

# South dakota

## Statewide Comprehensive Outdoor Recreation Plan

Department of Game, Fish and Parks



Division of Parks and Recreation

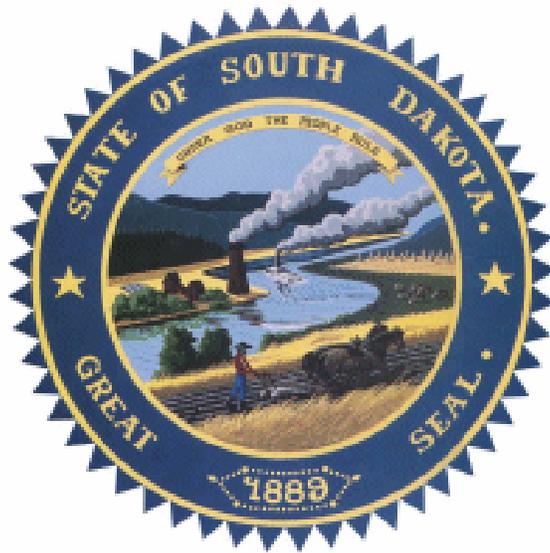
2008



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## Statewide Comprehensive Outdoor Recreation Plan

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**M. Michael Rounds**  
Governor

**Jeff Vonk**  
Secretary  
Department of Game, Fish and Parks

**Douglas Hofer**  
Director  
Division of Parks and Recreation





STATE OF SOUTH DAKOTA  
M. MICHAEL ROUNDS, GOVERNOR

December 11, 2008

Ernest Quintana  
Regional Director  
National Park Service  
Midwest Regional Office  
601 Riverfront Drive  
Omaha, NE 68102

Dear Ernest,

In South Dakota, we are truly blessed with outstanding outdoor recreational opportunities and resources. Places like parks, lakes, and trails can strengthen our bodies and minds while contributing to productive and fulfilling lives. These resources also offer attractions where visitors can seek relaxation and adventure. While there is so much going for South Dakota, there are also many challenges.

Childhood obesity and health problems related to inactive lifestyles and poor diet continue to cost our society economically, socially, and physically. Outdoor recreation plays a crucial role in allowing people to enjoy the outdoors. Outdoor recreation can also provide affordable and fun ways to participate in healthy activities. In fact, our park areas are often referred to as South Dakota's largest wellness centers.

The *2008 South Dakota Statewide Comprehensive Plan* takes a look at certain challenges and strategies to help people to make outdoor recreation a priority in their choices for healthier lifestyles. It incorporates public input from many successful programs and initiatives such as the Department of Health's *Healthy South Dakota Program*. These collaborations will inspire new and innovative ways to get more people outdoors. With these strategies in place, our outdoor recreational attractions will make South Dakota even more special for its residents and visitors.

If you have any questions, please do not hesitate to contact my office.

Sincerely,



M. Michael Rounds

## Acknowledgements

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# 2008 SOUTH DAKOTA STATE COMPREHENSIVE OUTDOOR RECREATION PLAN

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# Introduction

## **WHAT IS THE SOUTH DAKOTA STATE COMPREHENSIVE OUTDOOR RECREATION PLAN?**

A wise person once said, “You are either going forward or backward, there is no standing still.” This certainly holds true for outdoor recreation. The 2008-2012 South Dakota Statewide Comprehensive Outdoor Recreation Plan (SCORP) examines how to best meet the needs of our citizens to provide quality, accessible outdoor recreational facilities in our state. The State of South Dakota chooses to move forward, using sound decision-making in determining the direction.

Although this plan takes the form of a single document, the plan is actually a process that began in 1964. It was in this year that Congress passed the Land and Water Conservation Fund (L&WCF) Act. This act paved the way for a grants program that utilizes revenues from offshore oil and gas leases to provide matching funds to states and local communities for projects relating to outdoor recreation. Since 1964, South Dakota has utilized over 36 million dollars from the program to acquire and build parks and recreation areas. Generations of South Dakotans have used and benefited from L&WCF projects such as playgrounds, ball fields, swimming pools and picnic areas. Projects have been completed in every South Dakota county.

As a requirement of the program, each state is charged with developing a plan that evaluates the demand for and the supply of outdoor recreation resources in the State. The State of South Dakota has prepared a SCORP each year in 1965, 1967, 1971, 1975, 1987, 1992 and 2002. Each plan has taken an in-depth look at outdoor recreation in the state and made recommendations for meeting the demand for that particular period. Many projects have been built utilizing the resources outlined in the SCORP.

Perhaps the most important product of the plan is the opportunity it offers the Division of Parks and Recreation to evaluate the ever-changing climate of outdoor recreation in South Dakota. Industry, economics, resources, attitudes and values can change significantly over the course of a few years. Keeping a pulse on outdoor recreation is the key to providing effective use of our resources.

## **WHY IS OUTDOOR RECREATION IMPORTANT?**

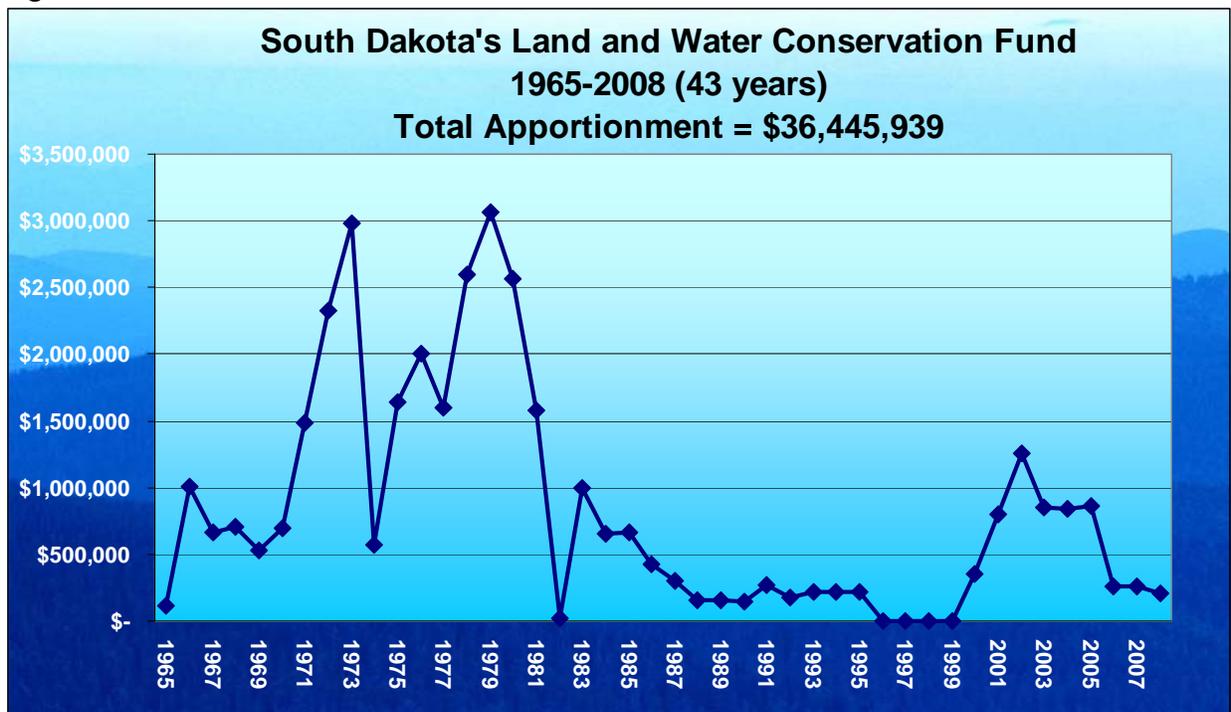
This is a question easily answered, but difficult to quantify. The many benefits of outdoor recreation often mean different things for different people. Some quick answers to the above question may include some obvious rewards such as fun, relaxation or exercise. However, it is becoming increasingly apparent that recreation has much more importance. Studies are showing that participation in outdoor recreation can improve the way we think, reason and socialize. Outdoor recreational facilities are now providing much needed services to help combat health problems associated with obesity and inactive lifestyles. Parks provide economic and environmental benefits, including places of solitude, reflection and education. Parks and recreation have become symbolic of American lifestyle.

All of these reasons contribute to the demand for parks, facilities and services.

### THE LAND AND WATER CONSERVATION FUND

The Land and Water Conservation Fund has a long and productive history of making outdoor recreational opportunities possible throughout the state and in cities big and small. Parks and projects funded through L&WCF have the unique reality of being dedicated to public recreation in perpetuity. However the program has reached a critical crossroads, due largely to erratic funding cycles. Figure I-1 shows South Dakota’s state-share apportionment from 1965-2008. In the 1970s and 1980s, L&WCF built the foundation of many outdoor recreational programs and facilities in South Dakota.

Figure I - 1



Seventy-five percent of South Dakota’s total apportionment came in the first 18 years of the program (1965-1983). Many of these projects built under the program during this time frame have reached or are approaching their normal useful life.

Playgrounds built during these periods are no longer considered adequate to meet modern safety standards. Swimming pools are aging and deteriorating under the extremes of South Dakota weather. Hard-surfaced play courts are cracked and in need of renovation. These are just some examples of the issues public recreation providers face.

In 2008, South Dakota received \$211,498 for its state-side apportionment. To put this figure into perspective:

- Construction or renovation of one outdoor swimming pool under today’s standards will easily exceed one-two million dollars.
- Construction of a new comfort station in 2008 averaged \$180,000.

Due largely to the increasingly scarce funding combined with the effects of inflation, L&WCF's role in any comprehensive strategy to address the current and future needs related to outdoor recreation remains uncertain. This SCORP will address the key issues facing outdoor recreation in South Dakota and strategies that include, but not necessarily depend on the Land and Water Conservation Fund to implement.

In recent decades participation in outdoor recreational activities have continued to diversify and increase. However, recent studies have shown some decline in participation in outdoor recreational activities, especially for children. This creates issues that cross over into other realms such as health care and social issues. Other studies suggest that obesity and health problems attributable to poor diet and inactive lifestyles are also on the increase, compelling the State of South Dakota to act in order to combat the phenomenon. The focal point of this effort has been the Healthy South Dakota program administered by the Department of Health. The South Dakota Department of Game, Fish and Parks has participated in this program and promotes South Dakota's parks as the state's largest wellness centers, providing accessible, affordable, and fun recreational opportunities.

## PUBLIC INVOLVEMENT

The South Dakota Division of Parks and Recreation's mission states that it will accomplish its goals of providing diverse outdoor recreational opportunities through, among other things, "constructive communication with those we serve." Providing information about our services, facilities and initiatives is as equally important as acquiring input, ideas and concerns from active and potential park users. Some methods of these communication strategies include the following.

The Division of Parks and Recreation

- Park surveys – Surveys are often conducted to gather input and preferences of our park visitors in order to effectively respond to their needs.
- Comment cards – An extensive, statewide comment card system is in place that allows park visitors to submit a ranking of their experience at a state park or recreation area and provide comments, complaints, or suggestions.
- Website and email – Persons can submit their comments via the web.
- Press releases, PSAs, and media coverage are utilized for all park activities, special events, and initiatives.
- *Conservation Digest* – the Department's official magazine.
- *Park Times* and *Tatanka* – The Division of Parks and Recreation's main source of information for park visitors.
- Trade shows – Attendance at major regional sports and trade shows allow face-to-face communication with visitors.
- Public meetings – Public meeting are held to encourage local input and participation in localized events and initiatives.
- Involvement and representation with other local, statewide, and national organizations such as local Chamber of Commerce, Tourism Associations, the Black Hills Forest Advisory Board, South Dakota Snowmobile Association, National Association of State Park Directors, National Association of Recreation Resource Planners Association, etc.

The South Dakota Parks and Recreation Association

- Annual conference – presentations and discussions about SCORP issues were held at SDPRA conferences in 2003 and 2007 to discuss statewide planning issues. The conference is one of the best mechanisms for recreation providers across the state to exchange ideas and create dialogue. Also, every five years, the SDPRA holds a joint conference with North Dakota Recreation and Parks Association.
- Newsletters, website, etc.

#### The Game, Fish and Parks Commission

- Appointed citizens – The GF&P Commission is the authority that approves all local L&WCF project applications.
- Public hearings – Sessions where the public is invited to testify on rule proposals or other issues and initiatives.

