

CHAPTER 2—The Refuge Complex



© John Eriksson

Wood ducks are commonly seen on refuge complex lands.

2.1 Establishment, Acquisition, Management History, and Use

The Lake Andes National Wildlife Refuge Complex consists of three units: Lake Andes National Wildlife Refuge (which serves as the refuge complex headquarters) (Lake Andes Refuge), the Karl E. Mundt National Wildlife Refuge (Karl E. Mundt Refuge), and the Lake Andes Wetland Management District (Lake Andes District).

The refuge complex shares a common staff that currently consists of the wildlife refuge manager, wildlife refuge specialist, wildlife biologist, administrative officer, and two maintenance workers. The refuge complex also supports a wildlife biologist from the Service's Partners for Fish and Wildlife program.

LAKE ANDES NATIONAL WILDLIFE REFUGE

Authorized by Executive Order in 1936, the Lake Andes National Wildlife Refuge (figures 5 and 6) was formally established in 1939 when the State of South Dakota granted an easement allowing the Service to operate a refuge for migratory birds and other wildlife.

This 5,639-acre refuge includes Lake Andes, a 4,700-acre lake created by the last ice age. The lake's shallow

waters are very attractive to migrating and nesting waterfowl, shorebirds, and other waterbirds. Water levels in the lake vary from 0 to 12 feet depending entirely on climatic conditions and precipitation, and the lake supports a boom-and-bust fishery that depends on water quality and water quantity. Grasslands surrounding the lake provide optimal habitat for nesting waterfowl and grassland songbirds, and in this area nesting densities are very high (greater than 300 nests per square mile).

Lake Andes Refuge is divided into four units. The lake itself comprises three of these units—the North Unit, Central Unit, and South Unit—and the fourth, the Owens Bay Unit, lies at the southeastern bank of Lake Andes.

Water level manipulation, grazing, prescribed fire, invasive plant control, and prairie restoration are used on the refuge to provide optimal habitat for migratory birds. Approximately 2,000 people—mostly birdwatchers—visit this refuge each year. A foot trail provides public access to a series of small wetlands that attract migrating waterfowl and shorebirds in great numbers.

KARL E. MUNDT NATIONAL WILDLIFE REFUGE

Named for a former South Dakota senator, the Karl E. Mundt National Wildlife Refuge is located below the Fort Randall Dam and encompasses a portion of the Missouri National Recreational River (figures 7 and 8). This refuge was established in 1974 when

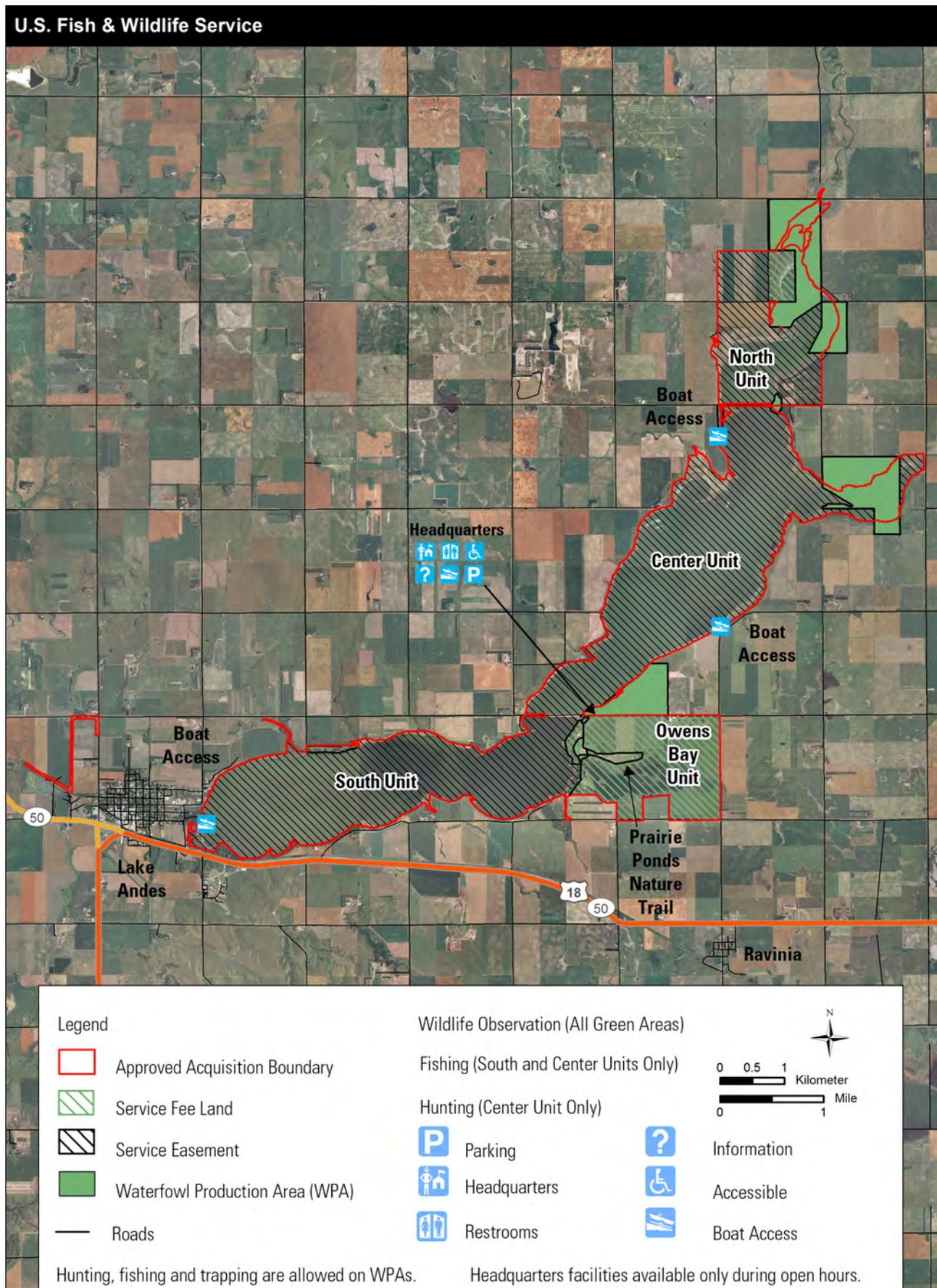


Figure 5. Map of the Lake Andes National Wildlife Refuge, South Dakota.

