 25-34, 45-54, and 55-64. Response rates were slightly lower for those aged 35-44. Response rates were generally higher for higher levels of education. Differences for urban/rural were probably more related to intentional rural over-sampling than differences in response rates.

Relationship Between Sample Characteristics and Participation in Marine Recreation

Response rates for selected sample characteristics established a difference in survey response rates for several important characteristics. Table C-3 shows that these factors were also important in explaining participation in marine recreation. Table C-3 shows a summary of probit and logit equations estimated for all 19 activities/settings for which this study estimated marine recreation participation rates. Estimates of participation in marine recreation were dependent on factors for which there were biases in response rates. This finding

provided sufficient conditions to conclude that potential for non-response bias exists.

Sample Weighting to Correct for Non Response Bias

Sample weights were constructed by first developing multivariate weights for sex, race/ethnicity and age. Since the survey was designed to allow some applications (modules), to be a stand-alone survey, some constraints were present on how many cells could be implemented using multivariate weighting. For education level and urban/rural residence, multiplicative weights were used.

For Table C-3, the following definitions apply:

AGE = Age of respondent

AGESQ = Age of respondent squared

MALE = Dummy variable for sex, 1=male 0=female

BLACK = Dummy variable for Race/Ethnicity,
1 = Black/African American, non-Hispanic (White, non-Hispanic is base or excluded category)

ASIAN = Dummy variable for Race/Ethnicity,
1 = Asian or Pacific Islander, non-Hispanic (White, non-Hispanic is base or excluded category)

NATIVE = Dummy variable for Race/Ethnicity,
1 = Native American or Native Hawaiian, non-Hispanic (White, non-Hispanic is base or excluded category)

HISPANIC = Dummy variable for Race/Ethnicity,
1 = Hispanic (White, non-Hispanic is base or reference category).

URBAN = Dummy variable for Urban/Rural residence,
1 = Urban residence and 0=Rural residence

EDUCHS = Dummy variable for Education Level,
1 = High School Graduate (those with less than a High School Graduate level of education and other in base or excluded category)

EDUCOL = Dummy variable for Education Level,
1 = Some College or College Graduate (those with less than High School Graduate level of education and other in base or excluded category)

Table C-3: **Results for Selected Participation Equations for Marine Recreation**

Activity	AGE	AGE SQ	MALE	URBAN	BLACK	ASIAN	NATIVE	HISPANIC	EDU CHS	EDU COL	EDU GRAD
Visit Saltwater Beaches	–*	+*	–*	+*	–*	–*	–*	–*	+*	+*	+*
Visit Saltwater Watersides Besides Beaches	–*	+	+*	+*	–*	–*	–	–*	+	+*	+*
Swimming in Saltwater	–*	+	–*	+*	–*	–*	–*	–*	+*	+*	+*
Snorkeling in Saltwater	–*	–**	+*	+*	–*	–*	–*	–*	+*	+*	+*
Scuba Diving in Saltwater	–*	–	+*	+*	–*	–*	–	–*	–	+*	+*
Surfing in Saltwater	–*	+*	+*	+*	–*	+**	–	–*	+	+*	+*
Wind Surfing in Saltwater	–	–	+*	+	–	+	+*	–	–*	–	+
Fishing in Saltwater	–	–*	+*	–	–*	–	+	–*	+	+*	–*
Motorboating in Saltwater	–	–	+*	+**	–*	–*	–	–*	+*	+*	+*
Sailing in Saltwater	–*	+*	-**	+*	–*	–*	–	–*	–	+*	+*
Personal Watercraft Use in Saltwater	–*	+*	+*	+*	–*	–	+	–**	+*	+*	+*
Canoeing in Saltwater	–*	+	+*	+	–*	+**	+	–*	–*	–	+
Kayaking in Saltwater	–**	–	+	+	–*	–*	–	–*	–	+*	+*
Rowing in Saltwater	–*	+	+*	–	–	–	+	–	–**	+	+
Water Skiing in Saltwater	–*	+*	+*	+*	–*	–*	–	–**	+	+*	+
Birdwatching in Saltwater Surroundings	+*	–*	–*	+**	–*	–*	–	–*	+*	+*	+*
Viewing Other Wildlife in Saltwater Surroundings	+*	–*	–*	+*	–*	–*	–	–*	+*	+*	+*
Viewing or Photographing Scenery in Saltwater Surroundings	+*	–*	–*	+*	–*	–*	–	–*	+*	+*	+*
Hunting Waterfowl in Saltwater Surroundings	–*	+	+*	–	–*	–*	+	–*	+*	–	–

EDUCGRAD = Dummy variable for Education Level, 1 = Masters, Doctorate or Professional degree (those with less than High School Graduate level of education and other in base or excluded category).

'–' means factor is negatively related to participation.

'+' means factor is positively related to participation.

'*' means factor is statistically significant at 0.05 level of significance.