Many other sources of information provided input to the development of this SCORP. Surveys, such as the Office of Tourism’s Interstate Visitor Center Intercept Study, are conducted to seek input. The advantage to this form of information gathering is that the survey tools can be carefully drafted and the respondents can be targeted.

Focus groups and public forums also provide venues to gather important data. The South Dakota Department of Health took the leadership role in organizing forums to develop the South Dakota State Plan for Nutrition and Physical Activity. The plan was a year in the making and began with series of public forums in January 2005 to gather public input about the issue. In April 2005, leaders from across the state gathered for the Healthy South Dakota Summit to formally launch development of the plan. The national Centers for Disease Control Director and South Dakota native Dr. Julie Gerberding also participated in the summit.

Since the summit, a diverse group of partners has been meeting to craft the five-year plan with specific strategies for parents and caregivers, schools and youth organizations, the workplace, communities, and health care. The aim is to increase healthy eating and physical activity as ways to reduce obesity and the subsequent risk for chronic diseases such as cardiovascular disease, hypertension, and diabetes.

The South Dakota Division of Parks and Recreation along with municipal park and recreation departments and the South Dakota Parks and Recreation Association have been active participants in the development and implementation of this plan.

Additional partners involved in this planning and implementation process include:

The American Cancer Society

Midwest Dairy Council

American Heart Association

Rapid City Regional Hospital

Avera McKennan Hospital

Sanford School of Medicine at the  
University of South Dakota

Boys and Girls Clubs Department of  
Education

School Nutrition Association of South  
Dakota

Department of Health, Department of Social  
Services

Sioux Falls Growing Healthy

Girl Scouts

Sioux Valley Health System

Indian Health Service

South Dakota AARP

South Dakota Action for Healthy Kids

South Dakota Association for Health,  
Physical Education, Recreation and Dance

South Dakota Association of Healthcare  
Associations

South Dakota Breastfeeding Coalition

South Dakota Comprehensive Cancer  
Control

South Dakota Dietetics Association

South Dakota Foundation for Medical Care

South Dakota Municipal League

South Dakota Nurses Association

South Dakota Nutrition Council

South Dakota State Medical Association

South Dakota State University Cooperative  
Extension Service

South Dakota State University (Dietetics,  
Health Promotion, Nursing)

University of South Dakota (Dietetics).



The 2008 SCORP has identified the following issues as key objectives for South Dakota.

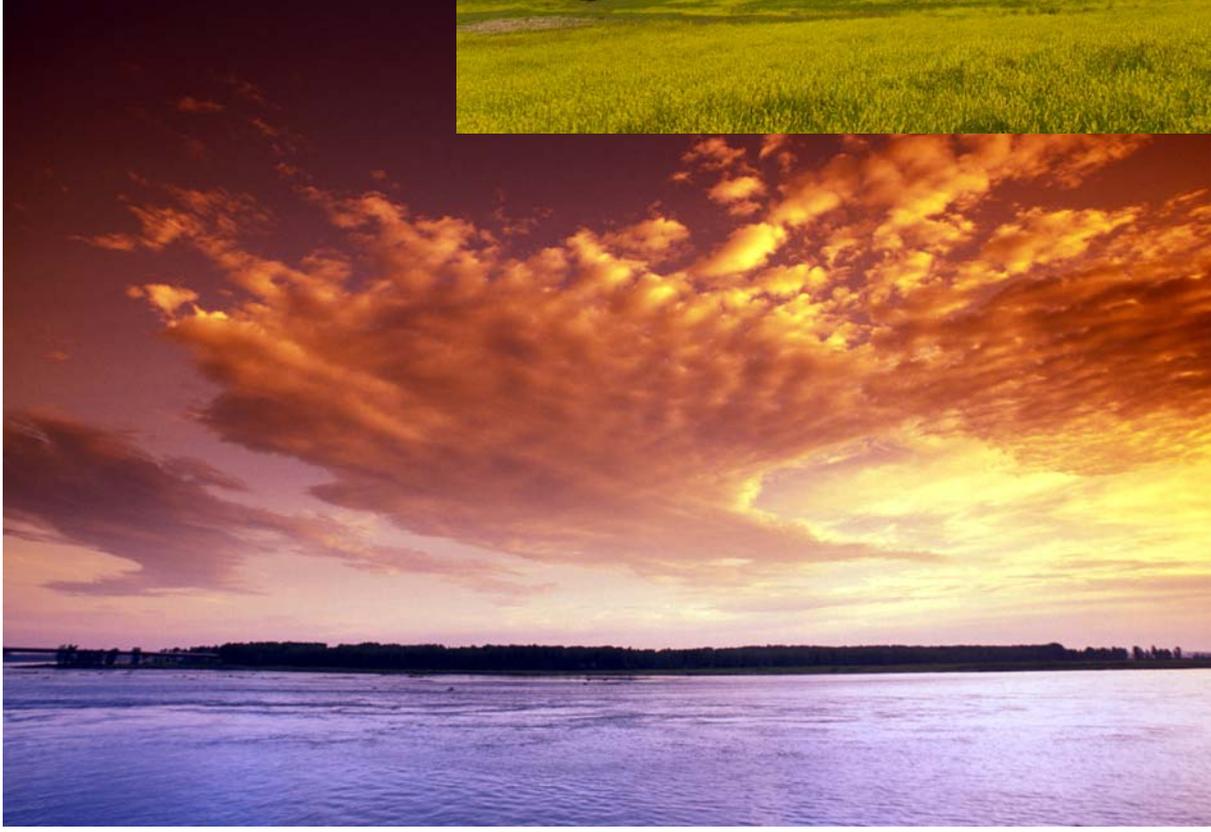
- The increases and effects of obesity and other health-related conditions attributable to poor diet and inactive lifestyles. These issues are costly in terms of lives and health care costs. Outdoor recreation has a role in providing places to experience the outdoors while participating in activities that increase the health and well being of our citizens.
- The decreases in certain types of unstructured outdoor play that is crucial for childhood cognitive development. In recent decades, the amount of time that children spend exploring the natural environment has been replaced by more time with technological interests such as TV, video games and computers. Also, participation in highly structured and supervised activities continues to increase at the expense of leisure time spent exploring, discovering, and pretend playing.

The 2008 SCORP also provides the following:

- An overview of South Dakota and its people.
- Challenges and Opportunities for outdoor recreation in South Dakota.
- A strategy plan that will guide how the state will utilize its share of the L&WCF apportionment.
- An updated wetlands addendum.

The preparation of this plan was financed entirely through the South Dakota Division of Parks and Recreation.

# CHAPTER 1: SOUTH DAKOTA OVERVIEW



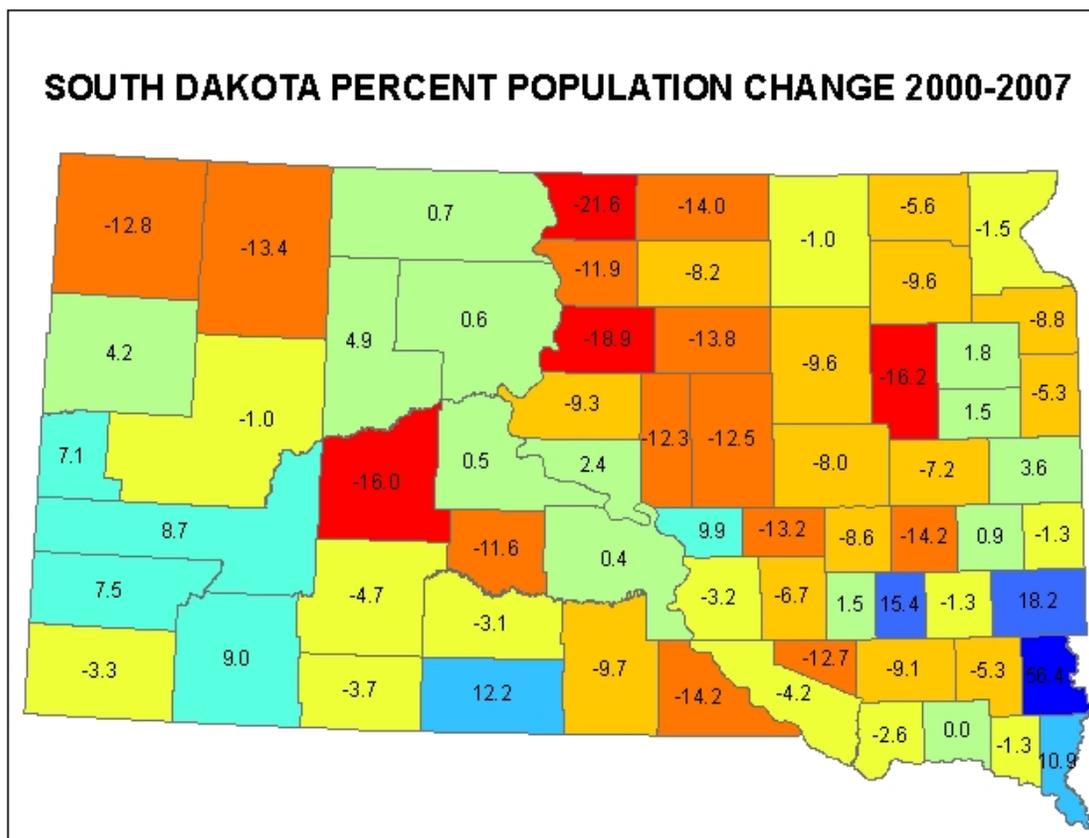
South Dakota became the 40<sup>th</sup> state in 1889. It would be difficult to determine how developed outdoor recreation got its start in South Dakota. Outdoor recreation has changed extensively over the years though most of the driving forces behind it remain the same. The outdoors offer a perfect setting for exercise, relaxation, learning, self-reflection and socialization. As one travels across the state, it is apparent why South Dakota is often referred to as the “land of infinite variety.” However, this adage can apply to the people as well as the landscape. This chapter will give a brief overview of both.

### THE PEOPLE OF SOUTH DAKOTA

According to the 2007 census estimates, there are 796,214 people living in South Dakota. This is a 5.5 percent increase over the 2000 census and the most people that have ever lived in the state. For the first time in history, South Dakota is on the verge of becoming an urban state. In 2000 there were 374,354 persons living in cities with a population over 2,500 whereas there were 380,490 people living in rural areas. Although trends show that rural non-farm residents are increasing, the number of persons living on rural open country farms is still on the decline.

Although population in the state has been increasing during recent decades, many areas of the state are experiencing population loss. Figure 1-1 shows which counties have experienced the greatest gains and losses from population change.

Figure 1 - 1



- South Dakota ranks 47<sup>th</sup> in population density with an average of 9.9 people per square mile. The average in the United States is 79.6 people per square mile according to the 2000 U.S. Census. Over half (34) of the state's 66 counties are classified as frontier (population density of less than six persons per square mile).
- South Dakota ranks eighth in the percentage of the population over 65 years of age with 14.3 percent of the population over 65. The national average according to the 2000 U.S. Census is 12.4 percent. South Dakota ranks even higher, (3<sup>rd</sup>), with 2.18 percent of the state's population over the age of 85.
- South Dakota ranks first in the nation for having two working parents. According to the U.S. Census data, 74 percent of children younger than six have two parents working. For children ages 6 to 12, South Dakota ranks ninth with 70 percent having both parents working.
- According to the South Dakota Voices for Children, 41 percent of children in South Dakota lived at or below the self-sufficiency line in 2006.
- In 2006, South Dakota ranked 38<sup>th</sup> in per capita personal income and ranked 34<sup>th</sup> in 2007 according to the U.S. Bureau of Economic Analysis and Bureau of the Census.
- According to the 2000 Census, 13.2 percent of South Dakotans live below 100 percent of the federal poverty level (FPL) compared to 12.3 percent for the nation. Over 33 percent (33.1 percent) of South Dakotans live under 200 percent of FPL compared to 29.6 percent for the nation.



## THE INDUSTRY OF SOUTH DAKOTA

South Dakota's major industries are agriculture, tourism and manufacturing. Major crops produced in the state include corn, oats, wheat, soybeans, sunflowers and hay. South Dakota also ranks high in the production of cattle and sheep.