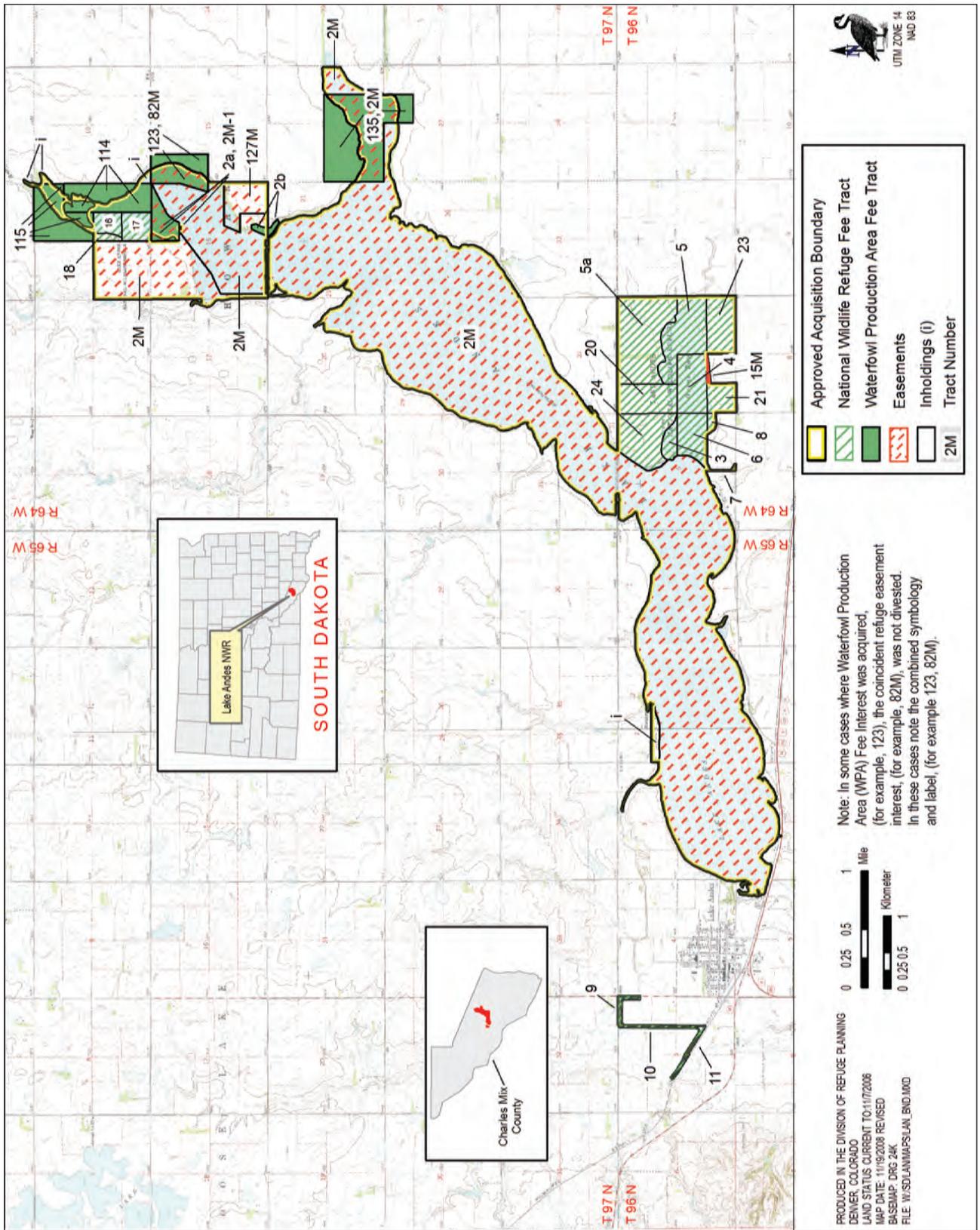


Figure 6. Land status map for the Lake Andes National Wildlife Refuge, South Dakota.



© John Jave

Pheasant

the National Wildlife Federation and the Southland Corporation donated 700 acres of land and 300 acres of easement to the Service for the primary purpose of bald eagle conservation. At that time, loss of habitat, the widespread use of dichlorodiphenyltrichloroethane, and poaching had thinned the bald eagle population in the lower 48 states to 1 percent of its former size. The Karl E. Mundt Refuge was the first national wildlife refuge established for the conservation of bald eagles, and since establishment the refuge has also provided important habitat for neotropical migratory birds that require riparian forests to migrate and nest.

Haying, grazing, prescribed fire, invasive plant control, and prairie restoration are used to maintain riparian and upland habitats. The refuge is closed to public use to reduce disturbance to bald eagles; however, guided tours are provided annually for approximately 50 visitors.

LAKE ANDES WETLAND MANAGEMENT DISTRICT

The 104,242-acre Lake Andes Wetland Management District was established in 1958 and protects 18,782 acres of habitat in waterfowl production areas (figures 9–14). These waterfowl production areas are public lands open to hunting, fishing, wildlife observation, and other forms of wildlife-dependent recreation. The district protects an additional 80,000 acres of habitat through easements that prevent loss of wetlands and grasslands on private land. Acquisition of additional easements is ongoing.

Grazing, haying, prescribed fire, invasive plant control, and prairie restoration are used to provide optimal waterfowl and other migratory bird habitat. Approximately 15,000 people visit the district each year to hunt, observe wildlife, or fish on waterfowl

production areas. Most of these visitors are hunters pursuing ring-necked pheasants.