'**' means factor is statistically significant at 0.10 level of significance.

NOTE: *Other factors, such as household income and residence in a coastal county were other factors included in estimation equations. Those factors are not included here, but were significant in explaining participation for several marine recreation activities/settings.*

Table C-4 shows the effects of sample weighting. Comparison of the unweighted and weighted sample estimates of participation shows the potential extent of non-response bias on estimated participation rates in marine recreation. Of the 19 activities/settings, 11 would have been over-estimated using unweighted data; 7 would have been under estimated using unweighted data; and one would have been the same with weighted and unweighted data.

Table C-4: **Participation in Coastal/Marine Recreation**

Activity or Setting	Participation Rate (%) Unweighted	Participation Rate (%) Weighted [2]	Over or Under Estimate [3]
Visit Saltwater Beaches	31.99	30.03	+
Visit Saltwater Watersides Besides Beaches	4.50	4.50	same
Swimming in Saltwater	27.97	25.53	+
Snorkeling in Saltwater	5.80	5.07	+
Scuba Diving in Saltwater	1.46	1.35	+
Surfing in Saltwater	1.43	1.59	–
Wind Surfing in Saltwater	0.38	0.39	–
Fishing in Saltwater	10.13	10.32	–
Motorboating in Saltwater	7.93	7.11	+
Sailing in Saltwater	3.49	2.98	+
Personal Watercraft Use in Saltwater	2.39	2.57	–
Canoeing in Saltwater	0.98	1.05	–
Kayaking in Saltwater	1.51	1.33	+
Rowing in Saltwater	0.55	0.53	+
Water Skiing in Saltwater	1.03	1.15	–
Birdwatching in Saltwater Surroundings	9.13	7.17	+
Viewing Other Wildlife in Saltwater Surroundings	7.68	6.45	+
Viewing or Photographing Scenery in Saltwater Surroundings	11.01	9.19	+
Hunting Waterfowl in Saltwater Surroundings	0.32	0.33	–
Any Coastal/Marine Recreation	45.33	43.30	+

[1] Civilian Non Institutionalized Population 16 years and Older, Sept. 1999 - NSRE 2000, Versions 1-6, Sample of 27,854 Households.

[2] Weights included multivariate weights for Age, Race/Ethnicity and Sex and multiplicative weights for Education Level and Urban/Rural place of residence.

[3] + means unweighted sample estimate of participation greater than weighted estimate and – means unweighted sample estimate of participation is less than weighted estimate.

Specific Methods Used to Maximize Response Rates and Control for Non-Response Bias

Change Introduction

- **Identify Survey Sponsor**
  Response rates for government-sponsored surveys were reportedly higher (49% or more) than the response rates being achieved by the NSRE. The current introduction being used by the Human Dimensions Research Lab did not identify the survey as being government sponsored. Therefore, the opening statement was changed to the following:

  "Hello. My name is _____ and we are calling on behalf of the United States Forest Service."

- **Increase Motivation for Survey Participation**
  The next statement in the introduction was shortened to spark the respondent's interest in completing the survey. Removing the word "outdoor" encouraged those who did not participate in outdoor recreation to continue with the survey versus not completing the survey due to lack of interest. The next statement in the introduction was therefore changed to the following:

  "We are asking a select sample of the public about recreation opportunities in the U.S."

Increase Level of Detail for Recording Call Dispositions

By keeping more detailed records regarding residential household status of non-contacted phone listings, the HD Lab was able to estimate the value of e, the estimated proportion of non-contacted cases which were eligible as household residents to be respondents to the survey. This parameter was used to calculate AAPOR's Response Rate 3. All attempts coded as no answers and busy signals for the NSRE were recorded in the past as "Non-contact" in the AAPOR response rate calculations, with no distinction of potential eligibility. Therefore, all no answer and busy signal attempts were reviewed to determine whether the number was likely a residential listing. This review enabled researchers to estimate likely residency rate for non-contacted phone listings of unknown eligibility for use in computing survey response rates (see separate spreadsheet for response rates).

Pre-notification Using Advance Letters

- **Experimental Design and Sampling**
  Some studies have shown increases in response rates resulting from sending an advance letter notifying potential respondents that a phone contact will be attempted. Advance letters were therefore used to improve NSRE response rates. For the RDD sample drawn for the Wisconsin survey, a reverse appended was conducted that provided the names and addresses for all numbers listed in the sample. There is no way to know exactly what percent of the sample had listed addresses. An average 40% match rate of names, addresses, and numbers has been reported in other studies which, for the Wisconsin survey meant sending approximately 14,000 letters. For the approximately 40% of listings with names and addresses, response rates were calculated and compared (see separate spreadsheet).