South Dakota Gross Domestic Product (GSP), by Component: 2000-2005						
GDP by State: Millions of Current Dollars						
INDUSTRY	2000	2001	2002	2003	2004	2005
<b>Total Gross State Product</b>	<b>23,230</b>	<b>24,104</b>	<b>25,826</b>	<b>27,337</b>	<b>29,386</b>	<b>30,919</b>
Private industries	20,103	20,874	22,554	23,857	25,674	26,912
Agriculture, forestry, fishing, hunting	1,519	1,443	1,143	1,750	1,931	1,808
Mining	89	94	82	79	74	138
Utilities	411	420	445	476	501	564
Construction	939	998	1,050	1,136	1,219	1,267
Manufacturing	3,115	2,733	2,707	2,888	3,181	3,068
Durable goods	2,533	2,145	2,105	2,255	2,490	2,328
Nondurable goods	582	588	603	633	691	740
Wholesale trade	1,316	1,391	1,439	1,473	1,584	1,713
Retail trade	1,851	1,931	2,144	2,250	2,315	2,206
Transportation & Warehousing	646	672	697	707	744	819
Information	597	636	656	710	785	886
Finance and Insurance	2,914	3,575	4,854	4,805	5,244	5,366
Professional & Technical Services	579	603	624	669	709	785
Educational Services	150	156	166	174	185	222
Health Care and Social Assistance	1,820	1,954	2,154	2,348	2,501	2,699
Arts, Entertainment, Recreation	229	240	265	276	290	298
Accommodation & Food Services	645	654	722	743	778	820
Government	3,126	3,230	3,272	3,480	3,712	4,007

**Source:** Bureau of Economic Analysis/Regional Economic Accounts/Gross Domestic Product by State  
<http://www.bea.doc.gov/bea/regional/gsp/>

**Release Date:** October 26th, 2006

## THE LAND OF SOUTH DAKOTA

South Dakota contains 77,123 square miles, making it the 16<sup>th</sup> largest state. The average population density is 9.9 persons per square mile as compared to the national average of 79.6 persons per square mile.

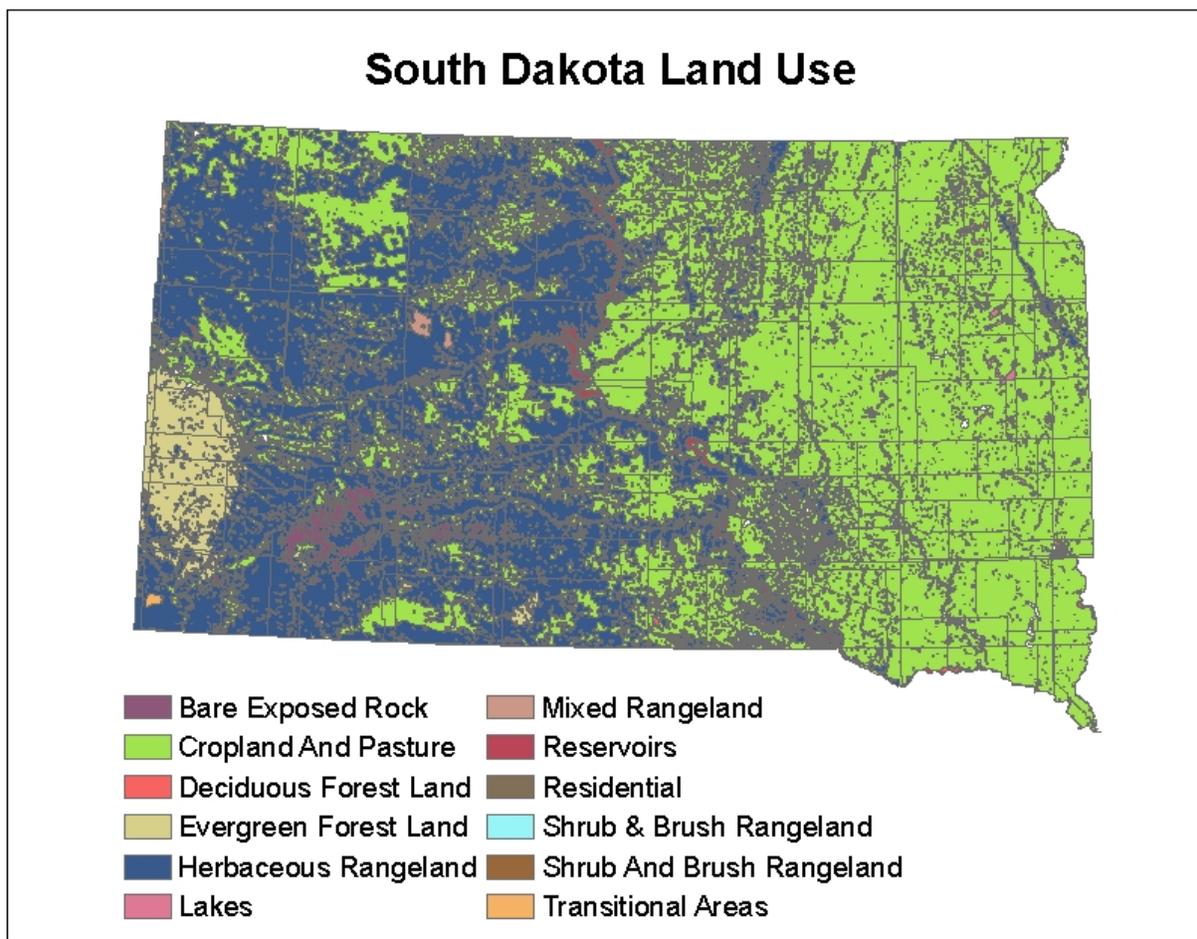
The state is identified by several distinct geological regions. The Missouri River bisects the state into east and west regions. On the Missouri River are four main stem dams authorized by the Flood Control Act of 1944. These reservoirs total 470,000 acres of surface area and over 3,000 miles of shoreline.

The different land formations found on either side of the Missouri River have proven to be a driving factor of industry, economics and demographics of the state. Geologically speaking, the land east of the Missouri River is relatively new, being shaped by glaciers that melted as early as 10,000 years ago. It is gently rolling, has deep soils and enough precipitation to support many

crops. The northeast portion of the state contains many prairie pothole wetlands and lakes left behind as the large remnants of the glacier began to disappear. These natural lakes provide many of the major recreation centers for the residents of this region.

Land west of the river is much older. Most of it was formed over 60 million years ago and consists of shale, limestone and sandstone beds. The topography is more divided, soils are thin and precipitation is limited. Lakes are only present where man-made dams and reservoirs were built. Towards the Wyoming border, the Black Hills rise from the surrounding prairie. These pine-covered hills and mountains began as a bulge in the earth's crust, eventually allowing the softer sedimentary rocks to erode. This exposed a bulls-eye pattern of formations and the granite core of the intrusion. Harney Peak, which rises 7,240 feet above sea level, is at the center of this pattern. (figure 1-2)

Figure 1- 2



### OUTDOOR RECREATION PROVIDERS

The government's role in outdoor recreation in South Dakota started taking shape shortly after the state was admitted into the union. It was during this time that leaders recognized the significance of our natural resources and the protection they needed in order to preserve them for future generations.

A number of public entities have a stake in outdoor recreation in South Dakota. Following are some of the main public agencies that provide recreation services. All state and federal public lands are inventoried and compiled in a comprehensive GIS database. The information is accessible at <http://www.sdgfp.info/Wildlife/PublicLands/PubLand.htm>. Other data pertaining to recreation providers such as municipal facilities is maintained in a GIS database by the Division of Parks and Recreation.

### **Federal Agencies**

The presence of the National Park Service in South Dakota began in 1903 when Wind Cave National Park was designated by President Theodore "Teddy" Roosevelt. Other national park units in South Dakota include Mt. Rushmore National Memorial, Jewel Cave National Monument, Badlands National Park, and the Minuteman Missile National Historic Site. Services offered at each of these parks varies, but all offer extensive interpretative facilities and programs along with some day-use activities such as picnicking, hiking/walking and sightseeing. Wind Cave National Park and Badlands National Park also offer overnight camping. Furthermore, the National Park Service manages sections of the lower Missouri River as part of the Wild and Scenic Rivers program. The National Park Service has also been a partner to the Lewis and Clark Bicentennial and Spirit Mound Historic Prairie projects.

The U.S. Fish and Wildlife service manages seven wildlife refuges in South Dakota including Bear Butte NWR (easement), Karl E. Mundt NWR, Lacreek NWR, Lake Andes NWR, Pocasse NWR, Sand Lake NWR and Waubay NWR. Services and facilities at each of these refuges vary, but they are all managed for wildlife production and habitat. Some offer basic facilities such as wildlife viewing areas, trails, picnic areas and fishing areas. The U.S. Fish and Wildlife Service also provides waterfowl production areas which are open to public access.

The U.S. Army Corps of Engineers manages the four mainstem dams on the Missouri River in South Dakota. Over 63 recreation and lakeside use areas are associated with these projects. In 2002, federal legislation transferred these recreation areas to the State of South Dakota. Eight other sites were either retained by the Corps of Engineers or leased to tribal governments. The Corps of Engineers also manages Cottonwood Springs and Coldbrook Reservoirs in the southern Black Hills.

The U.S. Forest Service is the largest public landowner in South Dakota. The Black Hills National Forest is one of the most popular outdoor destinations in the region. The Black Hills National Forest offers a multitude of outdoor recreation facilities, including campgrounds, trails, picnic areas, scenic byways, swimming beaches, boat ramps and interpretive facilities. Custer National Forest offers some limited recreational facilities in the northwestern corner of the state. There are also three national grasslands administered by the Forest Service: Ft. Pierre NG, Grand River NG and Buffalo Gap NG.

The Bureau of Reclamation manages five large reservoirs in western South Dakota. Angostura, Shadehill and Belle Fourche reservoirs have recreation areas that are leased to the South Dakota Division of Parks and Recreation. The recreation areas on Pactola, and Deerfield reservoirs are operated by the Black Hills National Forest. These recreation areas provide excellent water-based recreation along with camping, trails and picnicking facilities.

The Bureau of Land Management (BLM) maintains the Ft. Meade Recreation Area in the northern Black Hills. Hiking, fishing, picnicking and interpretive facilities occupy this area that

lies within the old Fort Meade military reservation. The BLM also manages land in western South Dakota for multiple use.

### **State Agencies**

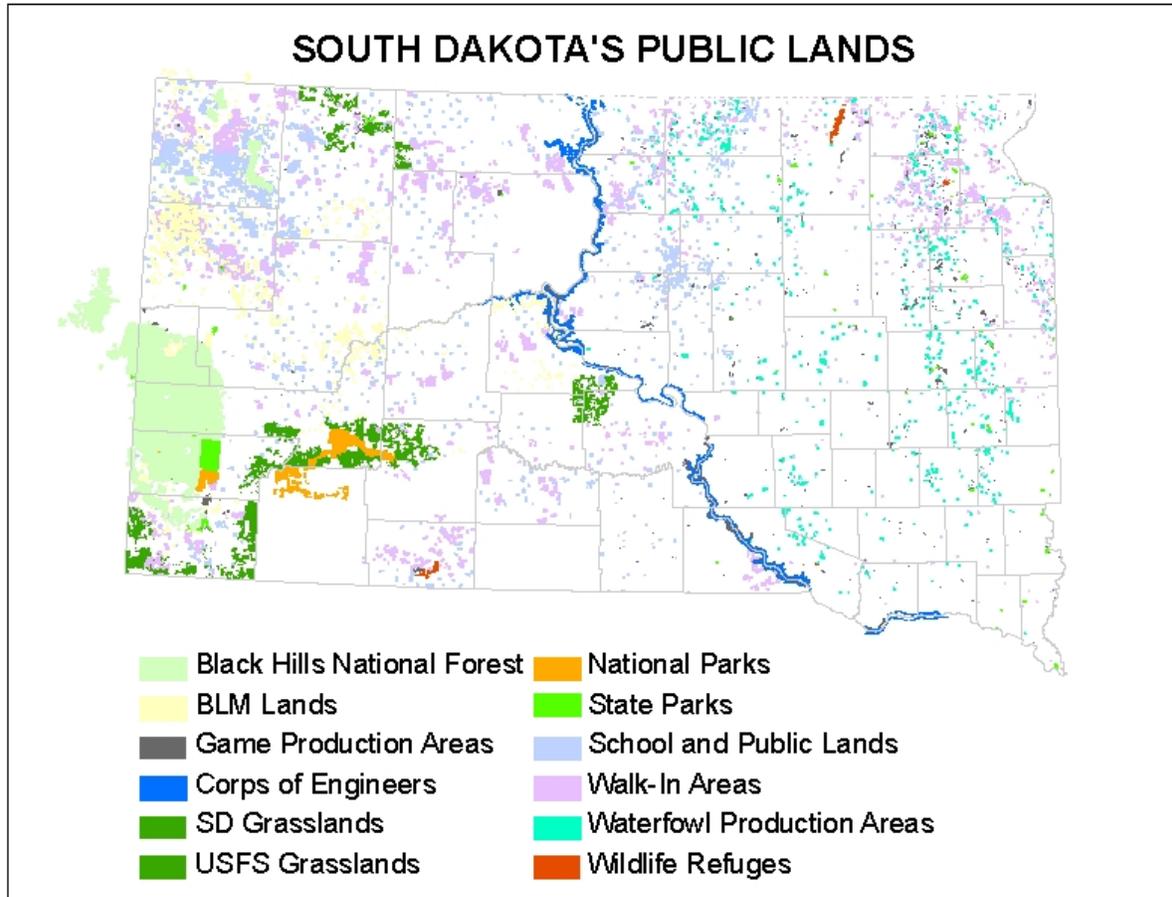
The South Dakota Division of Parks and Recreation manages 12 state parks, 42 recreation areas, 70 lakeside use areas, 6 nature areas, the George S. Mickelson Trail and 350 miles of snowmobile trails in the Black Hills. The land managed by the division totals over 103,000 acres. Custer State Park alone consists of 71,000 acres in the Black Hills.