2.2 Special Values of the Refuge Complex

Early in the planning process, the planning team and public identified the outstanding qualities of Lake Andes National Wildlife Refuge Complex. These qualities are the characteristics and features of the refuge complex that make it special, valuable for wildlife, and worthy of inclusion in the Refuge System. Such qualities can be unique biological values as well as simple values like providing a quiet place to enjoy nature or view wildlife. It was important to identify these special values to recognize the refuge complex's worth and to ensure that its special values are preserved, protected, and enhanced through the planning process. The following summarizes the qualities that make the refuge complex unique and valued:

- The refuge complex protects and manages nationally significant nesting and migration habitat for waterfowl and other migratory birds.
- The refuge complex conserves and restores wetlands and grasslands for the benefit of wildlife and people.
- The refuge complex provides the public with opportunities for wildlife-dependent recreation and a place to reconnect with nature.
- The refuge complex contributes to local economies, the preservation of open space, and the quality of life of area residents and visitors.

2.3 Purposes

Every unit in the Refuge System has a purpose for which it was established. This purpose is the foundation on which to build all programs, from biology and public use programs to maintenance and facilities programs. No action taken by the Service or public may conflict with this purpose. The purposes are found in the legislative acts or administrative orders that authorize either the transfer or acquisition of land for the units. Over time an individual unit may contain lands that have been acquired under a variety of transfer and acquisition authorities, giving the unit more than one purpose.

The goals, objectives, and strategies identified in this CCP are intended to support the purposes for which the Lake Andes Refuge, Karl E. Mundt Refuge, and Lake Andes District were established.

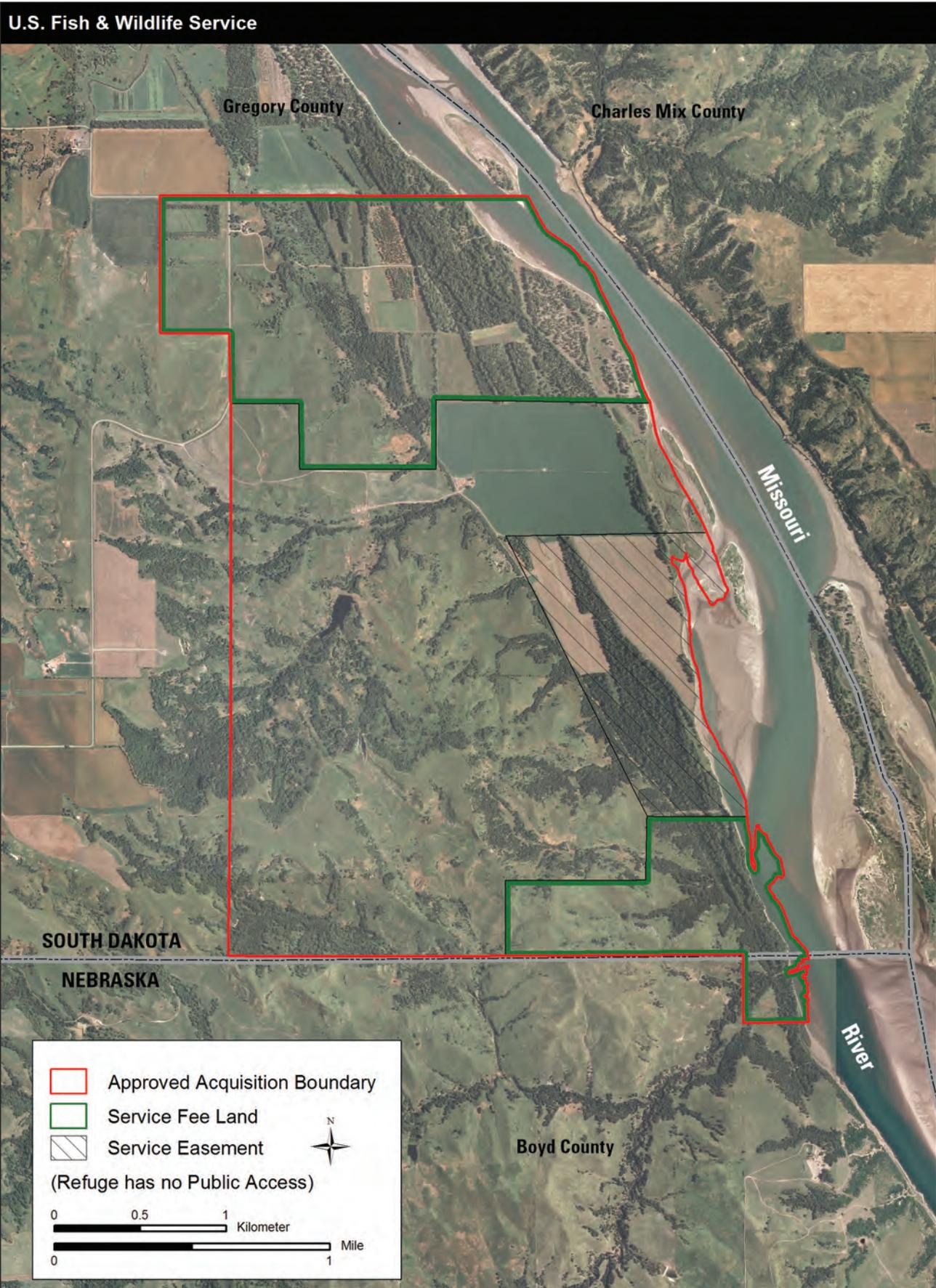


Figure 7. Map of the Karl E. Mundt National Wildlife Refuge, South Dakota.