- **Advance Letter Specifications:**
  a. Official U.S. Forest Service stationery was used to identify the survey as government sponsored. The letter was from Dr. Ken Cordell, Project Leader and Senior Scientist with the USDA Forest Service, and emphasized the importance of the study.
  b. Since the survey selected participants randomly from a household, the advance letter was addressed to the "John Smith Household" and the salutation greeted the "residents at the John Smith household." The person that was randomly selected in the household to be interviewed may or may not have seen the letter.

Reducing Survey Length

The Human Dimensions Research Lab at The University of Tennessee has shown that response rates improve with shorter interviews. The Wisconsin survey was therefore limited to an average 15-minute interview time. All versions of the NSRE were submitted to extensive testing and refinement before application.

Strengthen Refusal Conversion Efforts

- **Training**
  The supervisory staff of the Human Dimensions Research Lab at the University of Tennessee reviewed interviewer training materials and searched for ways to improve overall interviewer training. The highest priority was given to more intensive refusal aversion and refusal conversion training.
- **Extend Data Collection Period**
  Based on the time frame for overall data collection and in order to meet agency data needs for resource planning, management and policy, extending the data collection period was difficult. However, to the maximum extent possible, extra time was budgeted near the end of the data collection period to allow a crew of interviewers to work specifically on refusal conversions. At the end of these extended time periods, improvements in response rates and costs were evaluated and approaches refined in accordance with this evaluation.
- **Send Follow-up Letter to Refusals**
  For those households for which addresses were obtained, a sample of those who refused were sent a letter on Forest Service letterhead prior to re-contact. In cases where a name was obtained, the letter was also personally addressed. The letter again stressed the importance of the survey. Selection of this sample occurred at the end of each week's interviewing.

Weighting Procedures

As blocks of interviews were completed and compiled, they were examined to identify differences in demographic profiles between those surveyed and the overall population of the country as described in Bureau of Census website reports. Indeed, sufficient differences are typically found to require weighting adjustments for over- or under-sampling. Weighting was achieved using a composite of multivariate and multiplicative weights to account for age, race, gender, education, and urban/rural differences. This composite weighting helped adjust estimates of recreation participation and other NSRE estimates to better represent what those estimates would have been had the sample been truly proportionately distributed across all social strata.

This type of weighting procedure, referred to as *post-stratification* (Holt & Smith, 1979), is the most widely accepted method for adjusting sample proportions to mirror population distributions (Zhang, 2000). Post-stratification has been successfully applied in similar national surveys in the United States and other countries (Thomsen & Halmoy, 1998). For NSRE, a total of 60 strata (6 age x 2 gender x 5 race) were identified to match identical strata in the U.S. Census. Each individual strata weight, Swi, is the ratio of the Census population proportion to the NSRE sample proportion:

$Swi = Pi / pi$
where Pi = U.S. Census proportion for strata i
pi = NSRE 2000 sample proportion for strata i

A weight Swi >1.0 indicated that the particular strata was a smaller proportion of the sample than of the U.S. population based on Census estimates. Likewise, weights with a value less than 1.0 indicated that the stratum was randomly sampled in greater numbers than its proportion of the U.S. population age 16 and over. A unitary weight (i.e., no adjustment) means the sample strata was sampled at the same rate as its proportion of the population. Each individual respondent was assigned to one and only one of the 60 age-gender-race strata and thus assigned a Swi for that stratum.

An additional step accounted for the sampling proportions of two other socioeconomic strata: educational attainment and place of residence (rural/urban). Weights for each of these were calculated separately in a similar fashion to the age-gender-race weight. The education weight, *Ewi*, is the ratio of Census sample proportions for nine different levels of educational attainment, ranging from "8th grade or less" to "Doctorate Degree." The residence weight, *Rwi*, is simply the ratio of the percentage of the U.S. population living either in metropolitan statistical areas or not living in these areas divided by their counterparts in the NSRE data. This weight was adjusted for the fact that urban or metropolitan residents were slightly under-sampled in the survey. A single weight, *Wi*, for each individual survey respondent was then calculated as the product of the three intermediate weights:

$Wi = Swi \; C \; Ewi \; C \; Rwi$

The largest composite weights, therefore, were applied to respondents whose numbers were under-represented in the total sample. The smallest weights were applied to strata which were over-represented. The sample had a potential total of 1,080 (60 x 9 x 2) unique weights, with each individual assigned a weight, *Wi*, depending on his or her combination of the three intermediate weights.

Sources of Error

There are many potential sources of error or bias in a large survey of human subjects. The principal sources of bias for the NSRE include recall and digit preference among the response biases, and refusal, avidity, and incomplete listings among the non-response biases. As with any survey, regardless of scope or complexity, bias is a reality to be recognized and accounted for to the extent affordable through design of the sample and survey content. Brief descriptions of principal anticipated sources of bias in the NSRE are presented below.

