

# Draft Comprehensive Conservation Plan and Environmental Assessment

*Lake Andes National Wildlife Refuge Complex*

**South Dakota**

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# Summary



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*Pintails wade in waters of the Lake Andes National Wildlife Refuge.*

This section summarizes the draft comprehensive conservation plan and environmental assessment for the U.S. Fish and Wildlife Service's Lake Andes National Wildlife Refuge Complex (Complex). The National Wildlife Refuge System Improvement Act of 1997 requires that a comprehensive conservation plan be developed for each unit of the National Wildlife Refuge System by 2012. The final plan for the Complex is scheduled for completion in 2012 and will guide management of the Complex over the next 15 years.

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## The Complex

Located in southeastern South Dakota, the Lake Andes National Wildlife Refuge Complex consists of three units: the Lake Andes National Wildlife Refuge, Karl E. Mundt National Wildlife Refuge, and the Lake Andes Wetland Management District. The Complex lies within the Plains and Prairie Pothole Region of South Dakota (figure 1), an ecological treasure of biological importance for wildlife, particularly waterfowl and other migratory birds—although the Plains and Prairie Pothole Region occupies only 10 percent of North America's waterfowl breeding range, it produces approximately 50 percent of the continent's waterfowl population.

The Complex manages lands located within Aurora, Bon Homme, Brule, Charles Mix, Clay, Davison, Douglas, Hanson, Hutchinson, Lincoln, Turner, Union, and Yankton Counties in southeastern South Dakota. These lands include a variety of grassland and wetland habitats which are managed with grazing, haying, rest, burning, restoration, tree plantings, invasive plant control, and very limited application of water level manipulation.

Each waterfowl production area managed by the wetland management district typically contains wetlands that are managed for waterfowl and shorebirds. Extensive wetland drainage and alteration throughout the Plains and Prairie Pothole Region has reduced the number of wetlands available to migratory birds to the point that most of the wetlands in the Complex are surrounded by cropland. Upland areas are managed for a high diversity of native vegetation to sustain grassland birds.

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## The National Wildlife Refuge System

All the units of the Lake Andes National Wildlife Refuge Complex are part of the National Wildlife Refuge

System. This system began when, in 1903, President Theodore Roosevelt designated the 5.5-acre Pelican Island in Florida as the Nation's first wildlife refuge for the protection of native nesting birds. This was the first time the Federal Government set aside land for wildlife. This small but significant designation was the beginning of the National Wildlife Refuge System.

One hundred years later, the National Wildlife Refuge System has become the largest collection of lands in the world specifically managed for wildlife, encompassing more than 150 million acres within 553 refuges and more than 3,000 waterfowl production areas providing breeding and nesting habitat for migratory birds. Today, there is at least one refuge in every State as well as in Puerto Rico and the U.S. Virgin Islands.

The Improvement Act of 1997 established a clear mission for the System.

*The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.*

## Planning Issues of the Complex

In May 2007, a notice of intent was published in the Federal Register announcing the Service's intent to prepare a comprehensive conservation plan and environmental assessment for the Complex and to obtain suggestions and information on planning issues to be considered. Throughout the planning process, the planning team distributed information to stakeholders including the State of South Dakota, tribal governments, partners, and neighboring landowners and communities to involve them in this planning process.

Following the analysis of comments from Service staff and the public and a review of applicable laws, the planning team identified several key planning issues. These issues were considered in the development of alternatives (chapter 3) and are summarized below.

### LAKE ANDES WATER QUALITY AND FISHERY

Numerous comments were received during scoping asking the planning team to consider restoration of Lake Andes in the comprehensive conservation plan. Over the past 100 years Lake Andes has supported a



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*Interpretive signs educate visitors about the Complex.*

boom-and-bust fishery that has been successful during wet periods (when fish are abundant) and unsuccessful during dry periods (which fish die out). Over the years several events and processes have affected the fishery as well as the lake's water quality on which numerous plants, fish, and migratory birds depend.

### INVASIVE PLANT CONTROL

Invasive plants are degrading the quality of Complex habitats and spreading to neighboring private lands. Comments received during scoping indicated that the Complex's neighbors desire more effective control of invasive and noxious weeds on Complex properties.

### MONITORING AND RESEARCH

Only isolated and uncoordinated research and opportunistic monitoring has occurred in the lands administered by the Complex. Additional surveys and research are needed to provide the science-based information necessary to improve management of the Complex.