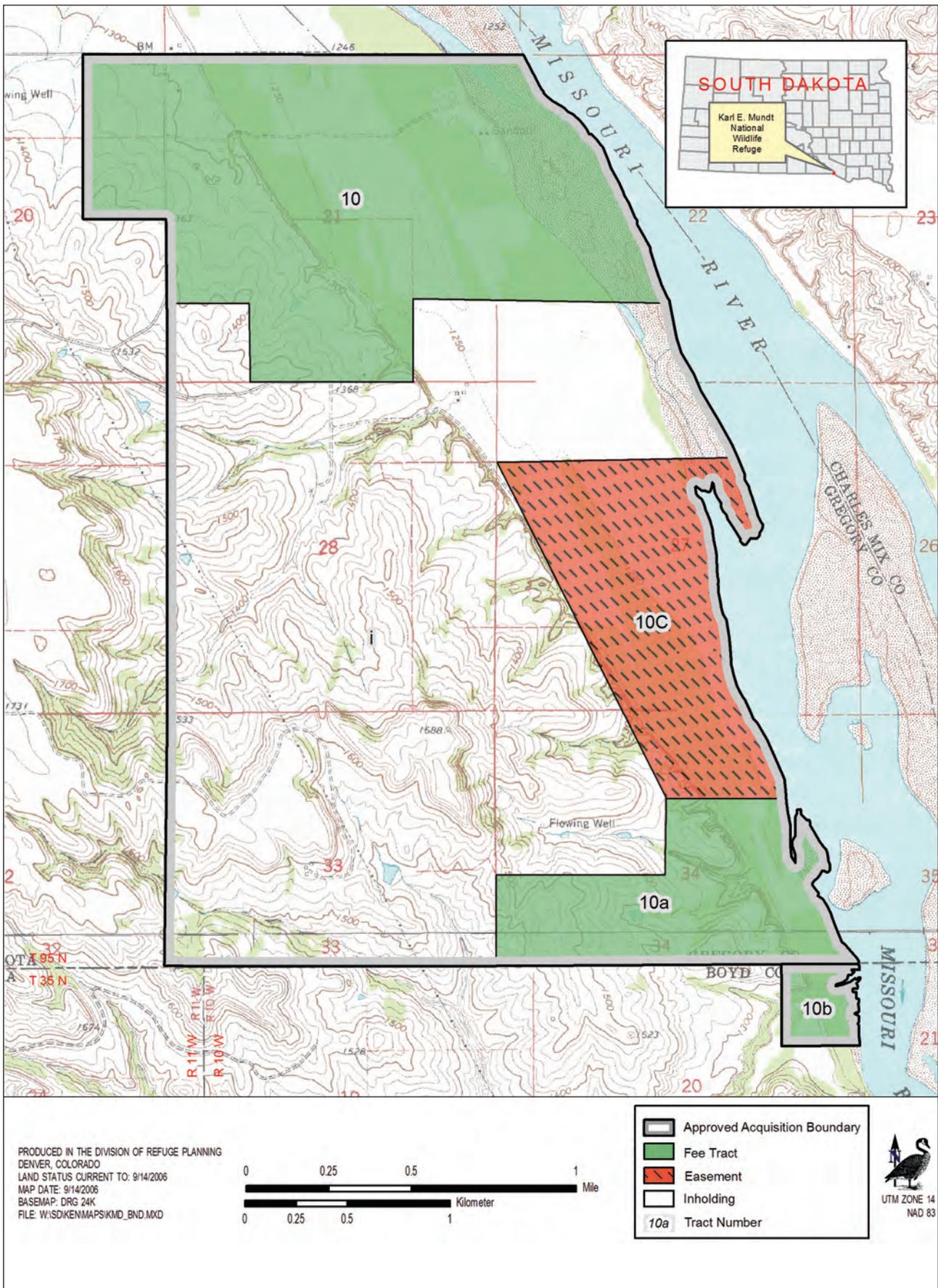


Figure 8. Land status map of the Karl E. Mundt National Wildlife Refuge, South Dakota.



Figure 9. Lake Andes Wetland Management District waterfowl production areas in Davison and Hanson Counties, South Dakota.