Recall Bias

Recall bias is simply an inability of a respondent to recall accurately or to recall at all whether they participated in recreational activities, the number of activities undertaken, or the places where these activities were undertaken. There is no conclusive evidence regarding optimum recall period (one week, one month, six months, etc.) or methods of correcting recall bias. Digit preference bias is related to recall bias, but more specifically is a participation rounding bias. For example, for activities of frequent participation, such as walking or running/jogging, respondents often round to the nearest five or ten, such as 25, 30, or 40, rather than accurately reporting actual number of occasions.

Nonresponse Bias

Principal sources of nonresponse bias include avidity and incomplete phone listings. Avidity bias is the tendency of persons who do not participate or who participate only infrequently in outdoor leisure activities to refuse participation in the survey. Left unaccounted for, avidity bias can result in seriously inflated estimates of population participation rates and biased estimates of participation differences by social group. Incomplete phone listings, like any other incomplete sampling frame, can occur for many reasons. More frequently encountered reasons include institutionalization, persons not having a phone, and persons having access only to pay phones or other non-individualistic arrangements. For the NSRE, an attempt to estimate avidity and listing bias was made by asking two key questions of persons who refused the survey. Those questions were age and whether or not the respondent participated in outdoor recreation in the last twelve months. Additionally, the sex of the respondent was recorded when recognizable. The estimated proportions of non-respondents, relative to respondents, was combined with weights derived from the 2000 U.S. Census of Population to weight each observation and correct for over- or under-representation by social group characteristics in the sample.

The NSRE included a more comprehensive listing of outdoor recreation activities than any of the previous national surveys. The activities list for the NSRE included 70 explicitly named activities. Some of these listed activities such as sightseeing and walking for pleasure have always been relatively vague. Other activities such as snorkeling and rock climbing are much more specific and have relatively precise technical definitions. Respondents were left to determine, by their own definition of the activities listed, whether or not they had participated in a given activity. For the NSRE, several new activities were listed, largely driven by newly available or improved technologies such as personal water craft, rock climbing, and orienteering. To the extent that respondents understood the activities they were being asked about, valid responses were recorded. Little guidance exists in the literature to control for this potential source of error in collecting participation data.

Sources of bias were addressed through data weighting and other approaches as necessary. For example, equally distributing a quota of 400 respondents across each of the 50 states would result in over-sampling of rural areas (e.g., 65% Urban, 25% Near Urban, and 10% Rural). This survey therefore used a sampling strategy that combined the quota of 400 per state with a proportional nationwide sample (e.g., 64.6% Urban, 27.4% Near Urban, and 8.0% Rural). Another source of potential bias is random digit dialing, which reaches a random sample of telephone numbers, rather than of people. Affluent families almost always have a telephone number (97%) while many low-income households do not have a telephone (ranging from 8 to 23% depending on geographic area). As a result, affluent people are likely to be somewhat over represented in survey samples (Bowen, 1994; Groves, 1990; Tucker, Lepkowski, Casady, & Groves, 1992). To compensate for these types of sampling biases, the NSRE data set was weighted based on comparisons with 2000 Census data.

Language barriers can also introduce bias through the exclusion of people who cannot speak either English or Spanish. According to the 2000 Census, 12.5 % of the U.S. population is Hispanic. For the non-English speaking segment of the Hispanic population, the NSRE was conducted in Spanish. The most difficult part of this process was making translation generic enough for overall comprehension by all the various Hispanic dialects. Other non-English speaking U.S. residents were excluded from the survey. The complexity of the translation and interviewing processes made interviewing in all languages prohibitively costly.

All results provided within this study are based upon the number of NSRE surveys completed at the time the analysis for this report was conducted. As of the writing of this report, data collection for the NSRE was still on-going. Obviously, as more data are collected final estimates of the percentages and numbers of people participating in different activities may change slightly from those reported in this report.

In analyzing the results presented in this report, it is important to remember that individuals were asked about their personal participation in specific recreation activities. To date, versions 1-12 of the NSRE have been completed, meaning participants have answered questions pertaining to approximately 80 outdoor recreation activities. For analysis and description of results, it was useful to place these activities into 12 groups. For simplicity, each activity was placed in only one category although in many cases, activities could have been placed in more than one category. Hiking, for example, was classed as an individual activity, which it is for many people. For others, however, hiking might best be classed as a backpacking and camping activity.

It is also important to note that with a maximum sample of approximately 3,000 respondents in Wisconsin alone, not all combinations of social characteristics may be present in the analyses investigated in this study. Weighting of data will help compensate for this by correcting for over- or under-representation by the respondent's social group in the sample.