### PRAIRIE RESTORATION

During scoping, many people expressed a desire for more prairie restoration on the Complex. Much of the native prairie that existed in the area before settlement has been lost through cultivation or degraded by invasive plants. Once broken, native prairie is essentially lost; however, restoration of native grasses and forbs can provide habitat that is very valuable to waterfowl and other migratory birds.

### PUBLIC ACCESS AND OPPORTUNITIES FOR WILDLIFE-DEPENDENT RECREATION

Much of Lake Andes National Wildlife Refuge and all of Karl E. Mundt National Wildlife Refuge are currently closed to public use. During scoping, a number of people commented that they would like the planning team to explore the possibility of expanding public access opportunities on both of these refuges.

### FUNDING, INFRASTRUCTURE, AND PARTNERSHIPS

Funding limits the staffing, the infrastructure, and to a large degree the capability of the Complex staff to conserve wildlife and to provide wildlife-dependent

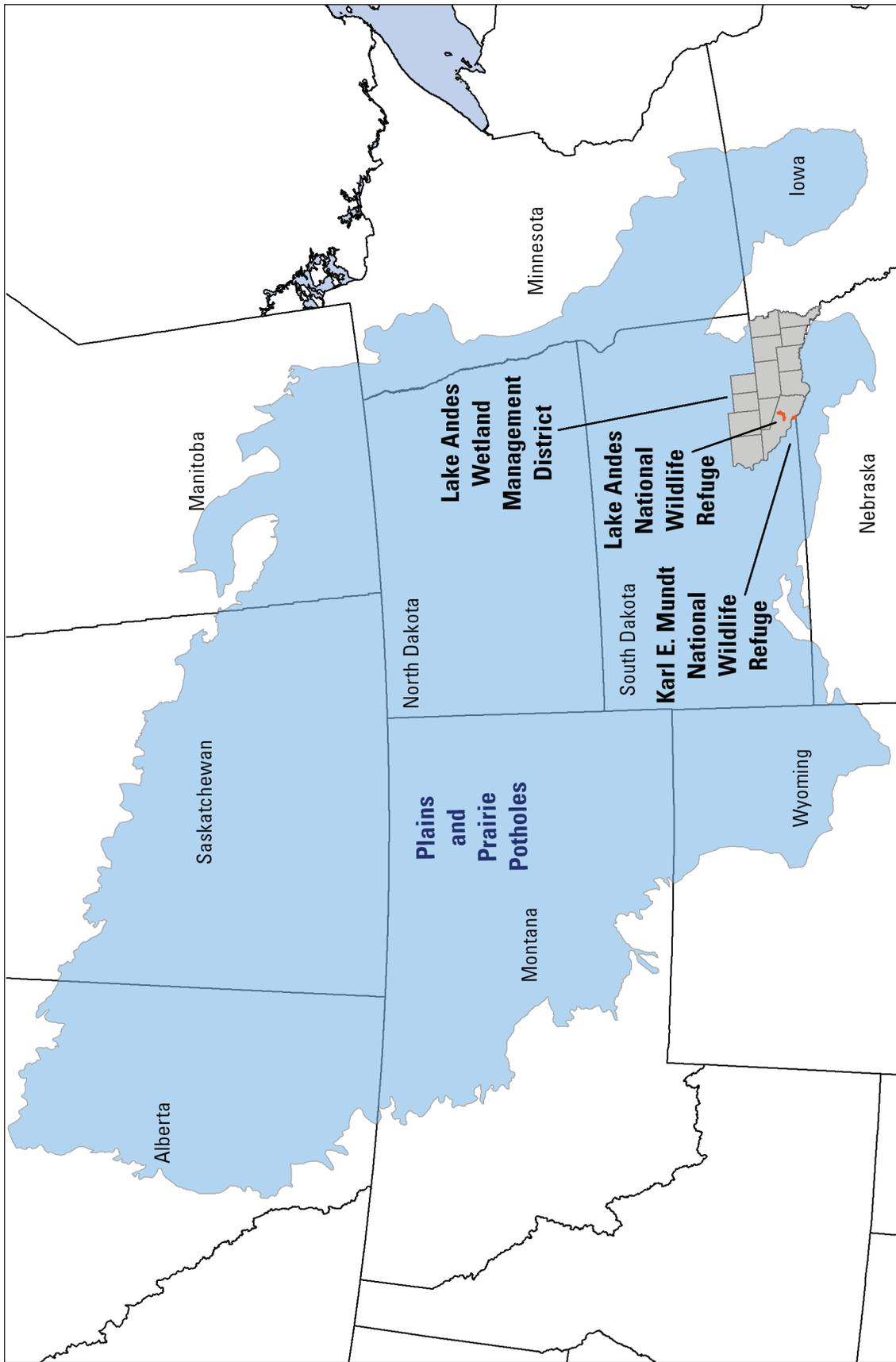


Figure 1. Map of the Plains and Prairie Pothole Region and the Lake Andes National Wildlife Refuge Complex, South Dakota.

recreation. Partnerships are an important way to help expand the staff’s capabilities to conserve wildlife and provide more and better recreation opportunities, especially when funding is so limited.