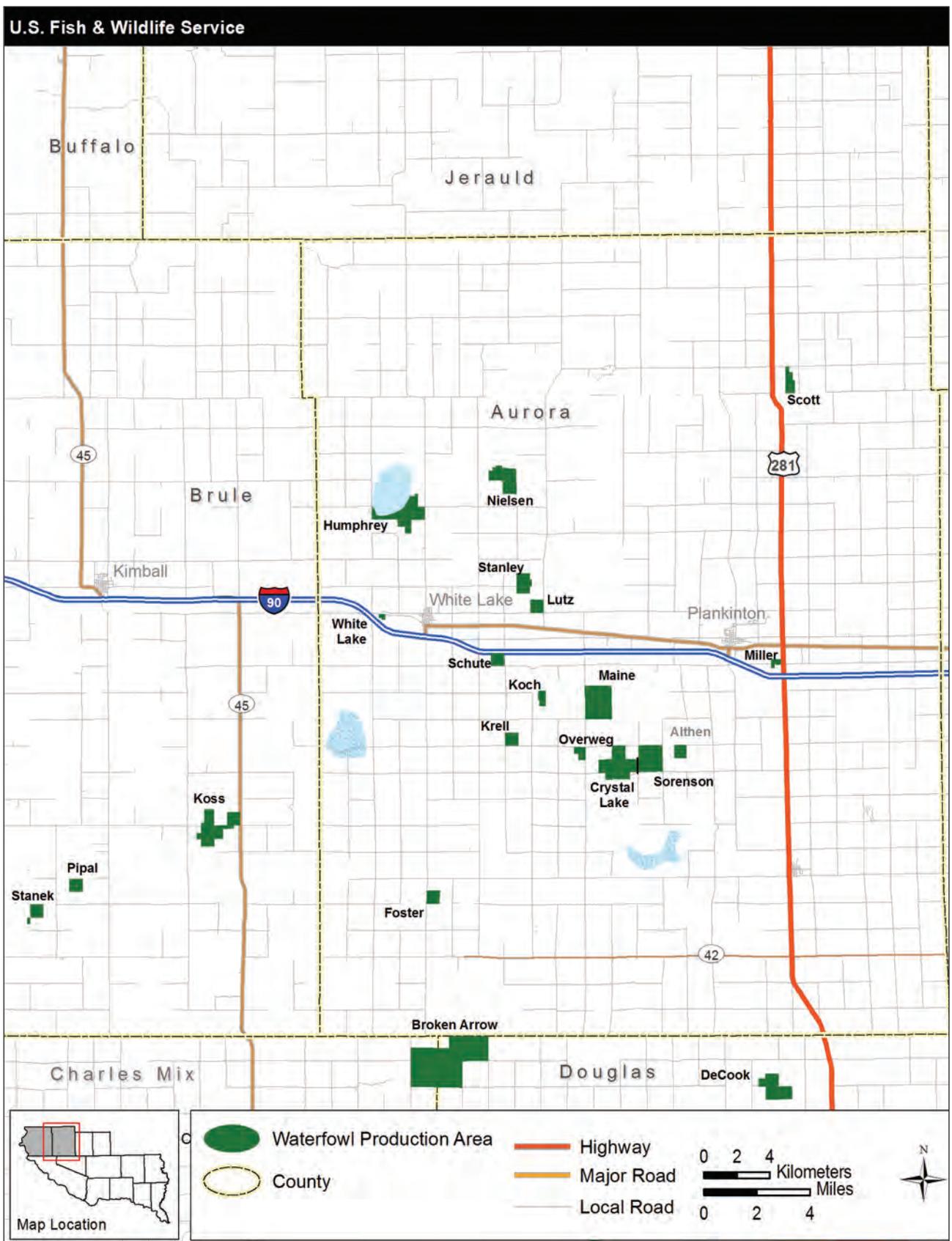


Figure 10. Lake Andes Wetland Management District waterfowl production areas in Brule and Aurora Counties, South Dakota.

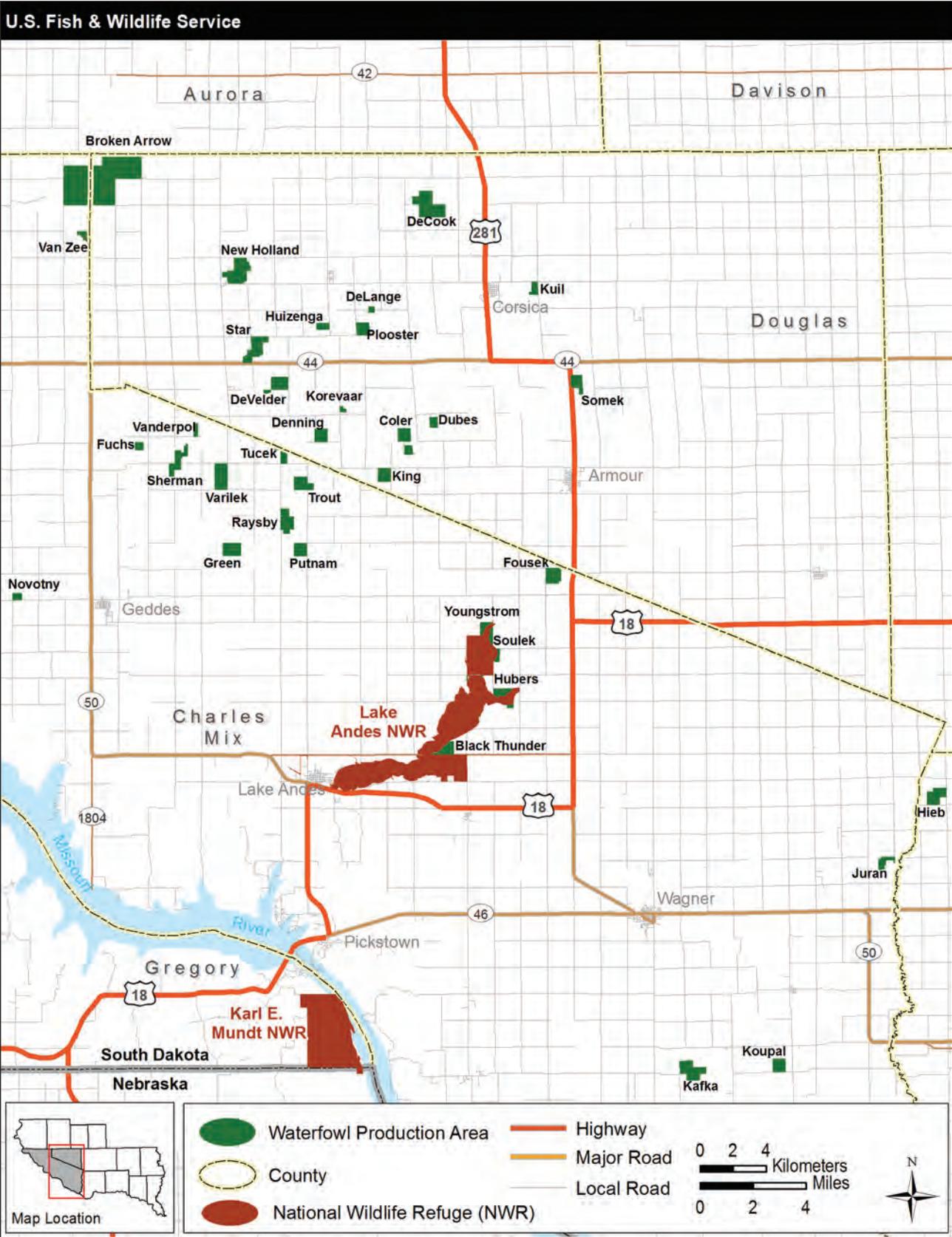


Figure 11. Lake Andes Wetland Management District waterfowl production areas in Charles Mix and Douglas Counties, South Dakota.

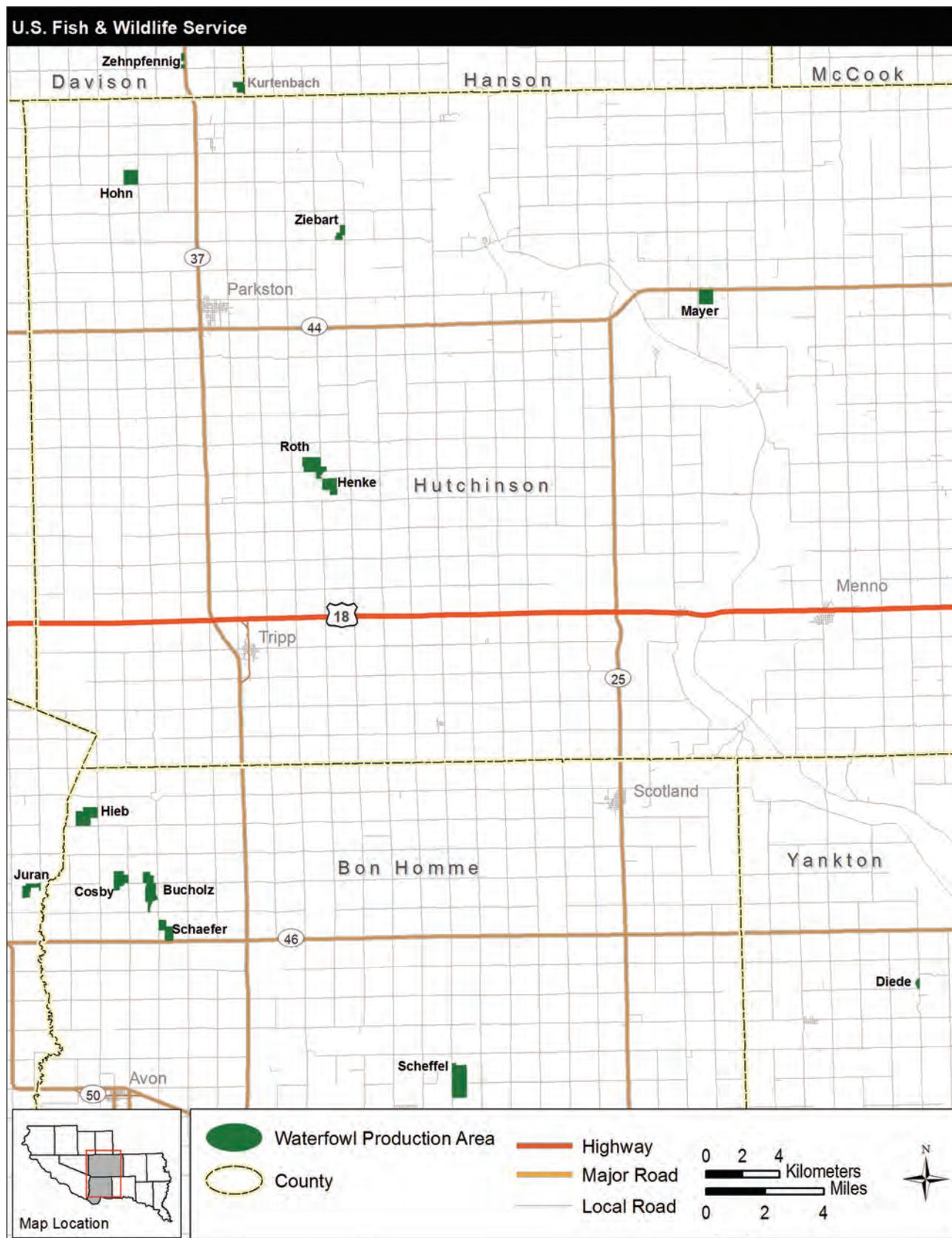


Figure 12. Lake Andes Wetland Management District waterfowl production areas in Bon Homme and Hutchinson Counties, South Dakota.