Activities Covered:

Individual Activities:
- Bicycling
- Mountain biking
- Walking for exercise or pleasure
- Horseback riding
- Day hiking
- Running or jogging
- Golf
- Tennis outdoors
- Gardening or landscaping
- Inline skating or rollerblading
- Orienteering

Snow and Ice Activities:
- Ice skating outdoors
- Sledding
- Snowshoeing
- Downhill skiing
- Snowboarding
- Cross-country skiing
- Snowmobiling

Water Activities:
- Swimming
- Swimming in streams, lakes, or the ocean
- Swimming in an outdoor pool
- Snorkeling
- Scuba diving
- Visiting a beach
- Visiting a waterside

Driving for Pleasure:
- Sightseeing
- Driving for pleasure on country roads or in a park
- 4-wheel drive, ATV or motorcycle driving off-road
- Riding motorcycles for pleasure on a highway

Viewing or Photographing:
- Viewing, identifying, or photographing birds
- Viewing, identifying, or photographing fish
- Viewing, identifying, or photographing other wildlife
- Viewing, identifying, or photographing wildflowers, trees or other natural vegetation
- Viewing or photographing natural scenery

Hunting:
- Big game
- Small game
- Waterfowl

Fishing:
- Fishing in coldwater such as mountain rivers or streams
- Fishing in warm rivers and lakes
- Ice fishing
- Saltwater fishing
- Fishing for migratory fish (salmon, shad or other spawning fish)

Visiting Educational Sites:
- Visiting a nature center, nature trail, visitor center, or zoo
- Attending outdoor concerts, plays, or other outdoor performances
- Visiting prehistoric structures or archaeological sites
- Visiting historic sites, buildings, or monuments
- Visiting a farm or other rural land setting

Traditional Activities:
- Gathering of family/friends
- Picnicking

Outdoor Team Sports:
- Softball or baseball
- Football
- Basketball outdoors
- Soccer outdoors
- Handball, racquetball, or squash outdoors
- Yard games—horseshoes, badminton, croquet, frisbee
- Attending outdoor sporting events as a spectator
- Volleyball outdoors

Boating/Floating/Sailing:
- Sailing
- Canoeing
- Kayaking
- Rowing
- Motor boating
- Water skiing
- Personal water craft such as jet skis and wave runners
- Sailboarding or windsurfing
- Rafting, tubing, or other floating activities
- Surfing

Outdoor Adventure Activities:
- Exploring caves
- Backpack camping on trails
- Camping at developed sites
- Camping at primitive sites
- Visiting a wilderness or other primitive roadless area
- Gathering mushrooms, berries, firewood, or other natural products
- Mountain climbing
- Rock climbing

Activities Particular to the Wisconsin Survey
- Target shooting
- Paintball games
- Geocaching
- Disc golf
- Nature-based educational program
- Outdoor amusement, water, or theme park
- Visit a dog park to walk a pet
- Hunting upland birds
- Playing ice hockey
- Dog sledding
- Off-road ATV
- Off-road motorcycle
- Off-road 4-wheel driving
- Fishing in a Great Lake

Participation Questions and Possible Responses

Because the NSRE will be used for many different purposes, the level of detail needed to describe participation in the activities varied. For each activity, a categorical yes/no answer recorded whether or not the respondent participated in the activity at least once in the past twelve months. Activities covered are listed on page C-12.

Outdoor Industry Foundation (OIF)

This report was made possible by the Business for Wilderness Program (B4W). B4W is engaging outdoor businesses to support America's public lands. The B4W program is an initiative of The Pew Charitable Trusts supported by a grant from the Outdoor Industry Foundation (OIF). OIF was established by the Outdoor Industry Association to support programs and events to increase participation in human powered outdoor recreation activities and to educate the public about the economic and recreational benefits of the conservation of wild lands. Outdoor Industry Association (OIA) provides trade services for over 4,000 manufacturers, distributors, suppliers, sales representatives, and retailers in the outdoor industry. State-level participation data was collected on behalf of Outdoor Industry Association as a part of the Outdoor Recreation Participation Study, 4th edition. Collection of participation data was funded in part by Business for Wilderness.

This data can be used to assess trends and perceptions among Americans 16 and older, not precise participant numbers. This data collection is designed to give insight into how Americans perceive themselves as outdoor recreationists. Canoeing is a good example. The survey question for canoeing is undefined, and the question simply asked: "Did you go canoeing (this year)?" The question is open to a respondent's interpretation. While interpretations may vary slightly from person to person, overall participation trends and perceptions may still be assessed. For this report, a participant is defined as an American 16 or older who reports participating in an activity at least once during the past year. Census-based information is used to classify participants by the region in which they live. The results presented in this report are based on a total of 7,000 interviews conducted during 2001 and the first six months of 2002. The overall results may be applied to the American population, age 16 and over, with a margin of error of +/– 1.2% at the 95% level of confidence. Data collection for the report was conducted using scientific sampling and random digit dial methodology. A disproportionate stratified random sample by census region was used for the study. Calls were made at random until a representative quota for each region was reached. Only Americans age 16 or over were interviewed. The results for each activity reflect where each resident lives, not necessarily where each activity occurred. For example, results show a sizeable population of snowshoe participants living in Florida. This suggests that many Floridians travel to cold-weather states to participate in the activity.