## Vision Statements for the Complex

Early in the planning process the planning team developed and refined a vision statement for each unit of the Complex. These future-oriented statements will guide the management of the Complex over the life of this comprehensive conservation plan.

### VISION STATEMENT FOR LAKE ANDES NATIONAL WILDLIFE REFUGE

*Migratory birds thrive on wetlands and grasslands composed of native plants. Visitors enjoy walking the foot trails, watching and photographing wildlife, and learning about Plains and Prairie Pothole Region habitat. Teachers bring their students to the refuge’s outdoor classroom.*

### VISION STATEMENT FOR KARL E. MUNDT NATIONAL WILDLIFE REFUGE

*Soaring bald eagles hunt, roost, and rear their young in this cottonwood forest where Lewis and Clark ventured up the Missouri River. Booming prairie chickens share the Missouri River bluffs with wild turkey, sharp-tailed grouse, quail, and songbirds. Careful observers, floating downstream along the refuge’s portion of the Missouri National Recreational River, may notice hunting bobcats, hovering raptors, or flying bats above placidly feeding deer. Wildlife-dependent recreational opportunities on this refuge foster a greater understanding of the refuge’s resources and the mission of the National Wildlife Refuge System.*

### VISION STATEMENT FOR LAKE ANDES WETLAND MANAGEMENT DISTRICT

*The waterfowl production areas and conservation easements of the Lake Andes Wetland Management District provide a network of wetland and grassland habitats that preserve the integrity of vital nesting and breeding grounds of North America’s migratory waterfowl. This mosaic of diverse and vigorous plant communities, interspersed with wetland complexes, supports a variety of marsh birds, shorebirds, songbirds, and colonial birds, as well as prairie grouse, upland plovers, sand pipers, and other resident wildlife species typical of the Plains and Prairie Pothole Region. District staff, landowners, cooperators, neighbors, and other partners work together to promote habitat conservation programs throughout the district and to control invasive plant species on public lands. Both consumptive and non-consumptive compatible wildlife-dependent recreational uses are allowed on these public lands.*

## Goals for the Complex

The following goals reflect the visions for the units of the Complex—providing for healthy ecosystems and compatible opportunities for the public to appreciate and enjoy the natural environment.

### WETLANDS GOAL

Acquire, restore, manage, and protect wetlands for the conservation of migratory birds and other water-dependent species endemic to the Plains and Prairie Pothole Region.

### RIPARIAN GOAL

Acquire, restore, manage, and protect riparian habitats endemic to the lower Missouri River for the conservation of bald eagles, other species of concern, and migratory birds.



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*Birdwatchers gather on the Complex.*

### UPLANDS GOAL

Acquire, restore, manage, and maintain a diverse mix of native grassland habitats to support migratory birds and resident wildlife found in the northern mixed-grass prairie ecosystem.

### VISITOR SERVICES GOAL

Provide opportunities for high quality and compatible hunting, fishing, environmental education, environmental interpretation, wildlife photography, and wildlife observation for persons of all abilities and cultural backgrounds by fostering an understanding and appreciation of the Lake Andes National Wildlife Refuge Complex and the missions of the Service and Refuge System.

### OPERATIONS GOAL

Provide funding, staffing, infrastructure, protection of cultural resources, partnerships, and a safe working environment to achieve the purposes and objectives of the Lake Andes National Wildlife Refuge Complex.

## Management Alternatives

The Service has prepared this draft comprehensive conservation plan and environmental assessment in cooperation with the South Dakota Game, Fish and Parks Department and the Yankton Sioux Tribe and with significant involvement from the public. After reviewing a wide range of public comments and management needs, the Service developed and analyzed the following alternatives for management of the Complex. Alternative B is the proposed action of the Service and is presented in chapter 6 as the draft comprehensive conservation plan.