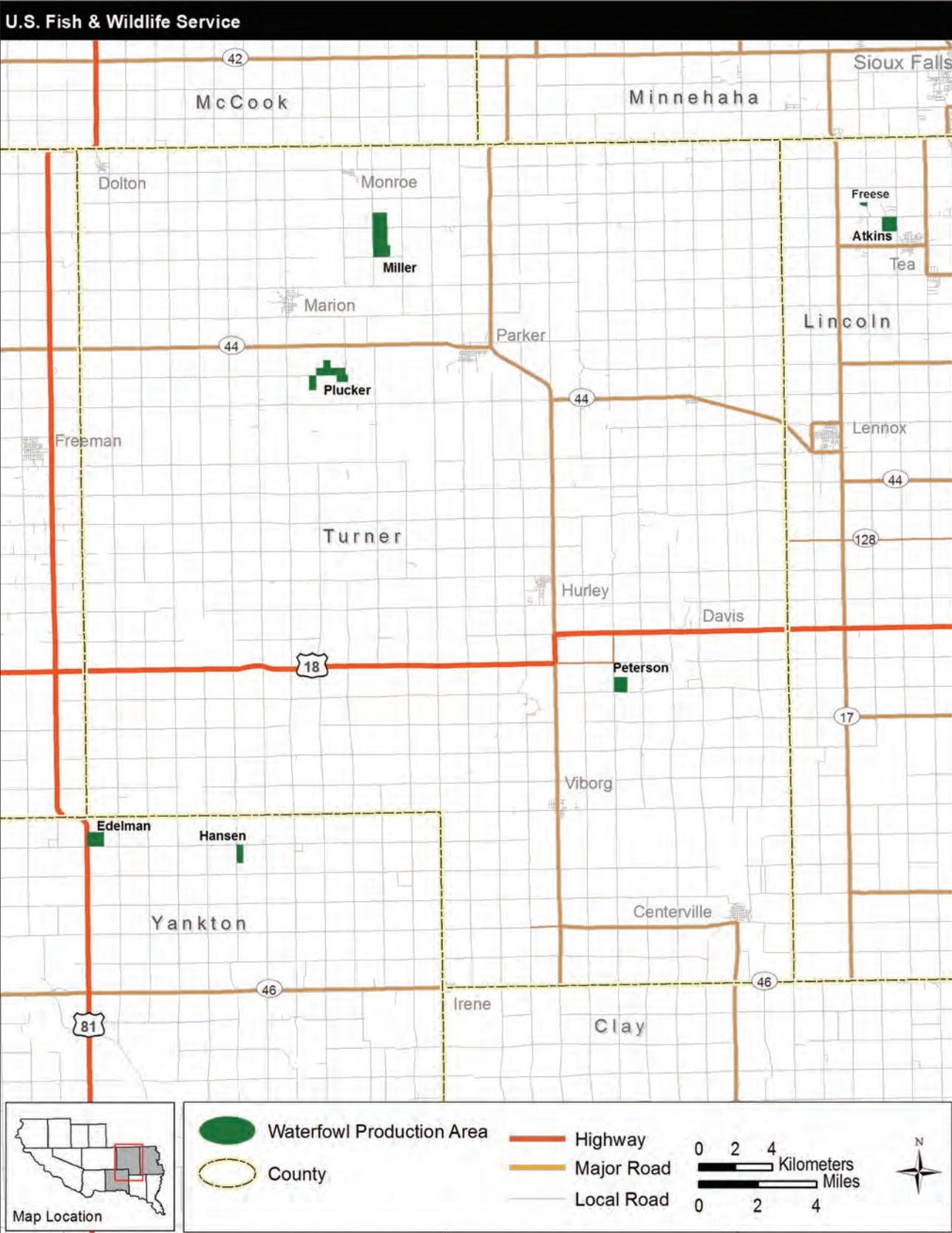


Figure 13. Lake Andes Wetland Management District waterfowl production areas in Turner, Yankton, and Lincoln Counties, South Dakota.

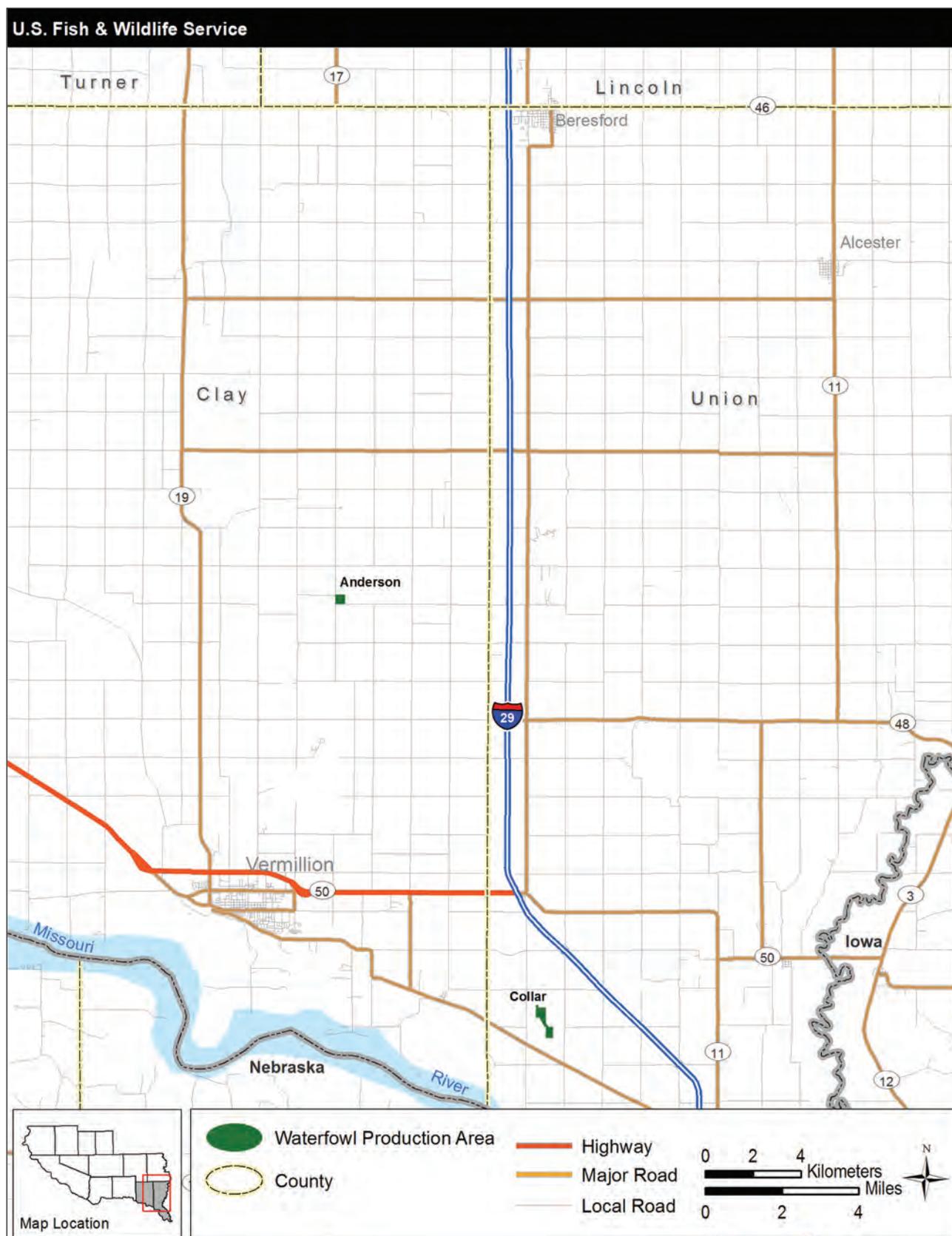


Figure 14. Lake Andes Wetland Management District waterfowl production areas in Clay and Union Counties, South Dakota.

LAKE ANDES NATIONAL WILDLIFE REFUGE

Lake Andes National Wildlife Refuge was authorized on February 14, 1936, by President Franklin D. Roosevelt through Executive Order 7292, under the authority of the Migratory Bird Conservation Act (16 United States Code [U.S.C.] 715d):

“as a refuge and breeding ground for migratory birds and other wildlife.”

“for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

KARL E. MUNDT NATIONAL WILDLIFE REFUGE

Karl E. Mundt National Wildlife Refuge was authorized on April 17, 1975, under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531–1543):

“to conserve fish, wildlife, or plants which are listed as endangered or threatened species.”

LAKE ANDES WETLAND MANAGEMENT DISTRICT

Lake Andes Wetland Management District was authorized on August 1, 1958, under the authority of P.L. 85–585, which amended the Migratory Bird Hunting and Conservation Stamp Act of 1934 (16 U.S.C. 718c). Official purposes are from a number of sources:

Regional Guidance, 2004: “to ensure the long-term viability of the breeding waterfowl population and production, through the acquisition and management of Waterfowl Production Areas, while considering the needs of other migratory birds, threatened and endangered species, and other wildlife.”

Migratory Bird Hunting Stamp Act (16 U.S.C. 718c): “as [waterfowl production areas] subject to all provisions of the Migratory Bird Conservation Act ... except the inviolate sanctuary provisions.”

Migratory Bird Conservation Act (16 U.S.C. 715d): “or for any other management purpose, for migratory birds.”

Consolidated Farm and Rural Development Act (7 U.S.C. 1924): “for conservation purposes.”

2.4 Visions

At the beginning of the planning process, the Service developed a vision for each unit in the refuge complex. These vision statements describe the focus of management, including what will be different in the future, and form the essence of what the Service is trying to accomplish at the refuge complex by the end of the 15-year life of the CCP. These vision statements appear below.

VISION STATEMENT FOR THE LAKE ANDES NATIONAL WILDLIFE REFUGE

Migratory birds thrive on wetlands and grasslands comprised 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 THE 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.



Karl E. Mundt National Wildlife Refuge

VISION STATEMENT FOR THE 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 preserves 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 marshbirds, shorebirds, songbirds, and colonial birds, as well as prairie grouse, upland plovers, sandpipers, 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 nonconsumptive, compatible, wildlife-dependent recreational uses are allowed on these public lands.

2.5 Goals

The Service developed five management goals for the Lake Andes National Wildlife Refuge Complex. These goals will direct efforts toward achieving the vision and purpose(s) of each unit in the refuge complex. These goals are based on the Improvement Act, the purpose(s) of each unit in the refuge complex, and information developed during planning.

WETLAND HABITAT 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 HABITAT 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.

UPLAND HABITAT 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, 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 the Refuge System.

OPERATIONS GOAL

Provide money, staff, 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.

2.6 Planning Issues

Several key issues were identified following the analysis of comments collected from Service staff members and the public and a review of the requirements of the Improvement Act and NEPA. These key issues were considered in the development of alternatives and are summarized below.

LAKE ANDES WATER QUALITY AND FISHERY

Over the past 100 years Lake Andes has supported a boom-and-bust fishery that has been successful during wet periods (when fish are abundant) and unsuccessful during dry periods (when fish die out). Over the years several events and processes have affected the fishery as well as the water quality on which numerous plants, fish, and migratory birds depend. Responding to complaints of flooding, the U.S. Congress in 1921 ordered an artificial outlet constructed on the lake to reduce the maximum depth from 25 feet to 12 feet. Limiting the maximum depth results in a shallower lake that will be low or dry more frequently than before. Additionally, ongoing agricultural activities in the watershed have deposited phosphorus, nitrogen, and sediment in the lake. These deposits reduce levels of dissolved oxygen in the water, affecting fish, vegetation, and the fishery. As a result, rough fish—which can survive in oxygen-poor water—have become more prevalent and difficult to control in the lake and watershed.



USFWS

Over the past 100 years Lake Andes has supported a boom-and-bust fishery that has been successful during wet periods (when fish are abundant) and unsuccessful during dry periods (when fish die out).

During scoping, numerous comments were received asking that the restoration of Lake Andes be included in the CCP.

INVASIVE PLANT CONTROL

Invasive plants are degrading the quality of refuge complex habitats. Canada thistle, leafy spurge, musk thistle, wormwood sage, Russian olive, smooth brome, and Kentucky bluegrass are the primary species of concern. Of these, Canada thistle occupies the greatest number of acres on the refuge complex and creates the biggest problem when its seeds become airborne in July. There is more thistle than can be treated in one growing season with the resources available to the refuge complex.

Noxious weed infestations are particularly troublesome for neighboring landowners who are required by State and local laws to control those species of plants on their lands. Some of these landowners see refuge complex lands as the source of invasive plants colonizing their lands. Comments received during scoping indicated that the refuge complex's neighbors desire more effective control of noxious weeds on refuge complex properties.

MONITORING AND RESEARCH

Additional surveys and research are needed to provide the science-based information necessary to improve management on the refuge complex.

PRAIRIE RESTORATION

Much of the native prairie that existed in this area before settlement has been lost through cultivation or degraded by invasive plants such as smooth brome or Kentucky bluegrass. 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. During scoping for the CCP, a number of people expressed a desire for more prairie restoration on the refuge complex.

PUBLIC ACCESS AND OPPORTUNITIES FOR WILDLIFE-DEPENDENT RECREATION

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

MONEY, INFRASTRUCTURE, AND PARTNERSHIPS

Funding limits the staff, the infrastructure, and to a large degree the capability of the refuge complex staff to conserve wildlife and to provide wildlife-dependent 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 money is so limited.