Department of Tourism

The Wave VIII report is the eighth in a tracking study on advertising and Wisconsin awareness. The survey is a follow-up study conducted after the largest segment of the summer campaign ended in July 2004. A random sample survey was conducted by telephone in the core markets of Chicago and Minneapolis/St. Paul during the middle of July 2004. A total of 1,000 interviews were completed; 500 in Chicago and 500 in the Twin Cities.

One of the purposes of the study is to track the awareness level of Wisconsin and competing states' travel campaigns among consumers in our core out-of-state markets. This is accomplished by measuring the impact of the Wisconsin summer campaign, which includes television advertising. The results are compared with prior summer campaigns to measure market changes. Additionally, comparisons are made with previous winter campaigns conducted both with and without the benefit of television advertising. The campaign conducted during winter 2002/2003 included television advertising for the first time.

The Wave VIII, report is an expanded version of the study conducted during summer 2003 so that updated data could again be collected for seasonal activities. In addition to continuing to track changes in share of mind, this study is also designed to identify the most memorable activities and travel characteristics in our core out-of-state markets.

The metropolitan neighborhoods targeted for the survey were selected by zip code to ensure compatibility with the sample audiences in the previous seven waves. Selected areas have a higher saturation of households with annual incomes of $50,000 and above. This technique is used to achieve a better measure of Wisconsin's market penetration among households that have sufficient disposable income to afford travel anywhere in the world.

APPENDIX D

Conservation and Recreation Lands in Wisconsin

Table D-1: **Conservation and Recreation Lands in Wisconsin • Acres by Ownership • June 30, 2004**

County[1]	Federal Government[2]	State Forests and Wild Rivers	State Natural and Park Areas	State Fisheries and Wildlife	County Parks and Forests[3]	City, Town and Village Parks	Total
Adams	344	—	5,089	8,741	813	9	14,996
Ashland	216,763	756	5,107	6,784	43,041	356	272,807
Barron	—	60	338	6,200	16,468	164	23,230
Bayfield	278,059	49	9,774	10,347	169,353	145	467,727
Brown	—	—	609	2,396	5,807	1,923	10,735
Buffalo	9,374	—	814	12,649	535	57	23,429
Burnett	—	15,157	229	54,420	108,918	24	178,748
Calumet	—	—	1,199	10,592	1,131	353	13,275
Chippewa	—	—	6,574	3,651	33,416	689	44,330
Clark	—	224	—	266	133,660	310	134,460
Columbia	2,846	19	548	20,371	815	349	24,948
Crawford	15,269	6,074	2,341	4,064	579	602	28,929
Dane	1,442	4,147	2,543	14,270	3,205	9,414	35,021
Dodge	20,918	—	216	23,331	1,131	969	46,565
Door	29	—	9,980	3,526	1,281	2,981	17,797
Douglas	—	40,953	3,850	7,598	270,813	434	323,648
Dunn	1,022	—	2,169	11,495	1,183	543	16,412
Eau Claire	—	—	140	2,468	54,714	1,189	58,511
Florence	85,028	5,630	4,980	42	39,973	24	135,677
Fond du Lac	1,706	10,696	507	13,500	1,691	1,152	29,252
Forest	344,008	25	454	3,532	30,877	25	378,921
Grant	6,469	13,629	3,638	534	1,070	555	25,895
Green	—	—	1,457	3,696	487	159	5,799
Green Lake	—	—	343	17,949	747	162	19,201
Iowa	—	8,661	6,694	4,150	381	140	20,026
Iron	—	61,569	2,186	11,660	182,015	21	257,451
Jackson	1,697	67,565	518	7,509	122,868	128	200,285
Jefferson	250	3,553	511	14,136	661	964	20,075
Juneau	79,831	—	4,517	5,763	16,240	298	106,649
Kenosha	—	—	4,838	1,942	2,700	2,204	11,689
Kewaunee	—	—	396	2,428	273	120	3,217

[1] Land in Menominee County that is not privately owned is held by the Menominee Nation.
[2] Federal lands include national parks, national forests, and lands controlled by the U.S. Fish and Wildlife Service as of June 30, 2002.
[3] Includes lands designated as public areas and trust lands not listed separately as of June 30, 2002.