Parks within the state system are classified according to the type of management objectives set for that particular unit. *State parks* are typically areas of natural, geological, historical or cultural significance where preservation and interpretation are main objectives for management. *Recreation areas* are usually more developed and offer a wide range of recreational opportunities. *Nature areas* are managed for little or no development. *Lakeside use areas* are normally small, water-based areas where access for boating and fishing is the primary objective.

The Division of Wildlife manages over 292,000 acres of land for wildlife production, public hunting and fishing access. Another 1,114,000 acres are currently leased from private landowners for hunting access. The division also manages interpretive and educational centers at the Outdoor Campus in Sioux Falls and Cleghorn Fish Hatchery in Rapid City.

The South Dakota Office of School and Public Lands manages 750,000 acres of trust land to provide income to support public schools in South Dakota. Although these lands are open to the public, they are operated primarily under lease agreements. Figure 1-3

Figure 1-3



### Tribal Governments

There are nine Native American tribes in South Dakota, including the Cheyenne River Sioux Tribe, Crow Creek Sioux Tribe, Pine Ridge Sioux Tribe, Yankton Sioux Tribe, Rosebud Sioux Tribe, Lower Brule Sioux Tribe, Sisseton-Whapeton Sioux Tribe, Flandreau-Santee Sioux Tribe and the Standing Rock Sioux Tribe. Six of these tribes exist within established reservation boundaries. Some tribal governments offer parks and recreation facilities including campgrounds, ball fields, playgrounds and picnic areas. Some of the reservations are sparsely populated and remote.

### Municipal Governments

There are 310 municipal governments in South Dakota. The South Dakota Municipal League categorizes cities into three groups based on population. There are 14 Class 1 cities with populations over 5,000, consisting of 45 percent of the state's population. There are 106 Class 2 cities with populations between 500 and 5,000. These cities make up 17 percent of the statewide population. Although there are 190 Class 3 cities with populations less than 500, this makes up only 5 percent of the state's total population.

Most of South Dakota cities have some form of outdoor recreational facilities. However, the extent and quality of these facilities often depends on the size of the city. Larger cities provide a

greater variety of facilities and services. Most cities have some basic facilities such as a playground, picnic area or softball field.

Cities play a vital role in outdoor recreation. They offer many of the services that people desire on a more frequent basis. City recreation programs also provide organized sports and fitness programs for children and adults.

### **County Governments**

There are only four county governments that were identified as owning or managing outdoor recreational facilities. They are Minnehaha, Clay, Douglas and Codington counties. Most counties have the presence of federal, state or municipal recreational services. Tight budgets and other priorities make it difficult for counties to provide recreational services.

### **Institutional Providers**

Many institutions such as schools and universities provide outdoor recreational facilities offer primarily for students or faculty, but are open to the public. This SCORP did not attempt to inventory or assess these facilities since the availability of these facilities is widely varied.

### **Private Providers**

In this SCORP, we attempted to quantify to some extent the presence of certain private outdoor recreational services and facilities. This mostly focused on campgrounds and public golf courses. The presence of clubs and other organizations help support some of the other sports such as shooting sports and off-road driving. There have also been some increases in private outfitting for sports such as hunting, fishing, canoeing, kayaking and others.

## **OUTDOOR RECREATION STATISTICS**

Between 1999 and 2003, the National Survey of Recreation and the Environment (NSRE) was accomplished by interviewing approximately 75,000 Americans aged 16 and over in random-digit-dialing telephone samplings. The primary purpose was to learn about the outdoor recreation activities of people aged 16 and over in the United States. They were asked about their participation in approximately 80 specific outdoor recreation activities. The South Dakota Division of Parks and Recreation commissioned the Outdoor Recreation and Wilderness Assessment Group who is responsible for the NSRE to create a subset report for South Dakota, and its surrounding states as a whole. Figure 1-4 shows the top 80 activities that respondents reported doing at least once in a year. They are sorted from most popular to least popular. Activities that are typically physical in nature and can contribute to a healthy lifestyle are denoted with a “♥”.

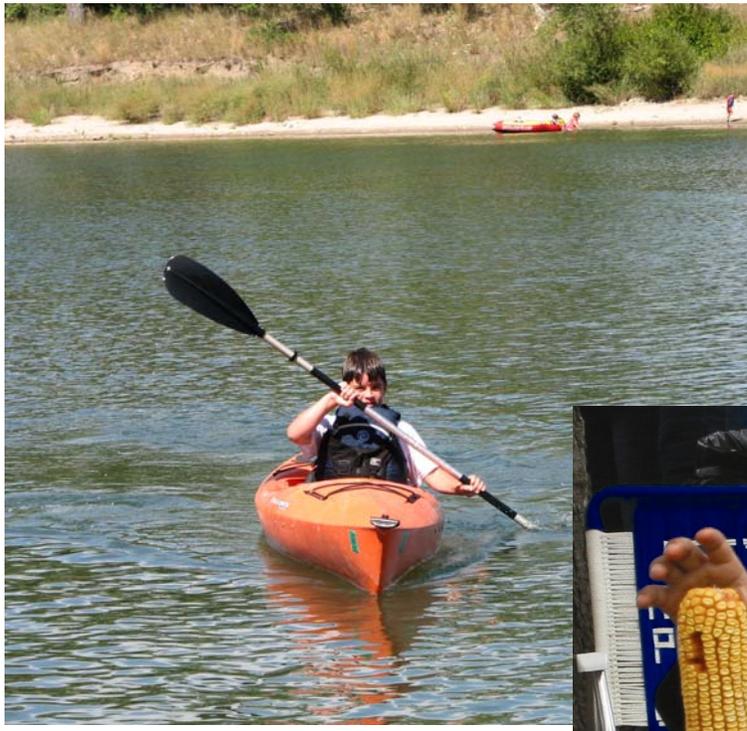
Figure 1-4

<b>Activity</b>	<b>Percent Participating (%)</b>	<b>Number of Participants (thousands)</b>
Walking for Pleasure ♥	83.0	479,059
Family Gathering	75.0	432,885
Gardening or Landscaping for Pleasure ♥	66.7	384,979
View/Photograph Natural Scenery	63.0	384,469
Picnicking	60.1	346,885
Attend outdoor Sports Events	59.6	363,720
Driving for Pleasure	57.3	330,724
Visit Nature Centers, etc.	53.4	325,884
Sightseeing	50.6	308,796
Visit Historic Sites	50.4	307,576
View/Photograph Other Wildlife	49.9	304,524
Attend Outdoor Concerts, Plays, etc...	48.3	278,778
View/Photograph Wildflowers, Trees, etc.	43.1	263,026
Fishing	42.4	244,724
Freshwater Fishing	41.6	240,107
Visit a Farm or Agricultural Setting	41.5	239,530
Bicycling ♥	39.5	227,986
Yard Games, e.g., Horseshoes	39.3	226,832
Swimming in Lakes, Streams, etc... ♥	39.3	226,832
Warmwater Fishing	37.1	214,134
Visit Beach	36.9	212,979
Motor Boating	35.7	206,053
Developed camping	35.2	203,167
Snow/Ice Activities	35.1	202,590
Visit a Wilderness or Primitive Area	32.4	187,006
View/Photograph Birds	32.2	196,507
Day hiking ♥	29.4	169,691
Hunting ♥	29.2	168,537

<b>Activity</b>	<b>Percent Participating (%)</b>	<b>Number of Participants (thousands)</b>
Gather Mushrooms, Berries, etc...	27.9	170,265
Drive Off-road	26.1	150,644
Visit Prehistoric/Archeological Sites	25.1	153,178
View/Photograph Fish	25.0	152,567
Sledding ♥	24.0	138,523
Small Game Hunting ♥	23.9	137,946
Swimming in an Outdoor Pool ♥	23.7	144,634
Running or Jogging ♥	23.2	141,582
Golf ♥	22.0	134,259
Visit other Waterside (besides beach)	21.7	125,248
Inline Skating or Rollerblading ♥	20.4	124,495
Boat Tours or Excursions	19.9	121,444
Mountain Biking ♥	19.1	110,241
Snowmobiling	17.6	101,584
Primitive Camping	17.3	99,852
Big Game Hunting ♥	16.9	97,543
Horseback Riding (general)	16.4	94,658
Coldwater Fishing	16.1	92,926
Jet Skiing	13.1	75,611
Rafting	13.1	75,611
Waterskiing ♥	12.7	77,504
Basketball Outdoors ♥	12.1	73,843
Migratory Bird Hunting	11.8	68,107
Ice Fishing	11.0	63,490
Horseback Riding on Trails	10.9	62,913
Softball ♥	10.5	64,078
Downhill Skiing ♥	9.9	60,417
Backpacking ♥	9.0	51,946

<b>Activity</b>	<b>Percent Participating (%)</b>	<b>Number of Participants (thousands)</b>
Mountain Climbing ♥	9.0	51,946
Baseball ♥	8.8	53,704
Volleyball Outdoors ♥	8.8	53,704
Football ♥	7.9	48,211
Canoeing ♥	6.8	39,248
Ice-skating Outdoors ♥	5.2	31,734
Soccer Outdoors ♥	5.2	31,734
Caving ♥	5.0	30,513
Tennis Outdoors ♥	4.9	29,903
Snowboarding ♥	4.5	27,462
Rock Climbing ♥	4.3	24,819
Handball or Racquetball Outdoors ♥	3.9	23,800
Cross Country Skiing ♥	3.5	20,201
Sailing	3.2	18,470
Snorkeling ♥	2.9	17,698
Orienteering ♥	2.3	13,275
Saltwater Fishing	2.0	11,544
Rowing ♥	2.0	11,544
Anadromous Fishing	1.0	5,772
Kayaking ♥	1.0	5,772
Scuba Diving ♥	0.8	4,882
Windsurfing	0.6	3,662
Snowshoeing ♥	0.4	2,309
Surfing ♥	0.2	1,221

# CHAPTER 2: CHALLENGES = OPPORTUNITIES



South Dakota faces many challenges. What may at first appear to be a challenge, may also provide opportunities. The focus must be on moving forward, capitalizing on how best to turn the difficulties into successes.

### *Challenge: Population shifts*

South Dakota continues to see significant shifts in the population make-ups across our towns, cities and counties. While certain South Dakota counties have seen significant drops in population the past seven years, those thirty counties that saw a decrease in population of 5 percent or more only account for approximately 17 percent of the states population.

Conversely, those ten counties that saw increases in population of 5 percent or more from 2000-2007 make up 41 percent of the state's population.