### ALTERNATIVE A—CURRENT MANAGEMENT (NO ACTION)

Under alternative A, current management activities conducted by the Service throughout the Complex would not change. The Service would not develop any new management, restoration, or education programs for the Complex. Staff would not modify or expand current habitat and wildlife management practices conducted for the benefit of migratory birds and other wildlife. Staff would perform monitoring and research activities at current levels. Funding and staff levels would not change. Programs would continue in the same direction with the same intensity.

### ALTERNATIVE B—MODIFIED MANAGEMENT

This alternative focuses on addressing many of the external and internal comments received during scoping. Under this alternative, there would be increased efforts to restore fish and wildlife habitat on Lake Andes; more effective control of invasive plants; more focused monitoring, studies, and research activities; more restoration of native plants in grasslands; expanded opportunities for hunting, fishing, environmental education, interpretation, and wildlife observation and photography; and increased funding for the additional staff, infrastructure, and partnerships necessary to allow the Complex to fulfill the purposes for which the units of the Complex were established by Congress.

### ALTERNATIVE C—INTENSIVE MANAGEMENT

Like alternative B, this alternative addresses comments received during scoping. However it goes one step further and focuses on a more intensive approach to wildlife and public use management. It would require additional staff beyond levels required for implementation of alternative B.



# Abbreviations

|                             |   |
|-----------------------------|---|
| <b>BCR</b>                  | bird conservation region                                |
| <b>CMCLRO</b>               | Charles Mix County Lake Restoration Organization        |
| <b>CFRs</b>                 | Code of Federal Regulations                             |
| <b>CCP</b>                  | comprehensive conservation plan                         |
| <b>CWCS</b>                 | comprehensive wildlife conservation strategy            |
| <b>cfs</b>                  | cubic feet per second                                   |
| <b>DNC</b>                  | dense nesting cover                                     |
| <b>DBH</b>                  | diameter at breast height                               |
| <b>DDT</b>                  | dichlorodiphenyltrichloroethane                         |
| <b>DVE</b>                  | duck virus enteritis                                    |
| <b>EDRR</b>                 | Early Detection Rapid Response                          |
| <b>EA</b>                   | environmental assessment                                |
| <b>EHD</b>                  | epizootic hemorrhagic disease                           |
| <b>FmHA</b>                 | Farmers Home Administration                             |
| <b>FTE</b>                  | full-time equivalent                                    |
| <b>gpm</b>                  | gallons per minute                                      |
| <b>GIS</b>                  | geographic information system                           |
| <b>GPS</b>                  | global positioning system                               |
| <b>HAPET</b>                | Habitat and Population Evaluation Team                  |
| <b>HPAI</b>                 | highly pathogenic avian influenza                       |
| <b>Karl E. Mundt Refuge</b> | Karl E. Mundt National Wildlife Refuge                  |
| <b>Lake Andes Refuge</b>    | Lake Andes National Wildlife Refuge                     |
| <b>Complex</b>              | Lake Andes National Wildlife Refuge Complex             |
| <b>Lake Andes District</b>  | Lake Andes Wetland Management District                  |
| <b>mg/L</b>                 | milligrams per liter                                    |
| <b>NEPA</b>                 | National Environmental Policy Act of 1969               |
| <b>Refuge System</b>        | National Wildlife Refuge System                         |
| <b>Improvement Act</b>      | National Wildlife Refuge System Improvement Act of 1997 |
| <b>NPAM</b>                 | Native Prairie Adaptive Management                      |
| <b>NABCI</b>                | North American Bird Conservation Initiative             |
| <b>NAWCA</b>                | North American Wetlands Conservation Act                |
| <b>PPJV</b>                 | Prairie Pothole Joint Venture                           |
| <b>P.L.</b>                 | Public Law  |
| <b>RLGIS</b>                | Refuge Lands Geographic Information System database     |
| <b>RONs</b>                 | Refuge Operation Needs System                           |
| <b>Administration Act</b>   | Refuge System Administration Act of 1966                |
| <b>SDGFP</b>                | South Dakota Game, Fish and Parks                       |
| <b>SWG</b>                  | State Wildlife Grant                                    |
| <b>Service</b>              | U.S. Fish and Wildlife Service                          |
| <b>USGS</b>                 | U.S. Geological Survey                                  |
| <b>U.S.C.</b>               | United States Code                                      |

|                   |  |
|-------------------|--|
| <b>USDA APHIS</b> | U.S. Department of Agriculture Animal and Plant Health<br>Inspection Service |
| <b>VOR</b>        | visual obstruction reading   |
| <b>WNV</b>        | West Nile virus  |

*Definitions of these and other terms are in the glossary, located after chapter 6.*