APPENDIX D: Conservation and Recreation Lands in Wisconsin

County[1]	Federal Government[2]	State Forests and Wild Rivers	State Natural and Park Areas	State Fisheries and Wildlife	County Parks and Forests[3]	City, Town and Village Parks	Total
La Crosse	12,192	2,972	368	3,805	3,096	2,232	24,665
Lafayette	—	—	1,530	4,048	278	210	6,066
Langlade	32,727	3	307	16,093	131,654	113	180,897
Lincoln	—	1,881	2,797	7,206	102,664	1,317	115,865
Manitowoc	120	2,903	334	6,255	1,052	1,217	11,881
Marathon	—	356	1,695	23,830	34,149	1,080	61,110
Marinette	—	11,951	4,372	10,053	238,730	408	265,514
Marquette	1,185	—	832	10,537	359	172	13,085
Milwaukee	—	237	—	—	16,359	1,585	18,181
Monroe	15,529		1,547	3,602	7,317	261	28,256
Oconto	141,498	472	817	5,178	44,974	793	193,732
Oneida	11,184	74,361	2,856	8,385	105,227	279	202,292
Outagamie	35	—	1,224	7,807	2,631	1,680	13,377
Ozaukee	536	—	2,294	237	1,243	1,232	5,542
Pepin	—	—	1,426	3,506	243	24	5,199
Pierce	—	—	1,626	1,433	1,223	147	4,429
Polk	1,085	4,984	2,090	13,198	21,799	512	43,668
Portage	—	—	1,044	28,412	3,349	728	33,533
Price	151,317	9,066	259	9,892	103,403	56	273,993
Racine	—	—	99	3,087	5,484	2,064	10,734
Richland	—	6,170	—	1,598	98	221	8,087
Rock	297	—	91	7,127	3,188	3,566	14,269
Rusk	—	15,202	—	3,273	91,382	4	109,861
St. Croix	302	—	2,955	6,758	8,688	462	19,165
Sauk	4,954	4,620	13,701	4,190	1,498	962	29,925
Sawyer	—	71,828	452	9,095	2,534	575	84,484
Shawano	126,686	—	1,024	13,857	117,927	878	260,372
Sheboygan	108	15,794	924	3,960	1,159	434	22,379
Taylor	123,952	—	249	8,014	18,534	99	150,848
Trempealeau	4,207	58	1,618	4,869	362	127	11,241
Vernon	6,863	52	3,957	1,573	1,538	86	14,069
Vilas	54,536	139,470	726	7,710	49,054	104	251,600
Walworth	—	6,835	1,269	5,866	766	1,020	15,756
Washburn	__	155	745	5,653	149,585	80	156,21
Washington	__	4,548	285	6,737	1,524	1,987	15,081
Waukesha	__	11,612	606	5,008	9,905	6,322	33,453
Waupaca	__	__	1,927	7,552	1,080	650	11,209
Waushara	232	__	622	17,411	1,990	135	20,390
Winnebago	2,118	__	5	9,198	1,784	1,107	14,212
Wood	2,312	173	14	14,955	59,949	612	78,015
State	1,795,030	624,470	141,246	600,978	2,594,625	62,004	5,782,353

[1] Land in Menominee County that is not privately owned is held by the Menominee Nation.
[2] Federal lands include national parks, national forests, and lands controlled by the U.S. Fish and Wildlife Service as of June 30, 2002.
[3] Includes lands designated as public areas and trust lands not listed separately as of June 30, 2002.

APPENDIX E

Wisconsin Wetlands Summary

"We promote, protect, restore, enhance, and preserve the quantity, quality, and diversity of Wisconsin's wetlands as a critical component of ecosystems essential to the health and quality of life of our state's diverse citizenry, plants, animals, and landscapes."

— WETLANDS VISION STATEMENT

As anyone who has ever witnessed the early morning commotion of riverbed roosting birds, or the spring blooming of water-loving wildflowers will tell you, wetlands are special places. The term "wetland" encompasses a variety of diverse habitats from sedge meadows, to wet forests, to calcareous fens, to bogs, to cattail marshes and more. These ecosystems provide habitat for a wide diversity of plant and animal species, some of which are rare and unique to wetland systems. With the wide diversity of life they support, wetlands are natural recreation areas for birders, hunters, fisherman, boaters, and wildflower enthusiasts. Beyond their value as habitat, wetlands perform many important functional processes as well. They act as buffers for excess stormwater, preventing flooding of inundated areas, and they protect water quality by filtering out contaminants.

In Wisconsin we have been blessed with an extensive array of wetlands, but these areas are in peril. When first declared a state in 1848, Wisconsin had approximately 10 million acres of wetland. Today only 53% (about 5.3 million acres) of this habitat remains. Historically, wetlands have been drained for farmland and filled for roads and development. As drainage technology has improved and suburban development increases, more and more wetlands are falling victim to an encroaching human presence. Other threats such as invasive species and contamination by pollutants have also increased and though they do not destroy wetlands directly, they do weaken wetland systems, making these areas more vulnerable to other threats.

Though efforts have been made to reduce wetland loss through regulation, restoration, and land-acquisition, we as a state are still losing wetland habitat at an alarming rate. The Wisconsin Wetlands Inventory (WWI) completed in 1985 identified wetlands across the state, creating a county-by-county inventory of where and how many wetlands each region contained. This survey inventoried 5.3 million acres of wetlands, a loss of 47% from original state acreages. Although the State Legislature has authorized the DNR to update the WWI on a 10-year cycle, budget cuts and limited staff have stalled the process and the Inventory has not been updated since its first inception in 1985. Data from other sources, however, indicate that this loss has continued.

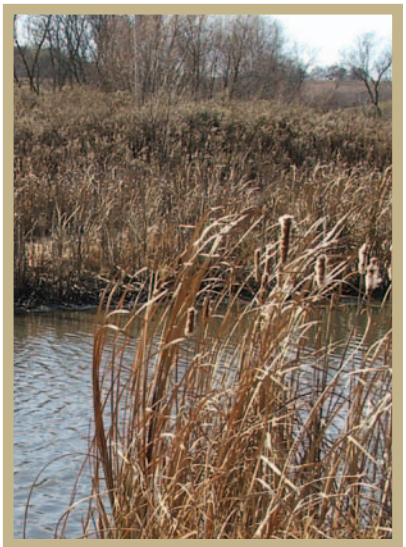
A DNR review of U.S. Army Corps of Engineers (COE) individual permit decisions from 1982 – August 1991 shows wetland losses of approximately 10,800 acres statewide (1,200 acres/year average). A later DNR review of COE individual and nationwide permit decisions from August, 1991 – April, 1998 shows wetland losses of approximately 2,053 acres statewide (312 acres/year average). Permitted wetland losses during this period declined by 460% (1,128 acres/year average), a decline attributed to the state's adoption of state wetland water quality standards on August 1, 1991. Wetland losses due to illegal wetland filling, wetland drainage and activities pre-authorized by general and nationwide permits are not known for either of these time periods and losses may therefore be larger than these estimates.

To protect these gems of biodiversity and ecosystem health we must be vigilant about further loss and implement strategies to protect and restore our wetlands. The first step in effective wetland management

and protection will be the involvement of local citizens. The DNR and other organizations are working to strengthen relationships with property owners, nonprofit conservation organizations, and local governments. Educational initiatives that teach the economic and environmental value of wetlands will be crucial in motivating people to implement and support conservation programs within their own communities. To assist these community restoration projects, the DNR has developed the *Wetland Restoration Handbook*. Offering practical guidance to property owners and conservation groups, this manual has proved quite popular among Wisconsinites, indicating the value state citizens place on their healthy wetland ecosystems.

Of all the groups involved in wetland management and restoration, private property owners will be among the most important. Today 75% (over 4 million acres) of Wisconsin's wetland habitat is held in private possession. Wetland mitigation programs that offer incentives to property owners who maintain and protect wetlands on their property have proven effective in slowing the loss of wetlands statewide. Current legislation offers reduced property taxes for those with land in a "managed wetland" or "preserved wetland" program, as well as those whose properties contain wetlands protected by easements or transfer of development rights. Other programs such as the Wetland Reserve Program offer incentives and cost-sharing options to property owners who wish to restore wetlands to their properties. Programs like these will become increasingly important in statewide wetland protection and should be expanded to involve the widest range of property owners in wetlands stewardship. The state should also work to establish a wetland protection and restoration grant program to maintain or protect current wetlands and restore altered and degraded areas.

We must also work to protect and manage species diversity within wetland environments. These areas play host to a wide array of species, some of which are endangered, rare, or exclusive to wetland systems. Healthy wetlands not only provide habitat, but also support the health of forest, prairie, and lake ecosystems around them. To ensure the continued health of these areas we will need to manage invasive species, improve water quality standards, and reduce polluted runoff. Rare, unique, or in-peril wetland areas should be protected through property acquisitions and land easements. Management plans that protect and restore entire watershed systems will become increasingly important in protecting the wide expanses of habitat needed for effective protection.



Working together, the DNR, private property owners, community organizations, and local governments can all ensure a healthy future for Wisconsin's extraordinary wetlands.

To ensure more efficient handling of this management, the DNR will need to streamline their regulatory approach. Currently most wetland regulation is carried out under federal laws. This system is inefficient, inconsistent, and not easily adapted to Wisconsin's specific economic, environmental, and social needs. A state wetland protection program should be established that supersedes federal regulation and deals with Wisconsin's wetland concerns in a more efficient and consistent manner. Continued mitigation with developers should consider the full range of wetland impacts when planning and implementing development in wetland areas.

Finally, wetland preservation will rely on the use of modern technology to map, monitor, protect, and manage wetland areas. The Wisconsin Wetland Inventory contains over 1,700 maps showing the location and types of wetlands in Wisconsin. Unfortunately, the information in this database is often outdated and therefore not useful to developers and management agencies. A statewide, comprehensive, and integrated inventory of natural resources should be developed to provide planners, local governments, and the general public with an up-to-date source of wetland information. This sort of database would facilitate legislation, planning, and restorations efforts, all of which would promote healthier wetland ecosystems.

Working together, the DNR, private property owners, community organizations, and local governments can all ensure a healthy future for Wisconsin's extraordinary wetlands.

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The 2005–2010 Wisconsin Statewide Comprehensive Outdoor Recreation Plan

SCORP

Publication number: PR-026-2006