Therefore, the loss of population from largely rural counties is less than the gain in more populous counties are seeing such as Lincoln, Minnehaha, Davison, and Union Counties.

Options for smaller, rural communities are limited to focusing on preservation of the most basic and sustainable forms of outdoor recreation through maximization of resources. Collaboration with other communities, groups and organizations are necessary to achieve even the most basic services. These partnerships foster much community pride and interest in recreation.

Communities seeing increases in population must be able to invest and react to the increasing demands of a growing and diversifying population.

### *Challenge: Elderly population*

The elderly segment of South Dakota's population provides both needs and opportunities. Accessible recreational opportunities are needed in order to sustain a healthy lifestyle. Retirees also provide many opportunities for volunteer programs, especially to encourage recreation with children and grandchildren.

### *Challenge: Both parents working*

As mentioned previously, South Dakota ranks first in the nation of having two working parents with children under the age of 6. This provides challenges for parents to set aside time as a family to participate in recreation or fitness activities. Furthermore, it puts a high percentage of kids in daycares where outdoor and physical activity is limited and confined for safety reasons.

Opportunities exist for recreation providers to offer quality activities geared towards families, and provide maximum flexibility for hours and days of availability to the public. Also, recreation providers can locate and market parks and facilities that are closer to daycares, youth centers, and schools. This will help to engage kids in both activities that promote fitness and an appreciation of the outdoors.

In 2008-09, the Fit from the Start Initiative (Healthy South Dakota) will be provided to child care home facilities to support and assist child care providers to increase the opportunity for physical

activity and improve vegetable intake. This evaluated intervention includes up to nine hours of training and follow-up technical assistance in making sustained change in the child care environment.

### *Challenge: Low incomes*

Providers must continue to supply and promote parks that are close to home, have low fees, and offer fee-reduced programs. Many recreational and physical activities have options or programs that are affordable for a wide range of households such as:

- Walking, hiking and running
- Camping
- Swimming
- Viewing nature
- Bicycling

### *Challenge: High obesity rates*

High obesity rates and health problems are attributable to poor diet and lack of physical activity. According to the South Dakota Behavioral Risk Factor Surveillance System, 24.0 percent of South Dakotans reported no leisure time physical activity or exercise during the past 30 days other than at their job. Nationally the median rate was 22.6 percent with Minnesota having the lowest percent (14.2 percent) and Mississippi having the highest rate (31.1 percent). Also according to this data, the prevalence of no leisure time physical activity is more pronounced for these demographic factors:

- Older age groups(55+)
- American Indians, especially females
- Those living in the central, northeast, and American Indian counties in South Dakota.
- Lower household income categories, especially those earning less than \$25,000
- Those persons with a maximum educational level of a high school diploma or less.
- The unemployed or those unable to work.
- Those that are widowed or divorced/separated.

The Healthy South Dakota Program in the Department of Health takes a multi-faceted approach to reducing obesity and encouraging healthy eating and increased physical activity.

The Healthy South Dakota website, [www.HealthySD.gov](http://www.HealthySD.gov), was launched by Governor Rounds in early 2004 and serves as a focal point for the Healthy South Dakota Program activities. The site is updated at least monthly to include the latest research and best practices impacting health behaviors that affect obesity. The site currently has 500 file pages and 5,400 hyperlinks of information. A search engine capability was added to the site in late 2007. The website now averages 69,000 hits per month.

### Childhood obesity

The South Dakota Department of Health, in cooperation with the South Dakota Department of Education has analyzed height and weight data on students since the 1998-1999 school year. According to the Department of Health, research shows six science-based strategies to prevent obesity and other chronic diseases:

- Increase physical activity
- Decrease television viewing
- Increase fruit and vegetable intake
- Decrease sweetened beverage intake
- Decrease portion sizes
- Increase breastfeeding

Outdoor recreation can play a large role in the first two strategies by providing safe, fun places to engage in physical activity, and reduce the amount of time spent viewing television or other similar sedentary activities.

A study conducted by the University of Michigan provides additional concern on how time spent doing various activities has changed over the past decades. The study tracked how time spent on certain everyday children’s activities has changed over a twenty year period from 1981/82 to 2002/03. According to this study as shown in Figure 2-1, time spent on sports and outdoor activities has declined significantly in favor of other activities such as school and computer activities.

Figure 2-1

WEEKLY AVERAGE TIME OF AMERICAN CHILDREN AGE 6-17, 2002-03 and 1981/82 (Hours:Minutes per Week)		
	<b>1981/82</b>	<b>2002/03</b>
Market Work	2:06	0:53
Household Work	3:43	5:43
Personal Care	5:56	8:13
Eating	8:28	7:06
Sleep, naps	62:38	68:12
School	26:21	32:27
Studying	2:38	3:58
Church	2:05	1:34
Visiting, Socializing	2:12	4:47
<b>Sports ♡</b>	<b>4:04</b>	<b>2:59</b>
<b>Outdoor Activities ♡</b>	<b>1:40</b>	<b>0:50</b>
Hobbies	0:27	0:12
Art Activities	0:40	0:48
Television	15:44	14:36
Other Passive Leisure	0:39	2:46
Playing	7:20	8:05
Reading	1:09	1:17
Being read to	0:03	0:05
Computer Activities	0.0	2:45
Missing Data	20:06	0:45
<b>TOTAL</b>	<b>168:00</b>	<b>168:00</b>

Source: CHANGING TIMES OF AMERICAN YOUTH: 1981-2003  
F. Thomas Juster, Hiromi Ono and Frank P. Stafford  
Institute for Social Research, University of Michigan, Ann Arbor, Michigan 48106, November 2004

### *Challenge: Harsh winters*

South Dakota is known for cold winters, but winter also brings new recreational opportunities. Ice fishing, sledding, hockey, ice skating, snow-shoeing, downhill and cross country skiing are all popular wintertime activities. However, the availability of the resources for these activities varies across the state due to topography, climate and services.

Providers should continue to offer maximum availability and access for these and other types of activities year around. However, many recreational and physical activities done in the summer can also be done year around with proper equipment and education. Walking, biking, running, hiking, wildlife/nature watching can be just as enjoyable and beneficial in the winter as during the summer. Providers, retailers and organized clubs have the opportunity to educate the public on weather safety, proper clothing and gear, and technique.

### *Challenge: Focus on technology*

It has been shown that the increased use of computers, video games, and other technology has come at the expense of leisure time available for outdoor recreation or physical activity, especially among our youth. Technology is here to stay, and will likely continue to expand. Outdoor recreation providers can “join the game” and promote the use of technology as a means to stimulate interest and participation in the outdoors. For example, using GPS units to navigate within wilderness areas is a fun way to experience nature.

### *Challenge: Fears of the outdoors*

Sensationalized accounts of rare incidents, crimes and injuries that can occur while recreating outdoors have fostered a form of parental fear that often precludes families and children from partaking in outdoor activities. The reality is that childhood obesity and lower cognitive and problem-solving abilities can put children at a far higher risk. At the same time, fear of the outdoors creates a generation of misunderstanding and low appreciation for the natural environment. Outdoor safety should continue to be of utmost importance, but there is a tremendous missed opportunity by completely avoiding the outdoors with our children. Through proper education and awareness, outdoor recreation remains one of safest activities for children and adults.



# CHAPTER 3: STRATEGIES – PARKS, PEOPLE AND PROGRAMS



The following strategies are a guide for the Division of Parks and Recreation, through its cooperative partners and programs including the Land and Water Conservation Fund. These strategies are established to address the challenges faced by the State of South Dakota in its efforts to provide outdoor recreation opportunities and to fulfill its maximum role in the effort to encourage healthy lifestyles and an appreciation for the natural environment.



**Strategy #1 – Protect South Dakota’s natural resources on which outdoor recreation depends. This entails maintaining present park land and future acquisitions efficiently and with appropriate stewardship.**

- Continually evaluate existing parks, facilities and services according to safety standards, maintenance needs, and ways to better protect the environment.
  - Continue to build and maintain the GIS database to inventory facilities and evaluate safety and maintenance issues.
  - Promote ongoing training to teach staff about safety issues and maintenance alternatives.
- Increase energy efficiency by expanding recycling efforts, designing energy-efficient facilities, and offering “earth-first” types of events.
  - Analyze the effectiveness of present recycling efforts in the parks implement the highly effective programs in additional parks.
  - Consider alternate forms of energy and energy efficient usage in designing new facilities such as solar or wind energy.
  - Sponsor and participate in state park anti-litter campaigns, park clean up events and educational programs about the impact of litter on wildlife.
- Research and acquire certain lands and easements adjacent to park lands. Land acquisition is often in the public’s best interest when it provides for an active population and preserves the integrity of the park from conflicting outside development.

- Identify parks at risk from encroachment through urbanization and/or housing and commercial development.
- Provide guidelines for park lands in new developments.
- Seek funding to purchase land that is at risk.
- Work with willing area landowners on conservation easements.
- Take immediate measures to protect highly sensitive areas through acquisition and/or cooperative management alternatives.
  - Assess lands that have valuable historical and/or archaeological findings and seek ways to protect them.
  - Implement management practices on archaeological sites already in the park system.
  - Conduct plant and animal species inventories to identify the presence of rare and endangered species.
  - Research and implement sound practices to protect sensitive areas, (I.E. controlled burning).
  - Seek funding for land acquisition and protection.
- Acquire property for open space, parks and recreation areas in locations that have a high likelihood of future development. Property set aside for parks and recreation ahead of time is likely to be much cheaper, and ultimately may increase the land value of the surrounding property.
  - A statewide GIS inventory of park facilities will allow the generation of maps to determine where the most needed facilities are both locally and statewide.
  - Seek funding for the purchase and development of needed park land.
- Be vigilant against potential threats to outdoor recreation lands, including fires, floods, pollution, infestations, over-use and abuse.
  - Continue to train staff in fire fighting methods.
  - Conduct research as needed to protect the land.
  - Continue to monitor small head dams.
  - Collaborate with other entities to fight insect infestations, (I.E. the U.S. Forest Service and managing pine beetles).
  - Monitor and take action in areas where there is over-use and/or abuse of the land (I.E. compaction on trails).

However, limited local, state and national funding hampers the ability to acquire properties and to hire staff to oversee them properly.

Priorities ranked **HIGH** for local and state L&WCF projects pertinent to this strategy:

- Land acquisitions for park areas and open space. Higher priority will be given to those parcels that will provide healthy activities and opportunities for outdoor activities for children. Priority will also be assigned to purchase parcels in areas where the populations are underserved according to statewide averages through GIS analysis.

**Strategy #2 – Provide and promote outdoor recreation opportunities for South Dakotans of all ages, throughout the seasons and be a compelling voice for action when it comes to making outdoor recreation a priority in people’s choices to improve their health and lifestyle.**

- Provide relevant and effective interpretive training for staff, maximizing efforts to inform and educate the public about outdoor recreational opportunities and programs.
  - Define a suitable and appropriate program and activity inventory for each park.
  - Provide a comprehensive training program for front-line staff and volunteers.
  - Develop a website of program resources for seasonal front-line staff and park managers.
- Meet the public’s diverse outdoor recreation desires through collaboration with other entities, maximizing staff talents and time, and incorporating volunteers.
  - Seek people in the community who have the backgrounds to provide excellent programs in the parks.
  - Co-host programs and events with both public and private entities, I.E. U.S. Corps of Engineers, National Park Service, South Dakota Department of Health, YMCA/YWCAs, Scouts.
  - Capitalize on staff interests and hobbies as possible program ideas.
  - Provide opportunities on the state park volunteer application for information concerning special hobbies and interests which might lead to park programs.



- Promote parks as the state’s largest wellness centers where the public can find a wide variety of individually initiated physical activities as well as staff-led events.
  - Make mileage information for trails and park roads easily available to walkers and runners.
  - Offer free use of recreation equipment by park visitors that encourage physical activity. I.E. discs for disc golf.
  - Host physical activity-focused programs (I.E. snowshoe lessons, marathons).
  - Provide geocaches in the parks to get people out walking while using technology.
  - Research, write and produce interpretive signs for park trails.
- Promote the concept of No Child Left Inside through educational programs, the media and events. Youth need to be involved now so they will appreciate and protect natural resources in the future.
  - Expand environmental education for local school groups.
  - Offer many family-oriented programs so parents will bring their children to the parks.
  - Provide the media with more public service announcements and press releases concerning the importance of getting outdoors and the opportunities available.
  - Create interpretive products (I.E. brochures, site bulletins, exhibits).
  - Stimulate interest in going outdoors by providing learning opportunities online.
  - Work with other entities to plan and fund billboards with “No Child Left Inside” messages.
  - Capitalize on printed opportunities such as the Kids Edition of the *South Dakota Conservation Digest* to educate the public about getting outdoors.
  - Develop and promote challenging youth-oriented programs (I.E. Junior Naturalist Program).
  - A committee on Children in Nature has been formed by the Division of Parks and Recreation to address how we can do our part to increase children’s interests and activity in nature.
- Involve older adults through volunteer work, intergenerational activities, and older age-specific programs.
  - Target retirees for volunteer opportunities.
  - Plan special events for grandparents and grandchildren.
  - Offer programs specifically for seniors (I.E. mid-week kayak lessons, class in outdoor crafts).
- Plan family-oriented activities to promote unity, memories and the desire to return.
  - Offer family outdoor challenges (I.E. Family Survivor Evening – a take-off on the television shows).
  - Promote activities for all ages rather than having just a child focus
  - Make it as easy as possible for families to participate (I.E. a nature hike on a surface suitable for a baby stroller, diaper changing tables in restrooms).
- Reach out to low income people.
  - Offer low or no cost activities
  - Subsidize programs
  - Work with sponsors to cover the costs of participating, I.E. park entrance license



- Use technology to reach individuals who utilize electronic devices.
  - Teach the public how to use GPS units.
  - Incorporate geocache sites into parks.
  - Maximize Internet natural resource learning opportunities with exciting information, games and puzzles.
  - Teach digital photography in the parks.
- Develop additional outdoor recreational facilities and renovate/replace existing ones to meet current demands.

Priorities ranked **HIGH** for local and state L&WCF projects pertinent to this strategy:

Projects that provide healthy activities and opportunities for outdoor activities for children will be assigned higher priority. Also higher priority may be assigned for facilities that will serve currently underserved populations based upon statewide averages and GIS criteria. Specific facilities include:

- Playgrounds.
- Winter recreation and associated facilities such as ice rinks.
- Sports courts and fields both new and renovated (tennis, basketball, baseball, softball, soccer, and walking tracks)

- Outdoor swimming pool projects, including both renovation and new construction of pools, decks and systems. Support facilities such as concession stands and change houses shall not be considered high priority.
- Outdoor learning centers and interpretive facilities that promote outdoor recreation participation and education.
- Campgrounds and associated facilities and campground renovation to meet the needs and expectations of families.
- Trails and walking tracks (no sidewalks) when the availability of other matching funds is not possible or practical.

It is absolutely essential that ongoing programs and events be offered in the parks as they stimulate attendance, educate the public and build memories. Perhaps most important is to develop an appreciation of natural resources and the need to protect them.



**Strategy #3 – Continue to research and analyze information about South Dakotan’s needs and demands for outdoor recreation. Methods of implementation will be based upon these ideas.**

- Provide additional opportunities for citizens to communicate their thoughts.
  - Conduct targeted surveys as needed.
  - Provide park visitors with comment cards to complete and return.
  - Encourage people to communicate their wishes on a special website.
  - Listen to the public in the outdoors, then document what is heard.
  - Hold public meetings when deemed appropriate.
- Reward people who share their ideas.
  - Enter them in a contest to receive something big (I.E. GPS unit).

- Give a free night of camping.
- Give them free participation in an event.
- Observe behaviors and their impacts on the natural resources.
  - On trails watch for erosion from short-cuts and compaction.
  - Place garbage cans at sites where litter collects.
- Utilize research conducted by other agencies.
  - National Association of State Park Directors on issues relating to state parks.
  - National Centers for Disease Control on the importance of physical activity in maintaining good health.
  - Outdoor Industry Association’s research on national trends.
  - South Dakota Department of Health on state trends concerning physical activity.
  - South Dakota Office of Tourism on statewide tourism trends.
- Involve researchers to assist in research design, implementation and analyzing data.
  - South Dakota Office of Tourism staff.
  - South Dakota university researchers.
- See the research process as ongoing, not something done once or twice a year.
- Use the SCORP as an excellent base for ongoing research.

It is one thing to paddle; it is a completely different issue to paddle in the right direction. Conducting research and utilizing existing research helps keep outdoor recreation professionals on the right track, which is especially critical when funding is limited.



**Strategy #4 Provide information on the risks and fears associated with outdoor recreation.**

- Provide information on how to predict and monitor the weather and proper dress, equipment, and techniques to safely enjoy the outdoors in less than ideal weather circumstances.
- Reduce risk of certain ailments such as West Nile Disease, skin cancer.
- Making your experience safe from illegal activities of others.
- Using proper safety equipment such as helmets, and personal floatation devices.

**Strategy #5 Maximize the role of parks and recreation in helping people achieve healthy lifestyles.**

- Continue to participate and cooperate with the Department of Health on the Healthy South Dakota program to provide recreational equipment and programs for park visitors. Efforts include promoting the importance of physical activity and healthy lifestyles, purchasing equipment for public use at the parks and programs offering health-themed programs in the parks. Through this important partnership all South Dakotans are able to enjoy the state parks and improve their health. This collaboration has changed the culture of the state park system and the public now sees the South Dakota state parks as the States Largest Wellness Centers.

**Summary of Priorities ranked HIGH for local and state L&WCF projects**

- Land acquisitions for park areas and open space. Higher priority will be given to those parcels that will provide healthy activities and opportunities for outdoor activities for children. Priority will also be assigned to purchase parcels in areas where the populations are underserved according to statewide averages through GIS analysis.
- Campgrounds and associated facilities and campground renovation to meet the needs and expectations of families.
- Playgrounds.
- Trails and walking tracks (no sidewalks) when the availability of other matching funds is not possible or practical.
- Winter recreation and associated facilities such as ice rinks.
- Sports courts and fields, both new and renovated (tennis, basketball, baseball, softball, soccer, and walking tracks)
- Outdoor learning centers and interpretive facilities that promote outdoor recreation participation and education.
- Outdoor pool renovation and construction projects.

Projects that provide healthy activities and opportunities for outdoor activities for children will be assigned higher priority. Also higher priority may be assigned for facilities that will serve currently underserved populations based upon statewide averages and GIS criteria.

All other eligible projects will be considered “low” priority.



# CHAPTER 4: SOUTH DAKOTA WETLANDS COMPONENT



## INTRODUCTION

Prairie wetlands play an important role in the hydrologic cycle in South Dakota's prairie landscape. Conservation of wetlands of all types is a vital component of the state's overall goal of improving the management and protection of its water and wildlife resources. Prairie wetlands provide many benefits to all South Dakota citizens, both rural and urban. Wetlands benefit the state's water resources by: storing flood water and slowing runoff to streams, rivers and lakes; recharging groundwater aquifers; recycling nutrients; stabilizing stream flows; removing pollutants from the water by trapping sediments and toxicants; and providing wildlife habitat.

Prairie wetlands are perhaps the most diverse and productive and therefore important wildlife habitat found in South Dakota. These wetlands provide some of the nation's most important breeding and brood rearing habitat for waterfowl. They provide breeding habitat and secure cover for hundreds of other game and non-game wildlife species. Prairie wetlands annually provide important recreational opportunities for most types of outdoor recreation activity including: hunting, fishing, trapping, bird-watching, photography and boating.

The Prairie Pothole Region (PPR) covers nearly 300,000 square miles and includes portions of Minnesota, Iowa, North and South Dakota, Montana and the Canadian provinces of Alberta, Saskatchewan and Manitoba. Nearly all of South Dakota east of the Missouri River was glaciated during the last ice age and is considered part of the PPR. The PPR is the most critical waterfowl breeding habitat in North America. It encompasses only 10 percent of the waterfowl breeding habitat in North America, yet can produce greater than 50 percent of the continental duck population during wet years (Batt and others, 1989). In the contiguous 48 states, 87 percent of the ducks breed in the four prairie pothole states. South Dakota usually is ranked number two in total waterfowl production. However, in some years, depending on water conditions and available nesting cover (e.g. Conservation Reserve Program grass cover and remaining native prairie) South Dakota's overall waterfowl production ranks first in the contiguous 48 states.

About 50 percent of the Prairie Pothole Region's original wetland base has been converted to other land uses. During the 20 years from the mid-1950s to the mid-1970s, such losses averaged 458,000 acres annually. Dahl (1990) estimated that Iowa has lost nearly 90 percent of its' original wetlands. The same author also concluded that the lower 48 states have lost an estimated 53 percent of all wetlands since the late 1700s.

According to National Wetlands Inventory data, wetlands and deepwater habitats account for over 2.2 million acres or just under 10 percent of eastern South Dakota's landscape (Johnson and Higgins, 1997). Fortunately South Dakota has managed to conserve more of its' wetlands than all the neighboring Prairie Pothole states. Dahl (1990) estimated that about 35 percent of South Dakota wetlands have been lost since settlement; most such losses are related to agricultural development. However, past and continuing rural and urban development have contributed significantly to the total loss. More than 80 percent of those wetlands lost were located east of the James River. In recent years flooding problems in eastern South Dakota have occurred that were probably associated with the drainage of 560,000 acres of wetlands. If wetland conversion continues, frequency of flooding will increase in those areas.

## PURPOSE AND SCOPE

In November 1986, Public Law 99-645 was passed by Congress. This legislation is also known as the Emergency Wetlands Resources Act of 1986 (Act). Section 303 of the Act requires the inclusion of wetlands in Statewide Comprehensive Outdoor Recreation Plans. This chapter is South Dakota's assessment and target for accomplishments in wetland acquisition, restoration and protection under the provisions of the Act and the Statewide Comprehensive Outdoor Recreation Plan.

## AUTHORITY

The authority for the development of this Wetlands Chapter to the South Dakota Comprehensive Outdoor Recreation Plan (SCORP) is Section 303 of the Act. Other funding for both wetlands acquisition and restoration is also provided for by the Act.

The South Dakota Department of Game, Fish and Parks has the authority for the conservation and protection of all wildlife. South Dakota Codified Law 41-2-18 states, "The department ... shall have the power to regulate, direct and control...the conservation, protection...and the hunting ... of all game and furbearing animals, game birds and fish ... and ... shall have jurisdiction and authority for such purposes over all lands and waters ... including all meandered lakes, sloughs, marshes and streams ... and also including all lands to which the state has acquired any right, title or interest for the purposes of water conservation and recreation."

The Department of Game, Fish and Parks has both a Parks and Recreation Division which is responsible for SCORP planning and a Wildlife Division which manages the wildlife resources of the State.

## COORDINATION AND CONSULTATION

This wetlands plan was written by the Division of Wildlife in cooperation with the Division of Parks and Recreation. Organizations including; Ducks Unlimited, the SD Wetlands Coalition, SD Wildlife Society, SD Wildlife Federation and the Izaak Walton League have provided input on previous versions of this plan. This plan will be updated as needed and will address the goals and objectives of SCORP regarding wetlands conservation in South Dakota.

## ASSESSMENT

### Inventory

With completion of the National Wetlands Inventory (NWI) of South Dakota in the mid-1990s and digitization of those data for the eastern part of the state, Johnson and Higgins (1997) completed a excellent state-of-the-art geographic information system (GIS) based summary/inventory of eastern South Dakota wetlands. Similarly, Rieger et al. (2006) summarized the NWI data for western South Dakota. A copy of those technical reports, as well as a less technical summary for the eastern part of the state (Johnson and others, 1997) have been appended to this plan.

South Dakota wetlands occur in all four of Bailey's (1994) ecoregion provinces (Prairie Parkland, Great Plains Steppe, Great Plains Dry steppe and Black Hill Coniferous Forest) that comprise the state. Because of the important ecological link between wetlands and associated

grassland (e.g. many wetland dependent birds are grassland nesters), it's important to discuss SD wetlands in the context of grassland resources. Excluding the Black Hills, most ecologists consider South Dakota to be comprised of an eastern tier of true tall grass prairie, with the balance of the state being characterized by mixed grass prairie. Much of the native grass prairie (an estimated 75 percent) in PPR portion of South Dakota, has been lost due to agricultural conversion. Conversion of mixed grass prairie in the western part of the state is considerably less severe.

According to Johnson and Higgins (1997), wetlands and deepwater habitats in eastern South Dakota are comprised of approximately 80 percent palustrine wetlands, 17 percent lacustrine wetlands and deepwater habitats and 3 percent riverine wetlands. These three wetland systems are further divided by subsystems, class, water regime and special modifiers. Because of their ecologic importance to many species, patterns of historic loss and future agricultural and development related threats, palustrine wetlands (particularly eastern SD prairie potholes) are a conservation priority in South Dakota. Of that, 77.5 percent of the palustrine wetlands are classified as emergent wetland, 15.8 percent are emergent/aquatic bed, 3.4 percent are aquatic bed and 3.3 percent are other classes. In terms of water regime, 43.5 percent of palustrine wetlands have a seasonal water regime, 32.8 percent are temporary, 23.3 percent are semipermanent and 0.2 percent are intermittently exposed. The reader should refer to Johnson and Higgins (1997) and Cowardin and others (1979) for more detailed treatment of eastern South Dakota's other wetland resources.

Rieger et al. (2006) summarized that surface water cover 257,000 hectares or about 2.4% of the western South Dakota landscape. These waters are comprised of approximately 50% palustrine, 42% lacustrine and 8% riverine wetlands. There are nearly 173,000 wetland basins and they are further categorized by the following water regimes: 36% temporary water; 29% seasonal; 34% semipermanent; and about 1% permanent. Just over 50% of the total number of basins, or approximately 87,000 are created wetlands. Over 72,500 of these are impoundments or what are locally called stock dams or ponds. Just over 14,000 are dugouts and about 300 are natural beaver dams/ponds.

In general, many of the wetlands in the mixed grass prairie portion of western South Dakota are associated with stream and river corridors and associated riparian areas. Palustrine forested wetlands (e.g. forested oxbows) are relatively common along larger river systems.

While there is 30% less total wetland area in western than is eastern South Dakota, these western palustrine emergent wetlands function similarly to those in the PPR east of the Missouri River. For example, parts of Lyman, Jones, Stanley, Dewey, Ziebach and Corson counties have many wetlands of various sizes that the local residents call "lakebeds." These palustrine wetlands are oftentimes surrounded by native grassland and are important breeding, brood rearing and staging (during migration) habitat for waterfowl, shorebirds and other wetland dependent species when water conditions are favorable.

The Black Hills region of southwestern South Dakota is a unique ecoregion more similar to mountainous ecoregions in the Rocky Mountains to the west. Like other areas in unglaciated western SD, wetlands in the Black Hills are primarily related to streams (riverine system) and related riparian areas. Saturated wet meadow montane wetlands characterized by sedges and associated wetland plants occur along some stream/riparian corridors. Most of these wetlands are classified as palustrine, emergent, saturated wetlands. Saturated scrub/shrub or forested palustrine wetlands, with various water regimes also occur in association with these riverine

systems. Additionally, beaver ponds along stream corridors are of local significance and add a unique diversity to these riverine systems.

South Dakota Department of Game Fish and Parks owns and manages approximately 165,700 acres of Game Production Areas (GPAs) across the state. Wildlife habitat on these areas is managed to benefit game and non-game species alike; the areas are also open to public hunting, fishing, wildlife watching and other outdoor activities. East of the Missouri River, essentially all such areas consist of wetland/grassland complexes. We estimate that between 45,000 and 50,000 acres east of the river are wetland acres. Most areas also have shelterbelts and foodplots designed to benefit resident wildlife. Many of the GPAs west of the Missouri River are associated with the Missouri River reservoir system or smaller impoundments.

As part of its National Wildlife Refuge System, the United States Fish and Wildlife Service (USFWS) owns in fee title a considerable amount of land within designated refuges (43,695 acres) and in the form of Waterfowl Production Areas (WPAs – 155,300 acres). The service has also purchased wetland and grassland conservation easements from willing sellers. Area protected with these perpetual easements total 1,032,300 acres of wetland/grassland complexes. Wetlands on these areas can not be drained, burned or filled and grasslands can not be plowed and converted to cropland; haying is allowed after July 15. Management focus of all these USFWS areas is for waterfowl and other migratory bird species and much of the money for these programs comes from Federal Migratory Bird Hunting and Conservation Stamp sales.

### **Wetland Threats**

A National Wetland Inventory Study showed that, from 1954 to 1974, certain wetland types had high rates of conversion to other land uses in specific regions of the United States, including the palustrine emergent wetlands in the Prairie Pothole Region in the Dakotas and Minnesota. The study also noted South Dakota as being one of 19 states that had significant decreases in wetlands over the 20-year period (Frayer and others, 1983). Subsequent reports (Dahl, 2000) indicate that agriculture related losses of freshwater wetlands nationwide decreased from about 1.0 million acres between the mid 1970's and 1984 down to about 198,000 acres between 1986 and 1997. Implementation and enforcement of the "Swampbuster" provisions of the 1985 Food Security Act (Farm Bill), as well as other land retirement or conservation programs (e.g. CRP, WRP, EWRP, etc.) are the primary reasons for this significant reduction in wetland losses.

Despite decreased rates of agriculture related wetland losses nationwide, threats to South Dakota wetlands from continued agricultural, urban, suburban and rural development are still a reality. In agricultural settings, wetlands, particularly ecologically important temporary and seasonally flooded basins of small size, are particularly vulnerable. More intensive agricultural practices such as improvement of drainage systems (converting from surface drains to subsurface tile) and use of new crop varieties, which have lead to conversion of native grassland and wetland complexes to cropland in areas traditionally managed for grazing purposes, have both increased the threat to wetland and associated grassland resources. Subtle changes in how "Swampbuster" provisions of the Farm Bill are administered and enforced in the field have also lead to further loss of wetlands in eastern South Dakota. Federal commodity crop price supports that are based primarily on production, in conjunction with the above threats, make wetlands in agricultural settings vulnerable to continued loss. Current rates of wetland loss are extremely difficult to estimate due to lack of a comprehensive tracking system.

A United States Supreme Court decision on January 9, 2001, known as the SWANCC decision (Solid Waste of Northern Cook County v. United States Army Corps of Engineers) removed some regulatory jurisdiction the Corps of Engineers previously had under Section 404 of the Clean water Act to protect isolated wetland basins from filling or related activities. The Corps' interpretation of the court's decision has resulted in some regulatory uncertainty, and apparently in some areas, significantly less protection of isolated prairie potholes and other isolated wetlands across the state. Such protection previously acted to minimize losses of such wetlands, particularly from urban, suburban and rural development, including road building. This regulatory change presents a significant threat to South Dakota prairie potholes.

## **Wetlands Functions and Values**

### ***Wildlife***

The demand for waterfowl production cannot be measured by South Dakota needs alone. National and international waterfowl production depends upon water and nesting cover conditions in the Prairie Pothole region as well as other important breeding grounds in Canada and Alaska.

Prairie wetlands, created during the last glaciation of South Dakota, are unevenly distributed in a wide variety of sizes, depths and degrees of permanence. This variety of wetlands in association with each other provides what is known as a wetland complex. The value of prairie pothole wetland complexes to waterfowl is well documented. Studies completed by Evans and Black (1956), Drewien and Springer (1969) and Duebbert and Lokemoen (1980) illustrated that many small wetland complexes provide excellent distribution of water for breeding pairs of waterfowl.

Prairie wetlands are quite dynamic, and the number of wetlands with water varies considerably from one year to the next. As a result, wetland types vary considerably from shallow basins that hold water for only a few days to semi-permanent or permanent lakes. Although prairie wetlands are basically unstable due to short-term fluctuations, they provide habitats with long-term ecological stability. Prairie wildlife species are well adapted to utilize the dynamic ecosystem provided by natural wetlands. Many species need wetland habitat for nesting and winter cover.

Prairie wetlands also provide suitable migration or production habitat for Federally listed endangered and threatened species. They include such species as the Interior Least Tern, Piping Plover, Whooping Crane, Bald Eagle, Peregrine Falcon and the Eskimo Curlew.

Wetlands are the most important furbearer habitat in South Dakota and essential for an even distribution of species. Mink, muskrats and raccoons are particularly abundant in areas characterized by numerous wetlands.

### ***Commercial and sport fisheries***

Wetlands adjacent to lakes, immediately upstream from lakes and in the immediate watershed serve as spawning areas for many species of fish. Wetland areas near river systems also have high values as spawning areas. Johnson and others (1997) estimated that wholesale and retail baitfish sales of minnows in South Dakota totals about \$2 million annually. These baitfish are harvested primarily in wetlands within the state. The retail value of fathead minnows in Minnesota exceeds \$12 million in some years and many of these fish are also harvested in South Dakota.

### ***Surface and groundwater supplies***

Wetlands play a very important part in the total water conservation picture. Prairie wetlands provide benefits to farmers, ranchers and rural and urban citizens in their capacity to store flood water, recharge groundwater, provide nutrient recycling and stabilize stream flows.

The U.S. Army Corps of Engineers recognized wetland values for flood water storage in at least two South Dakota projects (Harmon, 1976). Various federally and state funded projects have advocated restoration and/or acquisition of wetlands to store water on the landscape in lieu on constructing additional flood control dams.

In relation to water storage ability of wetlands, Shjeflo (1968) and Eisenlohr and others (1972) have shown the amount of water loss from May to October is roughly 2.5 feet. This provides an approximate 2.5 foot storage cushion per unit for spring runoff and precipitation. In a recent study completed in the Devils Lake Basin in North Dakota, Ludden and others (1983) found that small wetlands could contain 657,000 acre-feet of water — equivalent to about 72 percent of the total runoff from a 2-year frequency runoff and about 41 percent of the total runoff from a 100-year frequency runoff.

The US Fish and Wildlife Service estimates that each acre of small wetland reduces flood damage to roads by \$6.11 per year. Each acre of small wetland also provides \$29.23 worth of flood damage protection to agricultural land per year.

### ***Outdoor recreation***

The recreational value of South Dakota's wetlands is important to residents and nonresidents alike. Wetlands provide places for hunting, fishing, trapping, bird watching, photography, boating and other outdoor recreation activities. Natural lakes in South Dakota suffer extreme fluctuations in water levels. This has a serious effect on recreational use of the waters as boat ramps and beaches are not useable if water levels drop to low levels. Wetlands moderate the inflows into these lakes and provide stream flows throughout the year. Wetlands recharging the aquifer would also stabilize lake levels at the same elevation.

### ***Sedimentation Collection***

Sedimentation is a concern in lakes or permanent wetlands used for recreation. Several dredging projects have been initiated to remove sediment in lakes. The preservation of wetlands controlling the inflows into permanent wetlands would alleviate this problem or reduce the sediment inflows.

### ***Economic Benefits***

The total economic value of wetlands is difficult to ascertain, but is undoubtedly important to South Dakota's economy. According to the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, 572 thousand residents and non-residents spent \$550 million on wildlife related recreation in South Dakota. 171 thousand resident and nonresident hunters alone spent over \$185 million that same year, with the migratory bird hunters' share totaling over \$44 million. 135 thousand anglers spent over \$131 million. It is noteworthy that migratory bird hunters primarily pursue ducks and geese and spend much of their time on or near wetlands of

various types where waterfowl congregate in the fall. Other hunters spend considerable time near or on wetlands because of the quality cover some wetlands (e.g. seasonal wetlands) provide for pheasants and deer.

Johnson and others (1997) reported that South Dakota trappers and predator hunters took over \$500,000 in furs during a single season. Although not as important as it once was due to a declining fur market, trapping is an important source of income for many South Dakota families. Furbearers often trapped on or near wetlands include mink, muskrats, raccoons, beaver and skunk.

The 2006 National Survey also indicates that 432 thousand residents and nonresidents spent over \$183 million in SD on wildlife-watching activities such as observing, feeding or photographing wildlife. Nearly 160 thousand wildlife watchers observed waterfowl and shorebird species, most of which would have been observed on wetlands. Similar 1996 survey results showed that 65 thousand wildlife-watchers that visited some type of public land visited a marsh or wetland site. Although numbers are unavailable, many other folks likely participated in these activities on or near privately owned wetlands.

Wetlands also provide outdoor classrooms and laboratories for school children, college students, wildlife biologists and other researchers interested in wetland ecosystems.

### ***Protection Strategies***

Conservation of South Dakota's wetland resources is vital if the above described functions and values are to be preserved for future generations. Gigliotti (2002) demonstrated that over 85 percent of South Dakotans believe that wetlands are important in preserving clean water and should be protected. Eighty-nine percent of them also feel that healthy wildlife populations are very (59 percent) or moderately (33 percent) important to the economy and well being of South Dakota residents. These data demonstrate that there is significant public support for conservation of wetlands and wetland dependent wildlife in the state. South Dakota GF&P's wetland conservation efforts fall into several broad categories including: education; management; acquisition; continued support of various state and federal regulatory; and legislative measures.

### ***Education***

SD GF&P will continue to provide educational materials in various media formats to the public regarding wetland functions and values and the importance of wetland conservation. We will also continue to support and provide technical assistance to other state and federal agencies producing such materials.

### ***Management***

Management of wetlands and associated grasslands on existing state Game Production Areas for the benefit of game and non-game species is a top priority for the Wildlife Division. Control of noxious weeds and other invasive species is an integral component of GF&P public land management. Assisting private landowners with wetland and grassland management by providing technical assistance, cost-share and/or incentive payments will continue and is likely to become more important. Practices including: wetland restoration, enhancement and creation, as well as grazing systems and grassland restoration are all eligible for cost share.

### ***Acquisition***

SD GF&P will continue to opportunistically purchase new lands from willing sellers. Priority for new land acquisitions will include “round outs” of existing areas through purchase of private inholdings within or areas immediately adjacent to, existing GPAs. Prairie pothole wetlands of virtually any type, as well as associated grassland (or cropland that can be restored to grassland) within the Prairie Pothole Region of eastern SD are acquisition priorities. Riverine wetlands associated with stream and river corridors (riparian areas) statewide are acquisition priorities as well. Lastly, fens, due to their rarity, special vulnerability and the unique plant communities they support also deserve special consideration by SD GF&P, although open access to such areas may need to be controlled due to the fragile nature of fens.

### ***Support of State and Federal Regulations or Legislation***

As alluded to above, most regulations, laws or provisions that protect wetlands in SD are federal (Clean Water Act, Farm Bill). Wetlands regulations have historically been very controversial in the state, and despite popular opinion, legislative support for more protection in state law seems unlikely. Continued support of federal programs by the state and the public is important for wetland protection in lieu of formal state regulatory protection. SDGF&P will continue to provide the Army Corps of Engineers and the Natural Resources Conservation Service with technical guidance regarding proposed regulation changes and specific projects that are likely to adversely affect wetland resources. Such guidance will include supporting avoidance, minimization and mitigation of wetland losses on State and Federally funded projects, with priority given to restoring drained wetlands. State laws and regulations that protect water quality of all waters, including wetlands should be supported and enforced. Improved state level wetland protection legislation should be considered in the future if and when public support demands it.

### **Wetlands Assessment Criteria**

The following criteria are based on the National Wetlands Priority Conservation Plan (U.S. Department of the Interior, 1989) for protection of wetlands through various forms of acquisition. The NWPC Plan has been developed by the US Fish and Wildlife Service for the Department of Interior. The Emergency Wetlands Resources Act requires consistency between the Statewide Comprehensive Outdoor Recreation Plan process and the NWPC Plan. Therefore, we have adequate NWPC Plan criteria in South Dakota.

Although the National Wetlands Priority Conservation Plan only applies to wetlands acquired by Federal Agencies and "wetlands acquired by the States through the Land and Water Conservation Fund grants program administered by the National Park Service", these criteria may be useful in guiding other wetland protection programs as well. The NWPC Plan represents only one tool to be used for the protection of valuable wetland ecosystems. Only through the coordinated efforts of all interests, public and private, can wetland resources be adequately protected for future generations.

All South Dakota wetland types, as defined by Cowardin (1979), will be considered for acquisition. There are many factors that must be considered in setting the priority for the acquisition of wetlands. Those identified within the NWPC Plan and adapted to South Dakota include:

1. Wetland losses: Wetland types may be given priority consideration for acquisition if they have declined within an ecoregion.

- Palustrine emergent, forested and scrub-shrub wetland types warrant priority consideration for Federal and State acquisition.
- An ecoregion sustaining a high or moderate loss of the base area of wetland types could warrant priority consideration over an ecoregion having a Low Index of Loss of original wetlands.
- Statistically valid data or supportable information could be used to substantiate significant losses for a specified wetland type or types within an ecoregion, a State or portion of a State when National Wetlands Inventory (NWI) trends study data do not show a high or moderate Index of Loss.

2. Threat of Future Wetland Loss: Wetlands may be given priority if they are facing imminent threat or long-term cumulative loss or degradation of functions and values to receive priority consideration.

- Priority may be assigned to a site regardless of size.

3. Wetland Functions and Values: Wetlands to be given priority consideration for acquisition are those with diverse functions and values and/or especially high or special values for specific wetland functions.

- Priority consideration will be given to wetlands whose public values and benefits cannot be maintained or realized, except through acquisition.
- Priority consideration will be given to interests in wetland acquisition methods that are the most cost-effective available while fully and permanently allowing for protection and/or improvement of the public values provided by the wetland. Fee title, perpetual easements, leases, deed restrictions, land donations and exchanges or other methods may be employed.
- Priority consideration will normally be given to wetlands which can be acquired from willing sellers.
- The relative size of a wetland, particularly smaller wetlands, will not in itself disqualify it from priority consideration.
- Restorable wetland sites or systems warrant priority consideration for acquisition.
- Wetland sites that would require minimal operation and maintenance requirements warrant priority consideration for acquisition.

### **IMPLEMENTATION AND GUIDANCE**

Although the Emergency Wetlands Resources Act of 1986 authorizes the use of the Land and Water Conservation Fund (LWCF) for the acquisition of wetlands, no additional money has been appropriated to this already diminished funding source.

The LWCF is a federal program that was established for the acquisition and development of outdoor recreation opportunities. Through a system of matching grants, states have traditionally used their apportionment for acquiring and improving state parks and municipal recreation

facilities. Applications for these types of projects already far exceed the level of funding available.

However, as stated earlier in this plan (page 4-5), wetlands do provide important recreational values. If a local government identifies wetlands acquisition as an important project to provide recreational opportunities in their area, such a project would be eligible for funding. The current procedures for evaluating LWCF applications do allow wetland related projects to compete with other project applications.

When funding is specifically appropriated to the LWCF for state acquisition of wetlands (as originally intended by the Emergency Wetlands Resources Act or the level of funding for the LWCF program in general reaches a point where a broader range of recreational needs can be addressed) wetland acquisition will be considered a priority for the use of LWCF funds.

In addition to the LWCF, the Department has the authority to use several other funding sources for wetlands acquisition. The use of any particular source will depend on the purpose of the acquisition and the amount of money available in the fund. The following is a list of sources with a brief description of each fund:

### **Game Fund**

1. License Revenue. The Game, Fish and Parks Commission can authorize the use of these revenues for approved projects, including land acquisition.
2. SD Migratory Bird Certification Stamp. This stamp was established as a source of revenue for waterfowl habitat development which could include wetland acquisition.

### **Acquisition Fund**

Pursuant to state statute portions of each nonresident waterfowl (\$4.00) and small game (\$3.00) license sold are placed in this fund. This fund can be used both for paying real estate taxes and acquiring new lands.

### **Federal Aid**

Wildlife Restoration funds (Pittman-Robertson or PR) and Sportfish Restoration funds (Dingell-Johnson or DJ) can be used to reimburse the Department 75 percent of the acquisition costs depending on the purpose. PR funds could be used to acquire wetlands to be managed for wildlife habitat purposes. DJ funds can be used to acquire wetlands that are suited for fisheries habitat management.

### **Other Funding Partnerships**

Partnerships with other governmental entities or programs such as the U.S. Fish & Wildlife Service, North American Wetlands Conservation Act Grants Program, County Conservation Districts, the State Conservation Commission or non-governmental organizations such as Ducks Unlimited, The Nature Conservancy, Pheasants Forever, Rocky Mountain Elk Foundation, other conservation organizations or clubs and private landowners are very important sources of funding for continued wetland and grassland conservation efforts in South Dakota.

### **Review and Revision**

This document and priority wetlands identified will be reviewed and updated at least every 5 years or during the revision of the SCORP. Feedback into the National Wetlands Priority Plan will take place as supported technical data is made available.



**LITERATURE CITED**

- Bailey, Robert G. 1996. Description of the ecoregions of the United States. 2<sup>nd</sup> ed. rev. and expanded (1<sup>st</sup> ed. 1980) Misc. Publ. No. 1391 (rev.), Washington DC: USDA Forest Service, 108pp.
- Batt, B.D.J., M.G. Anderson, C.D. Anderson and F.D Caswall. 1989. The use of prairie potholes by North American ducks, *in* van der Valk A., ed., Northern prairie wetlands: Ames, Iowa, Iowa State University, p. 204-227.
- Cowardin, L.M., V. Carter, F.C. Golet and E.T. Laroe. 1979. Classification of wetlands and deepwater habitats of the United States; FWS/OBS-79/31. Washington, D.C.: U.S. Government Printing Office, 131pp.
- Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. Water resources and wetlands, *in* Wetland functions and values: The state of our understanding. American Water Resources Association. pp. 344-376.
- Dahl, T.E. 1990. Wetland losses in the United States 1780's to 1980's. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 21pp.
- Dahl, T.E. 2000. Status and trends of wetlands in the conterminous United States 1986 to 1997. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 82pp.
- Drewien, R.C. and P.F. Springer. 1969. Ecological relationships of breeding blue-winged teal to prairie potholes. pp. 102-115 in Saskatoon Wetlands Seminar. Can. Wildlife Service, Report Series 6.
- Duebbert, H.F. and J.T. Lokemoen. 1980. High duck nesting success in a predator-reduced environment, *in* Waterfowl ecology and management: selected readings: The Wildlife Society, pp 191-200.
- Eisenlohr, W.S., Jr., et al. 1972. Hydrologic investigations of prairie potholes in North Dakota. 1954-1968. Geological Survey Professional Paper 585-A, U.S. Government Printing Office, Washington, D.C. 102pp as cited in Shjeflo 1968.
- Evans, C.D. and K.E. Black. 1956. Duck production studies on the prairie potholes of South Dakota. U.S. Fish and Wildlife Service, Special Scientific Report Wildlife, No. 32, 59pp.
- Frayner, W.E., T.J. Monohan, D.C. Bowden and F.A. Graybill. 1983. Status and trends of wetlands and deepwater habitats in the conterminous United States, 1950's to 1970's. US Fish and Wildlife Service, National Wetlands Inventory. 32 pp.
- Gigliotti, L.M. 2002. Wildlife values and beliefs of South Dakota residents, HD-10-02.AMS. South Dakota Department of Game, Fish and Parks, Pierre, SD. 175 pp.
- Harmon, K.W. 1976. The economics of wetland values. US Fish and Wildlife Service Wetland Symposium, June 8-9, 1976. Printed in Wildlife Management Institute Newsletter. Washington, D.C.

- Johnson, R.R. and K.F. Higgins. 1997. Wetland resources of eastern South Dakota. Brookings: South Dakota State University. 102pp.
- Johnson, R.R., K.F. Higgins, M.L. Kjellsen and C.R. Elliott. 1997. Eastern South Dakota wetlands. Brookings: South Dakota State University. 28pp.
- Ludden, A.P., D.L. Frink and D.H. Johnson 1983. Water storage capacity of natural wetland depressions in the Devils Lake basin of North Dakota. Journal of Soil and Water Conservation, pp 45-48.
- Rieger, B.A., K.F. Higgins, J.A. Jenks and M. L. Kjellsen. 2006 Demographics of Western South Dakota Wetlands and Basins. Brookings: South Dakota State University. B748. 124pp.
- Shjeflo, J.B. 1968. Evapotranspiration and water budget of prairie potholes in North Dakota. U.S. Geological Survey Professional Paper 585-B, U.S. Government Printing Office, Washington, D.C.
- U.S. Department of the Interior, Fish and Wildlife Service. 1989 National Wetlands Priority Conservation Plan.
- U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, Bureau of the Census. 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation.