2 The District

A wetland management district includes land that the Refuge System acquires with Federal Duck Stamp and other funds. These districts, including the Rainwater Basin Wetland Management District, are to be restored and managed primarily as prairie wetland habitat, which is critical to waterfowl and other wetland birds.

This chapter describes the establishment, vision and goals, special values, and planning issues of the district.

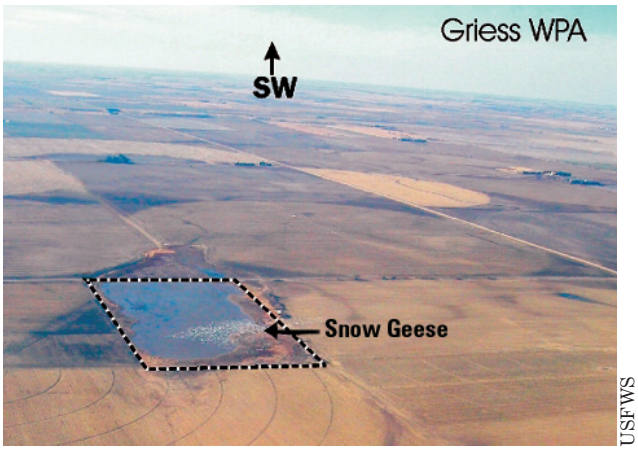
2.1 ESTABLISHMENT, ACQUISITION, AND MANAGEMENT HISTORY

The Rainwater Basin Wetland Management District was established in 1963 with the purchase of land on what is now Massie WPA. An area acquisition office of the Service was located in Hastings from 1962 to 1971, during a time when more than 14,000 acres were acquired to be managed as WPAs. Valentine National Wildlife Refuge, more than 200 miles from the nearest WPA, managed these WPAs from 1963 until 1966 when the wetland management district was staffed by one person. The district held the name of Hastings Wetland Management District until its name was changed to Rainwater Basin Wetland Management District in 1981.

The Rainwater Basin encompasses 17 counties in southern Nebraska. The district boundary includes all or portions of 13 of these counties. The district has land-purchasing authority within Adams, Clay, Fillmore, Franklin, Gosper, Hall, Hamilton, Kearney, Phelps, Polk, Saline, Seward, and York counties. The district manages WPAs in all of these counties except Polk County. In addition, the district manages one WPA that occurs outside the district boundary, in Cuming and Dodge counties.

Through the years, the Service has acquired 230 tracts of land that form 61 WPAs under the district's management. The WPAs managed by the district total 24,210.09 acres and occur across 14 Nebraska counties (see table 2). Figures 8–19 display the WPAs within each county, except for Cuming and Dodge counties, which lie outside the district boundary.

The Service's acquisition goal for the district is 24,000 acres. To date, the Service has acquired 21,703 acres of the 24,210 acres the district manages. The remaining 2,507 acres under district management have been gifted or obtained from other agencies. Three of the areas managed by the district are atypical WPAs. McMurtrey WPA in Clay County was transferred to the Service from the Department of Defense (originally part of the Hastings Ammunition facility). McMurtrey WPA has no public access and is managed as a closed area. In addition, the Farmers Home Administration transferred to the Service the Haseman WPA (in Cuming and Dodge counties, northwest of Omaha) and Schwisow WPA (Saline County). These two properties are different from the other 59—they are not within the basin and they occur within floodplains of the Elkhorn and Big Blue rivers respectively. Although these two WPAs are outside the basin, they are managed in the same manner as the rest of the district's WPAs and are open to public use.



USFWS

Snow geese congregate at Griess WPA (Fillmore County).

Separate from the WPAs, the district contains 35 conservation easements, which total 2,476 acres. The Farmers Home Administration transferred all these areas to the Service. While the easement restrictions vary, they generally prohibit wetland drainage, grassland conversion, and development. However, 25 of the easements allow livestock grazing. Special use permits are generally required for vegetative manipulation.

2.2 SPECIAL VALUES OF THE DISTRICT

The planning team and the public identified special qualities that make the district valuable for wildlife and the American people. Attributes identified included the following:

- The district provides a critical spring staging area for millions of migratory birds that gather from the coastal states, Mexico, and South America.

Table 2. Waterfowl production areas managed by Rainwater Basin Wetland Management District, Nebraska.

County Name and WPA Summary	*WPA Name*	*Acreage*
Adams: 2 WPAs; 391.56 acres	Kenesaw	231.56
	Weseman	160.00
Clay: 16 WPAs; 6,374.48 acres	Eckhardt	175.21
	Glenvil	119.46
	Green Acres	63.66
	Hansen	320.00
	Harms	60.00
	Harvard (all units)	1,484.00
	Hultine (all units)	1,000.00
	Lange	158.76
	Massie	853.00
	McMurtrey	1,067.00
	Meadowlark	80.00
	Moger	196.70
	Schuck	80.00
	Smith	476.40
	Theesen	80.29
	Verona	160.00
Cuming and Dodge: 1 WPA, 229.11 acres	Haseman	229.11
Fillmore: 11 WPAs; 3,578.52 acres	Brauning	240.00
	County Line	408.00
	Griess	20.00
	Krause	534.26
	Mallard Haven	1,087.00
	Miller's Pond	130.78
	Morphy	89.54
	Rauscher	250.75
	Real	160.00
	Rolland	128.56
	Wilkins	529.63
Franklin: 3 WPAs; 1,783.04 acres	Macon Lakes	1,108.61
	Quadhamer	593.56
	Ritterbush	80.87
Gosper: 3 WPAs; 1,453.59 acres	Elley	60.00
	Peterson	1,156.09
	Victor Lakes	237.50
Hall: 1 WPA, 627.81 acres	Hannon	627.81
Hamilton: 3 WPAs; 1,120 acres	Nelson	160.00
	Springer	640.00
	Troester	320.00
Kearney: 9 WPAs; 2,873.75 acres	Bluestem	75.93
	Clark	451.00
	Frerichs	46.50
	Gleason	569.58
	Jensen	465.00
	Killdeer	38.36
	Lindau	152.38
	Prairie Dog	892.00
	Youngson	183.00

Table 2. Waterfowl production areas managed by Rainwater Basin Wetland Management District, Nebraska.

County Name and WPA Summary	*WPA Name*	*Acreage*
Phelps: 6 WPAs; 4,606.89 acres	Atlanta	1,147.08
	Cottonwood	560.00
	Funk	1,996.40
	Johnson	577.44
	Jones	165.97
	Linder	160.00
Polk: 0 WPA	——	——
Saline: 1 WPA, 61 acres	Schwisow	61.00
Seward: 2 WPAs; 471.14 acres	Freeman Lakes	187.76
	Tamora	283.38
York: 3 WPAs, 639.2 acres (County Line WPA occurs in two counties, Fillmore and York. This WPA's occurrence and acreage is reported in total under Fillmore County.)	County Line	(see Fillmore County)
	Heron	320.00
	Sinninger	160.00
	Waco	159.20

- Large concentrations of migratory birds use the basin in the spring: 90% of the midcontinental population of white-fronted geese, 50% of the midcontinental population of mallards, 30% of the continental population of northern pintails, and 90% of the midcontinental population of snow geese.
- The basin has the second highest number of confirmed sightings of whooping cranes along their migration route.
- Five of nine grassland species of concern nest in the basin.
- Two ecosystems, tall-grass prairie and mid-grass prairie, occur in the district.
- Most of the remaining prominent wetlands in the basin are under ownership and management of the district.
- The district has the ability to provide supplemental water to wetlands during migration.

2.3 PURPOSES FOR THE DISTRICT

The purposes for the Rainwater Basin Wetland Management District are described in the following legislation and public land orders:

Consolidated Farm and Rural Development Act (7 United States Code [USC] 2002 [a])—"For conservation purposes any real property, or interest therein … that has marginal value for agricultural production; is environmentally sensitive; or has special management importance."

Emergency Wetlands Resources Act (16 USC 3901 [b])—"It is the purpose of this chapter to promote … the conservation of the wetlands of the nation in order to maintain the public benefits they provide and to help fulfill international obligations in various migratory bird treaties and conventions with Canada, Mexico, Japan, the Union of Soviet Socialist Republics, and with various countries in the Western Hemisphere."

Migratory Bird Conservation Act (16 USC 715d [2])—"For use as an inviolate sanctuary, or for any other management purpose, for migratory birds."

Migratory Bird Conservation Act (16 USC 715i [a])—"Areas of lands, waters, or interests therein acquired or reserved pursuant to this subchapter shall … be administered … to conserve and protect migratory birds in accordance with treaty obligations with Mexico, Canada, Japan and the Union of Soviet Socialist Republics, and other species of wildlife found thereon, including species that are listed … as endangered or threatened species, and to restore and develop adequate wildlife habitat."

Migratory Bird Hunting and Conservation Stamp Act (16 USC 718 [c])—"Small areas, to be designated as 'Waterfowl Production Areas' may be acquired without regard to the limitations and requirements of the Migratory Bird Conservation Act, but all of the provisions of such Act which govern the administration and protection of lands acquired thereunder, except the inviolate sanctuary provisions of such Act, shall be applicable to areas acquired pursuant to this subsection."

Public Land Order 6979 (May 25, 1993)—"To protect waterfowl production areas."

Public Land Order 7206 (June 24, 1996)—"The following described public lands are hereby withdrawn from settlement, sale, location or entry under the general land laws, including the U.S. mining law, but not from leasing under the mineral leasing laws, to protect waterfowl production areas. This withdrawal will expire 50 years from the effective date of this order unless … the Secretary determines that the withdrawal shall be extended."

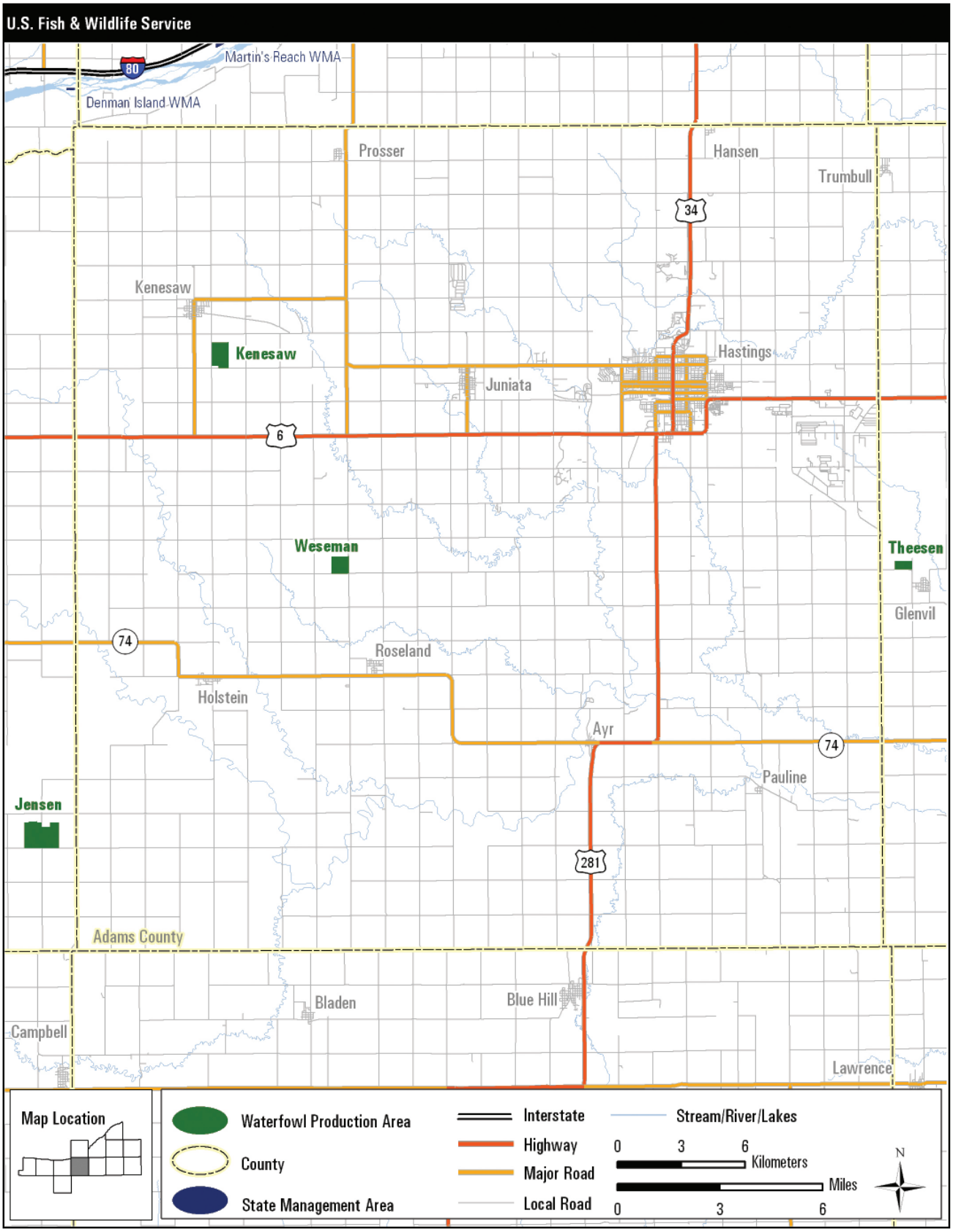


Figure 8. Waterfowl production areas in Adams County, Nebraska.

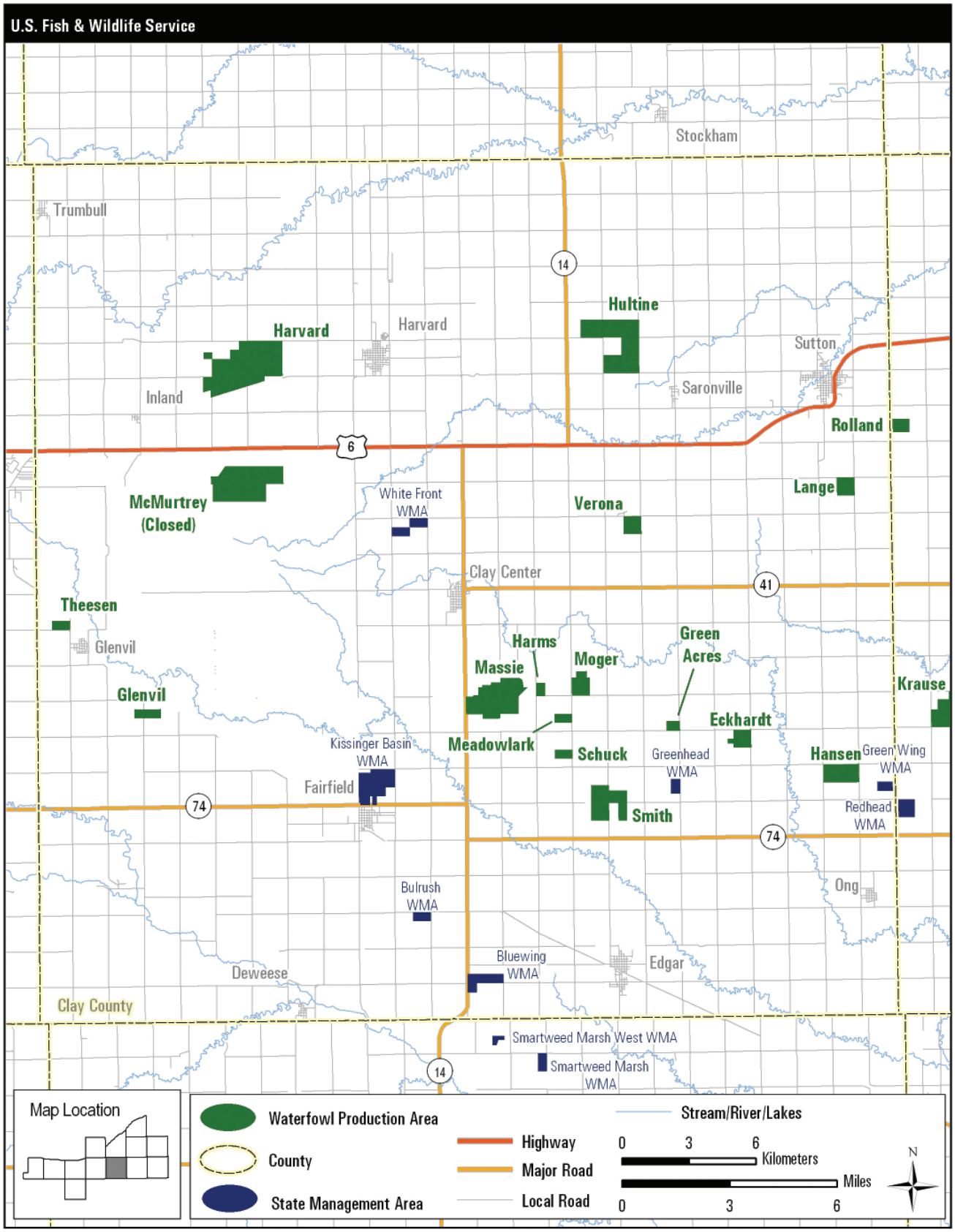


Figure 9. Waterfowl production areas in Clay County, Nebraska.

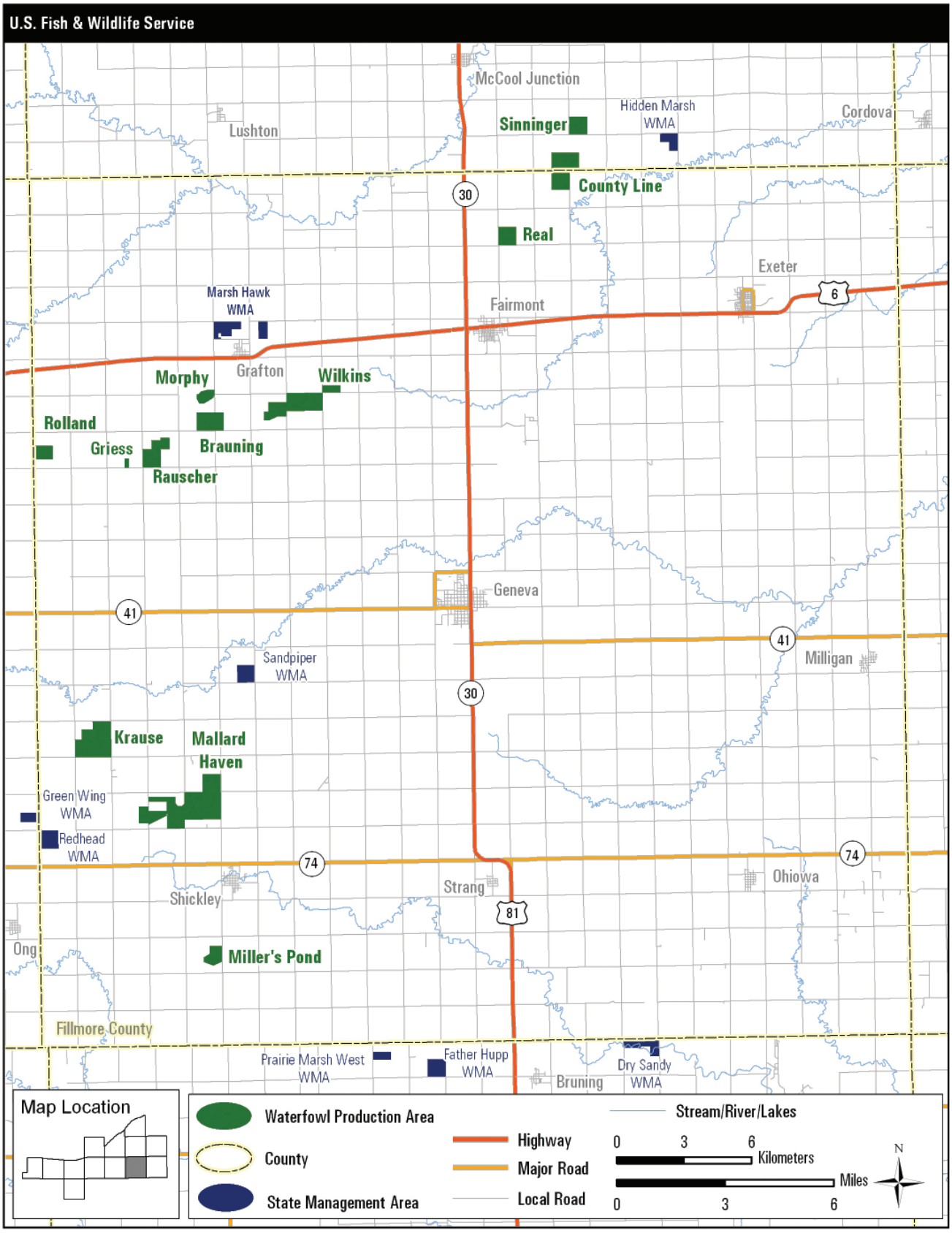


Figure 10. Waterfowl production areas in Fillmore County, Nebraska.

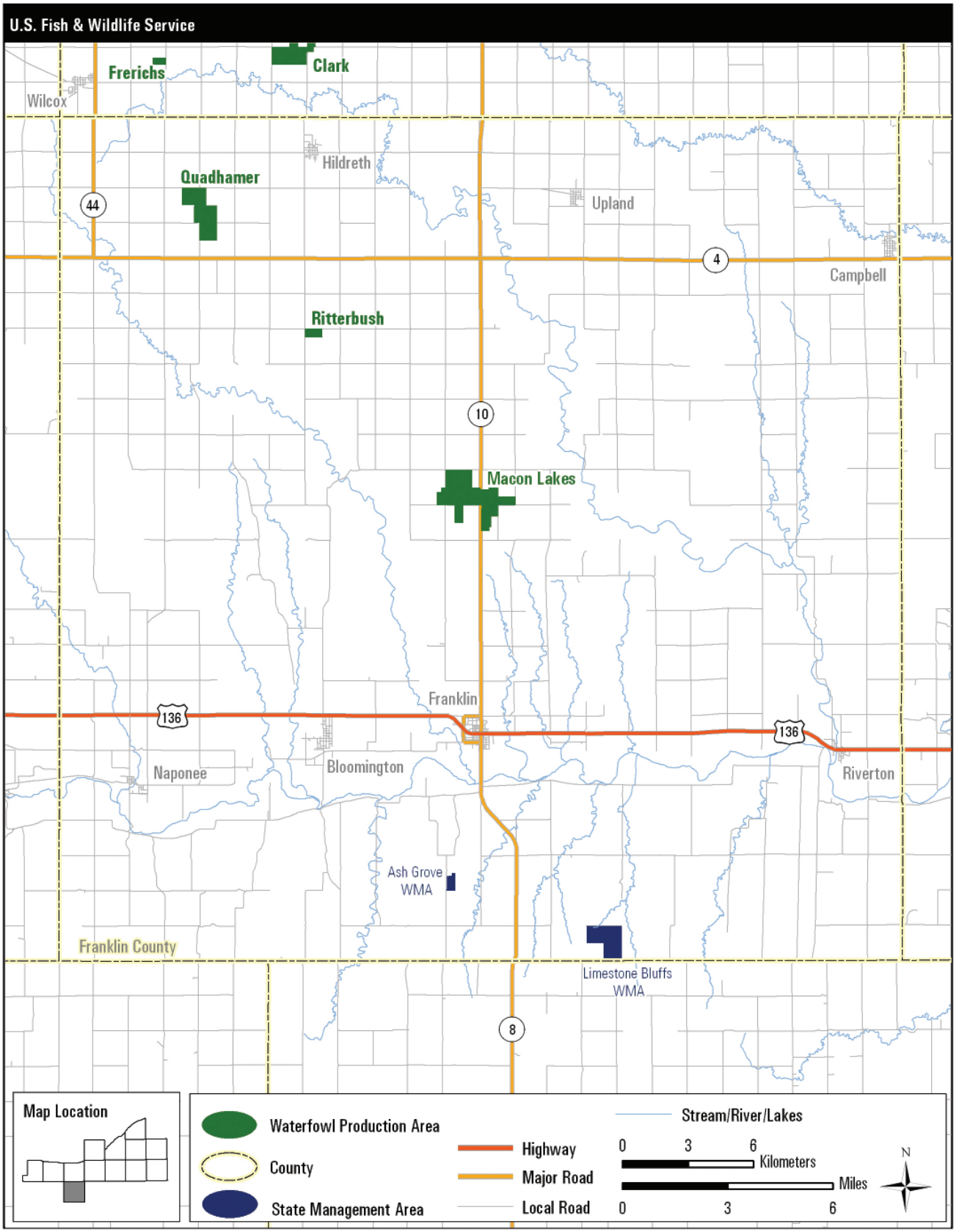


Figure 11. Waterfowl production areas in Franklin County, Nebraska.

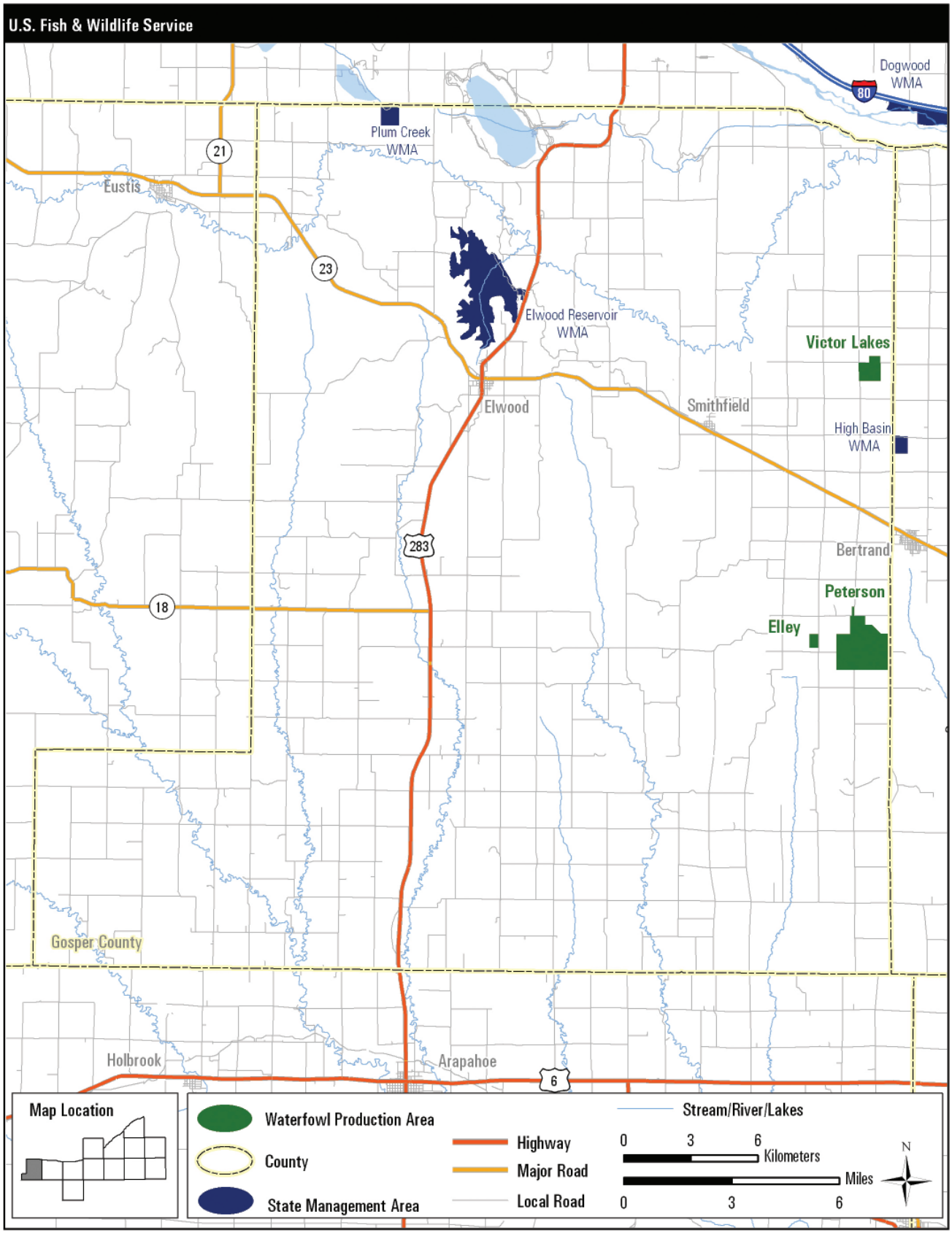


Figure 12. Waterfowl production areas in Gosper County, Nebraska.

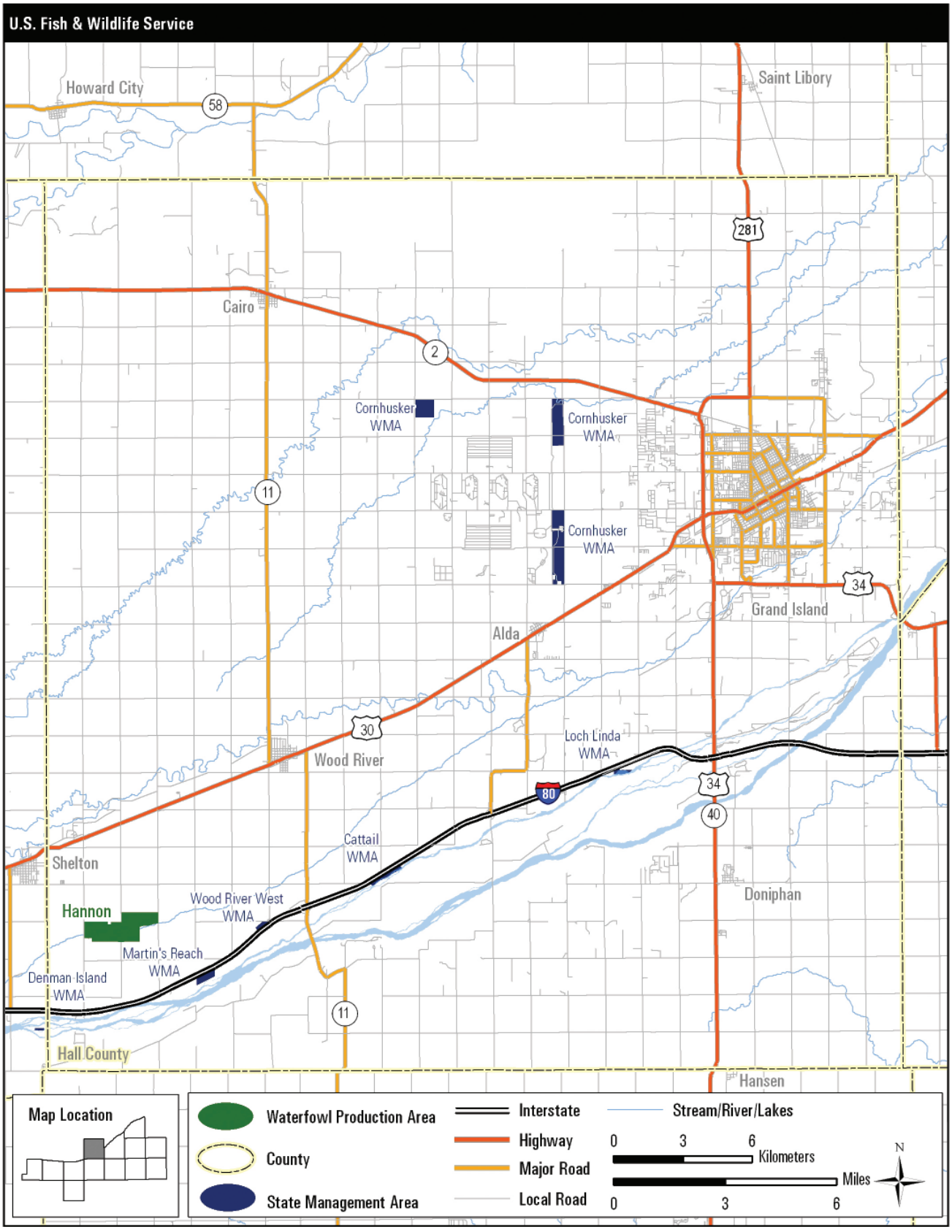


Figure 13. Waterfowl production areas in Hall County, Nebraska.

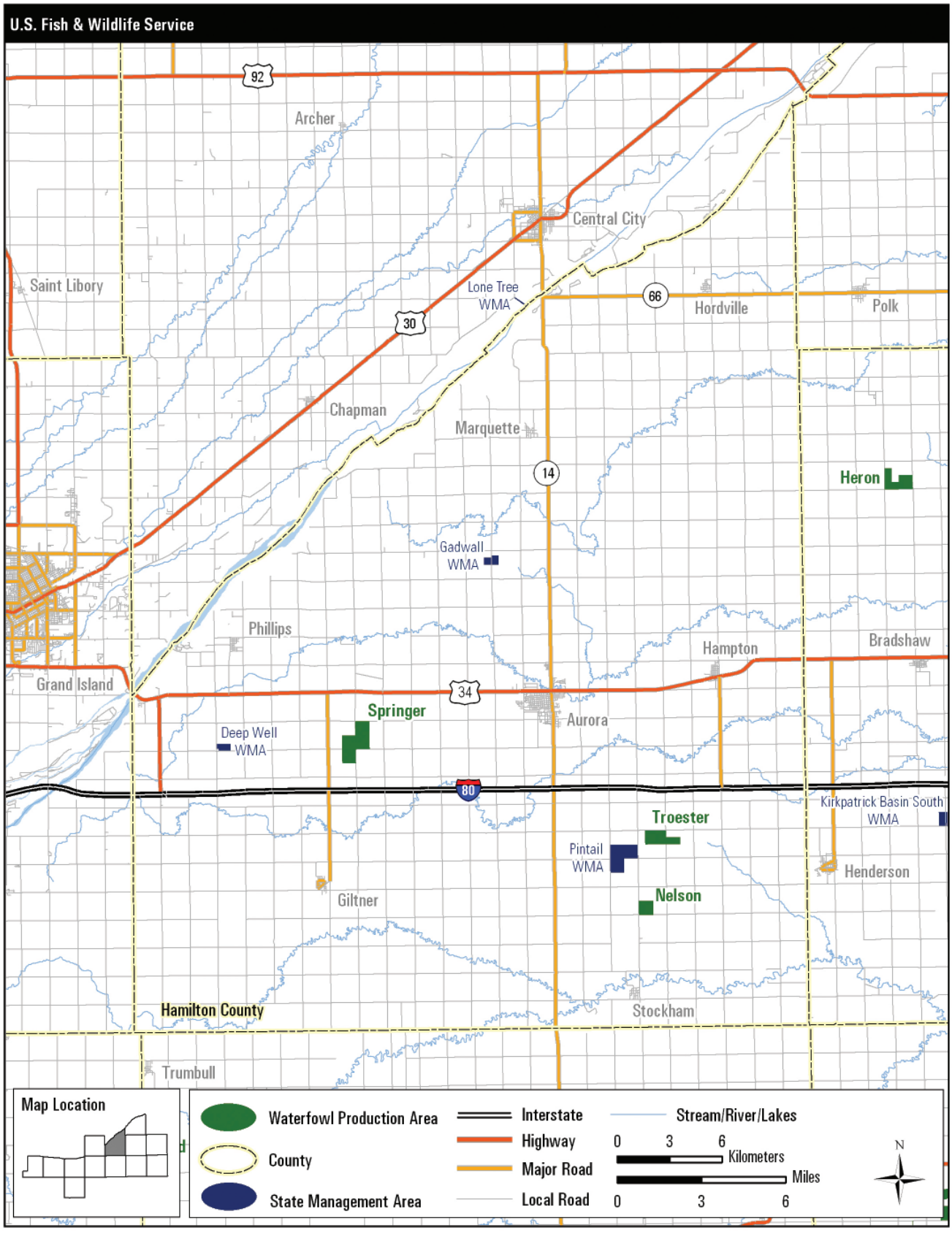


Figure 14. Waterfowl production areas in Hamilton County, Nebraska.

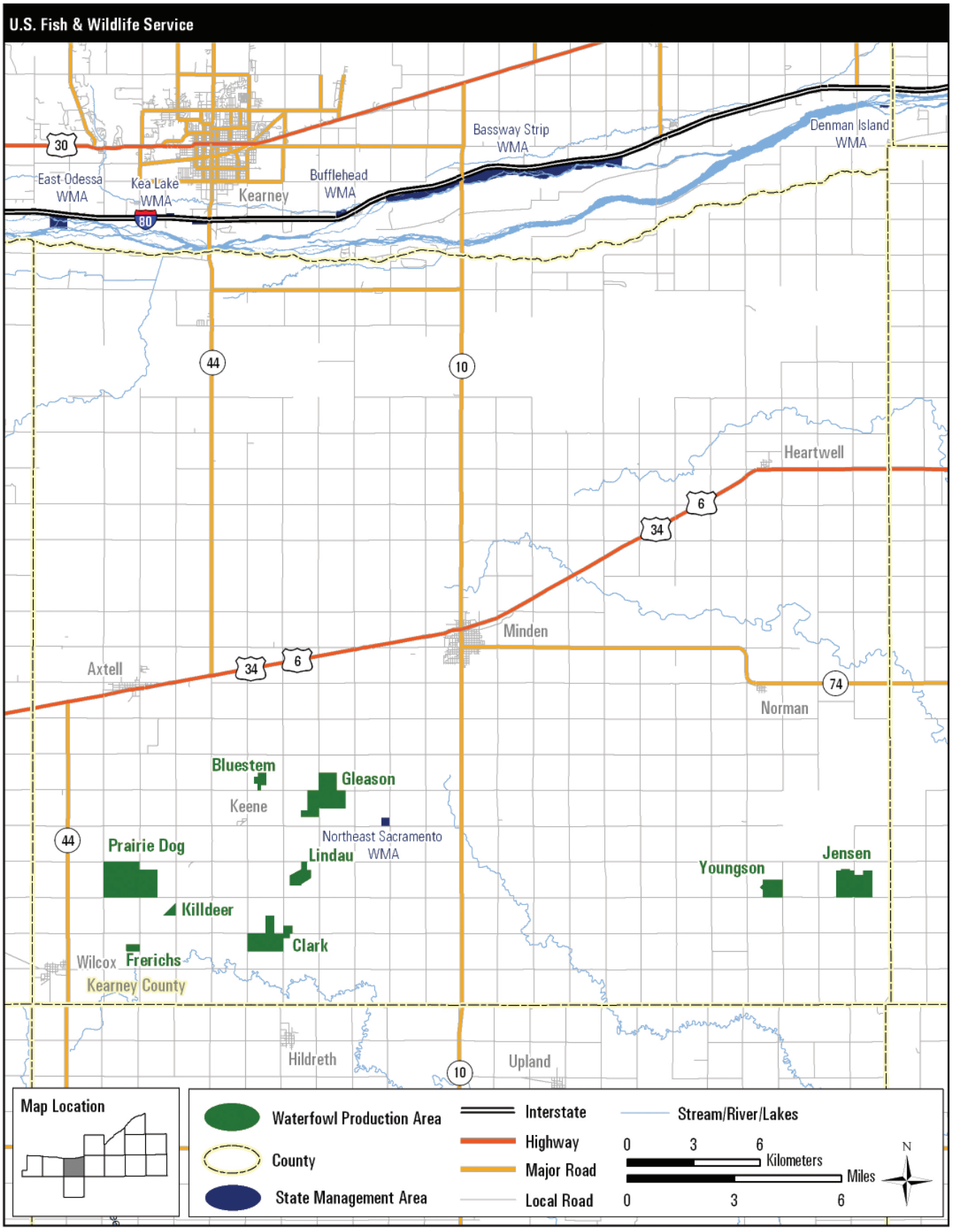


Figure 15. Waterfowl production areas in Kearney County, Nebraska.

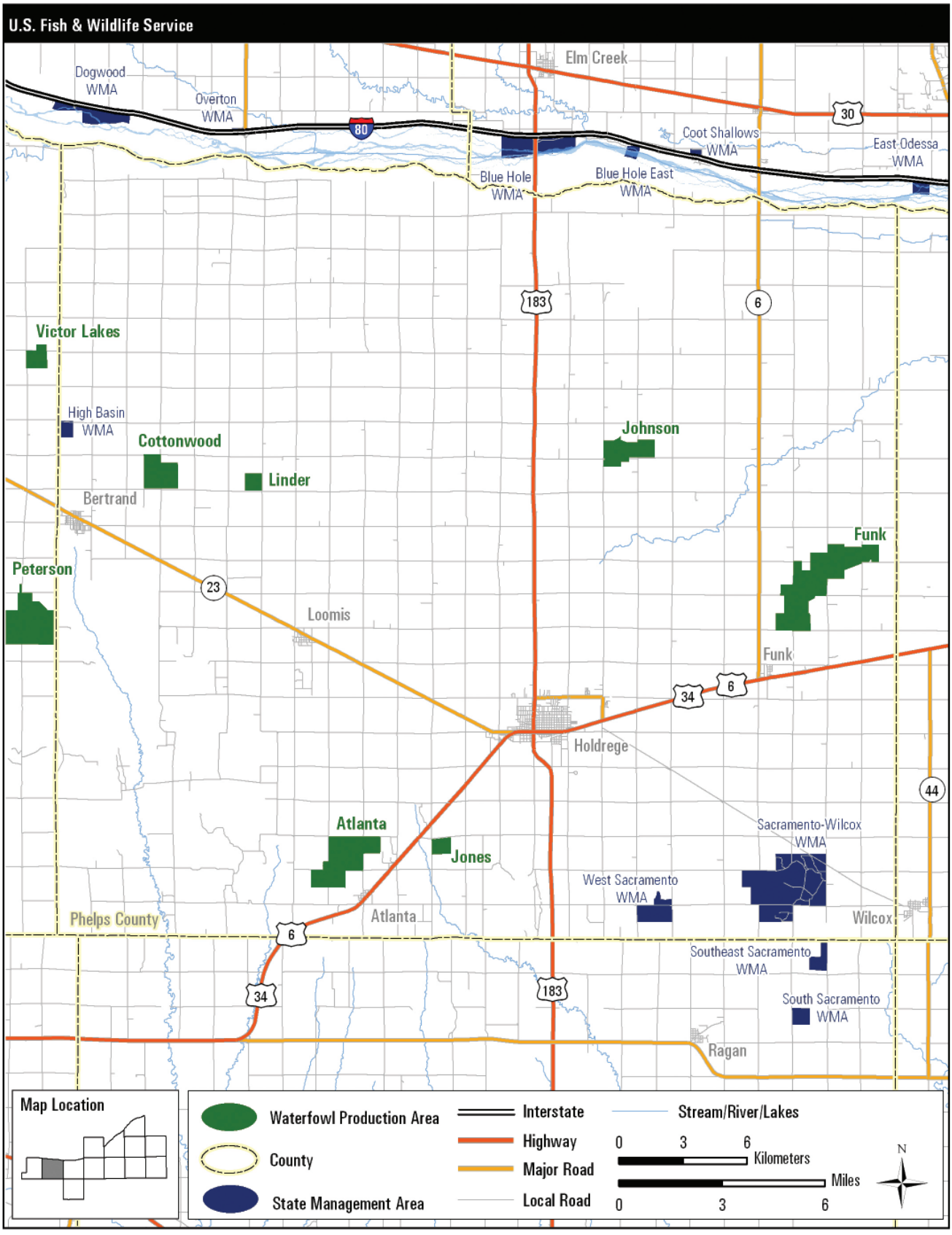


Figure 16. Waterfowl production areas in Phelps County, Nebraska.

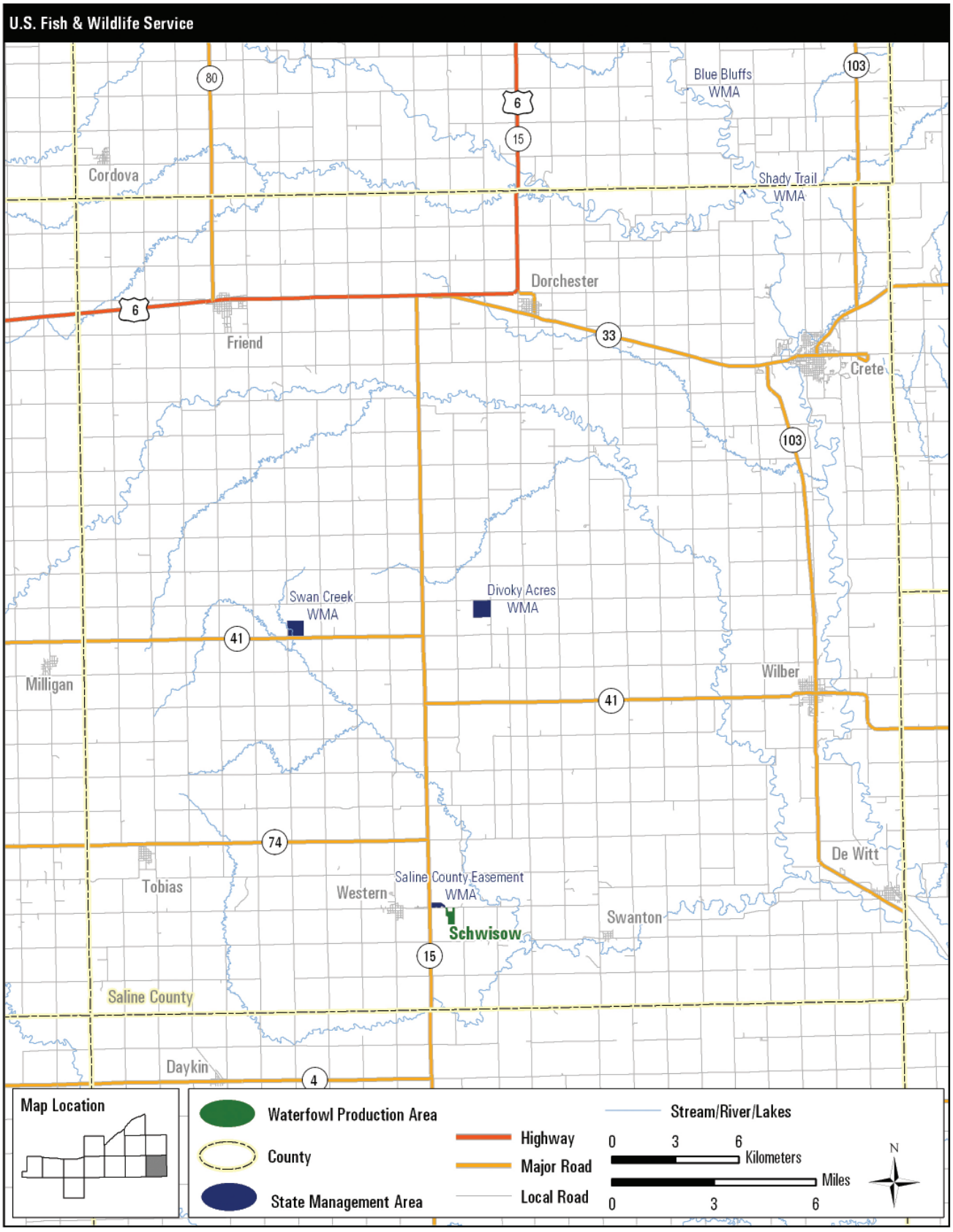


Figure 17. Waterfowl production areas in Saline County, Nebraska.

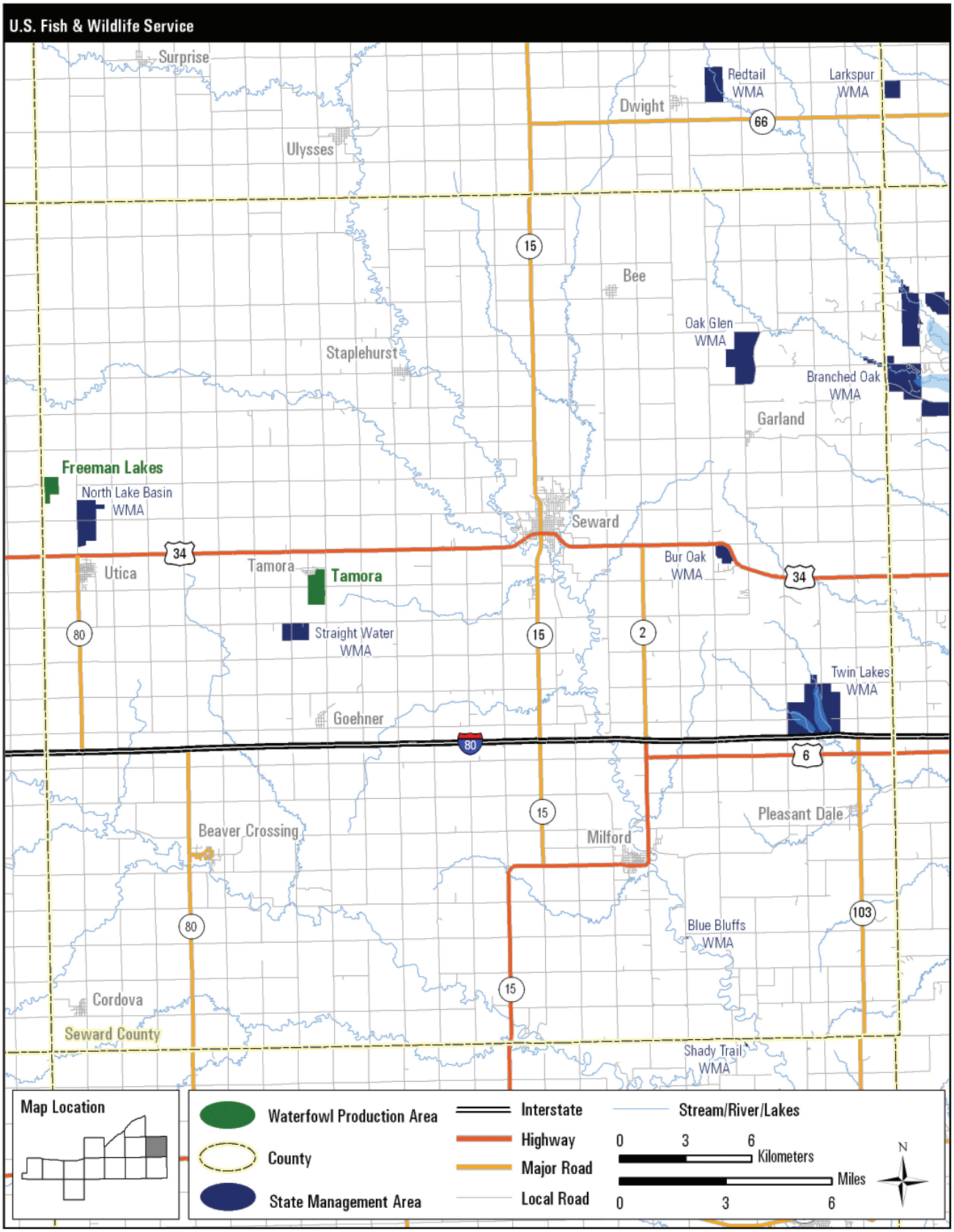


Figure 18. Waterfowl production areas in Seward County, Nebraska.

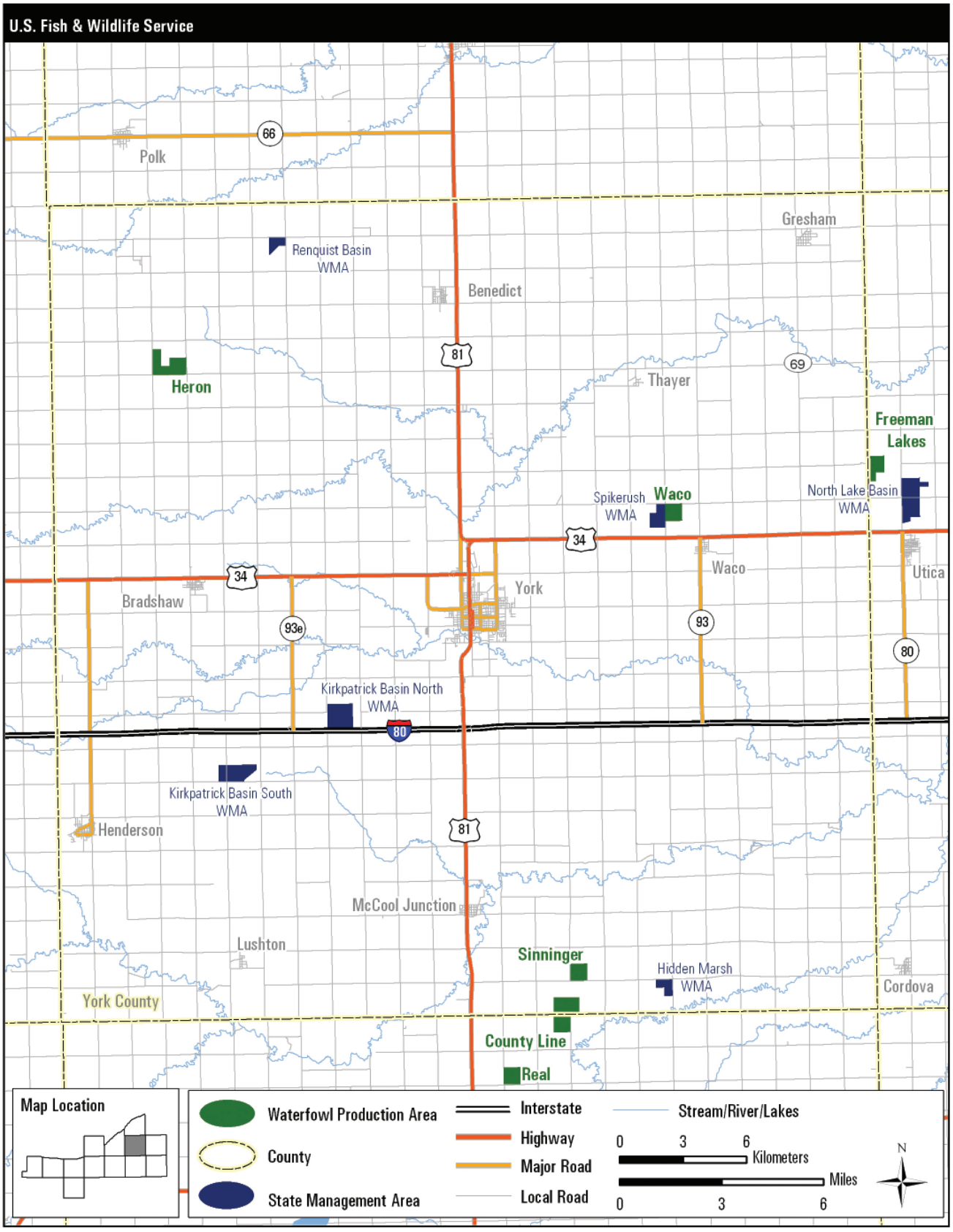


Figure 19. Waterfowl production areas in York County, Nebraska.

2.4 VISION

The Rainwater Basin provides critical habitat for millions of migratory birds. The basin's name reflects both the basis of its wetland hydrology and natural precipitation cycles. A network of functioning wetland and prairie plant ecosystems provides a native grassland mosaic that gives the local community a sense of pride and connection to the Great Plains flora and fauna. The lands managed by the wetland management district serve as an example of land stewardship mimicking natural processes, and they provide an array of wildlife-dependent educational and recreational opportunities. It is only through partnerships with individuals, agencies, and organizations that this vision can be achieved and maintained.

2.5 GOALS

The following goals reflect the vision for the district—providing for healthy ecosystems and compatible opportunities for the public to appreciate and enjoy the natural environment.

Wetland Habitat Goal

Restore, enhance, and maintain the hydrology and early successional vegetation conditions essential to the conservation of migratory birds.

Upland Habitat Goal

Reestablish and maintain native grassland communities of the Rainwater Basin.

Water Rights Goal

Develop partnerships to protect the natural hydrology of WPA watersheds and ensure the necessary water rights are in place to protect future use of both ground and surface water.

Invasive Plant Species Goal

Reduce and control the spread of nondesirable, nonnative plant species within wetland and upland habitats for the benefit of native plant and wildlife communities.

Wildlife Diseases Goal

Work with partners to prevent or control the outbreak and spread of wildlife-borne diseases to protect human and migratory bird populations.

Research and Science Goal

Encourage and support research that substantially contributes to the understanding and management of the Rainwater Basin wetland and grassland ecosystem.

Cultural Resources Goal

Identify and evaluate the cultural resources in the district and protect those that are determined to be significant.

Visitor Services Goal

Provide quality wildlife-dependent recreation and educational opportunities by instilling an understanding of basic ecological processes, purpose of the Rainwater Basin Wetland Management District, and mission of the Service for persons of all abilities and cultural backgrounds.

Partnership Goal

Promote and develop partnerships with adjacent landowners, public and private organizations, Native American tribes, and other interested individuals to protect, restore, enhance, and maintain a diverse and productive ecosystem.

Socioeconomics Goal

Obtain a better understanding of the social and economic contribution WPAs make to the people and communities within the Rainwater Basin.

Operations Goal

Safely and efficiently use funding, staffing, infrastructure, and partnerships to achieve the purpose and objectives of the Rainwater Basin Wetland Management District.

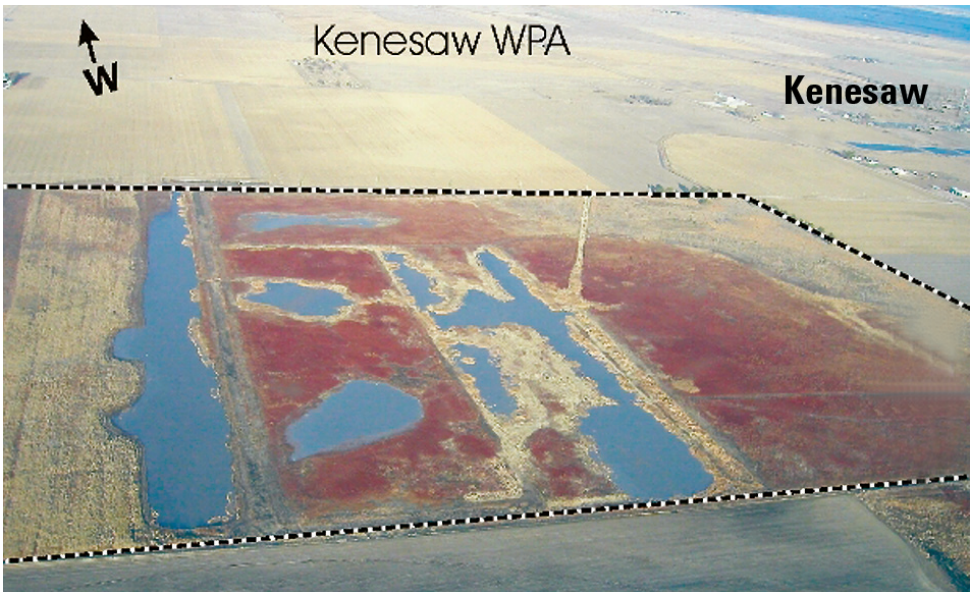
2.6 PLANNING ISSUES

The Service held four public meetings, sent news releases to the local and regional press, published an announcement in the "Federal Register," and sent numerous mailings to solicit public input on important issues. Following are the most significant issues identified, which are addressed throughout this CCP.

Habitat Management

The district's primary purpose is to provide optimal migration habitat for waterfowl, waterbirds, and other species that depend on a grassland-wetland ecosystem. To achieve goals and objectives set for the district's habitats, there must be aggressive management. Nearly all lands bought for the district had been drained and farmed and have required extensive restoration.

Restoration work is not achieved by merely plugging a drainage ditch or planting native grasses.



USFWS

Kenesaw Waterfowl Production Area (Adams County).

Restoration requires years of assertive management to establish native grasslands that can compete or withstand the influence of early succession, such as encroachment or dominance of weedy or woody plants. Planned grazing and burning are the two more common treatments used to reach a naturally dynamic grassland-wetland ecosystem. Staff levels are currently at a level that is more in line with managing a native grassland community rather than restoring drained and farmed lands.

There is a gap between the public's perception of wetland ecology and an understanding of how managed disturbance mimics natural disturbance and creates a healthier ecosystem. When a WPA wetland goes dry, a portion of the public expects additional water pumping be done, another portion expects management to be changed to benefit pheasants rather than waterfowl, and another portion simply concludes that no management is being done. Prescribed fire and grazing are perceived by some as habitat destruction rather than a management tool that is beneficial in sustaining these habitats.

Water and Wetland Management

Wetlands within the Rainwater Basin are in multiple ownerships and the district has been unsuccessful in obtaining complete ownership of the wetlands at many WPAs. On some WPAs, the areas were bought with little or no adjacent upland. Without complete ownership, restoration and management of the wetland is difficult or not possible. The WPAs and their watersheds (the surrounding areas that naturally drain into the WPAs' wetlands) are altered by land leveling, diversion of runoff water away from the wetland, and lowered water quality associated with agricultural runoff and sedimentation. Agricultural runoff includes effluents from feedlots. Some of the WPAs contain legal drainage tiles (underground drainage systems that pre-date the WPAs' existence) that prevent wetland restoration. Nebraska water laws do not protect WPAs from having the natural runoff captured before it reaches the wetland.

Pumping groundwater to provide supplemental water to wetlands is critical to maintain habitat during the spring and fall migrations. However, the growing demand for groundwater is creating a conflict between agricultural needs and wildlife needs. Increasing energy costs, antiquated equipment, and growing restrictions on groundwater usage are threatening the district's ability to provide adequate water.

USFWS

Pumping water to wetlands.

Invasive Plant Control

Invasive plants, especially those designated as noxious weeds, have the ability to degrade wildlife habitat and to spread into adjacent lands. This has been a significant issue for the district for years. The district directs a large portion of their resources for the control of invasive plants. Integrated pest management (IPM) strategies currently include prescribed fire, grazing, mowing, herbicides, biological control using introduced insects, "interseeding," and farming.

The establishment of new invasive plants—such as salt cedar and purple loosestrife—is a constant threat. Generally, an immediate control response to new invasive plants is most effective in the long term.

Wildlife Disease Control

Since 1975, the district has had a history of avian cholera. In 1980 and 1998, avian cholera outbreaks killed over 100,000 birds during the spring migrations. The high concentration of birds each spring poses a threat of disease outbreaks and the spread of disease in the Central Flyway. Management actions taken have included increased pumping to improve water quality and quantity and collection of infected carcasses to control the spread of disease.

In 2005, there was a positive case of chronic wasting disease found in Hall County within the Rainwater Basin. The disease is expected to continue to spread eastward across Nebraska.

In the future, the H5N1 strain of avian influenza is expected to migrate from the Eastern Hemisphere to the Western Hemisphere. Because of the high concentration of birds found throughout the basin during spring migration, there is a concern about the spread of the disease.

Species of Concern

Species of concern are the prairie dog and federally listed threatened and endangered species.

In July 1998, the National Wildlife Federation petitioned the Service to list the black-tailed prairie dog as a threatened species under the Endangered Species Act. In the fall of 1999, the Service's regional director (region 6) issued a moratorium on all control of black-tailed prairie dogs on Service lands. In February 2000, the Service concluded that this species warranted listing, but was precluded from being listed due to concerns and resource constraints related to other higher priority species. In August 2004, an updated evaluation of the best available scientific information led the Service to determine that the black-tailed prairie dog should be removed as a candidate for listing.

Prairie dog colonies are located on five WPAs scattered throughout the district. The five sites had historical use, and management has been done to allow the dog towns to continue. The spread of the populations to private lands has been controlled by two factors: (1) the sites are surrounded by cropland; and (2) the precipitation level causes native grasses to grow faster than the prairie dogs can remove it. The tall vegetation keeps the town to a manageable size. A management plan written in 2003 is included in appendix F.

The CCP will not address specifically this species any further because (1) the district currently manages black-tailed prairie dog colonies in accordance with the existing management plan (appendix F), and (2) the existing colonies within the district are stable.

The district staff, in consultation with staff from region 6's ecological services, reviewed all threatened and endangered species with historical ranges on or near the district to determine if additional actions could be taken to restore or enhance habitat for endangered species. These species are the whooping crane, interior population of the least tern, American burying beetle, and western prairie fringed orchid. No species were identified as requiring actions different from those being taken to meet the purposes of the district (see appendix G, section 7 biological evaluation).

The "Biological Integrity, Diversity, and Environmental Health Policy" (USFWS 2001) guides Service personnel in carrying out the clause of the Improvement Act that directs the Secretary of the Interior to ensure the maintenance of the "biological integrity, diversity, and environmental health" of the Refuge System. This policy guides the Service to consider restoration of lost or severely degraded components of the Refuge System "where appropriate and in concert with refuge purposes and the Refuge System mission"; this includes federally listed species.

Research and Science

The Rainwater Basin serves as a critical staging area during spring migration. While the birds are in the basin, they feed extensively in surrounding croplands and within the wetlands. When they are not feeding, these birds roost on the larger wetlands. There is little information to determine whether the basin is meeting the needs and energetics of waterfowl and other migratory birds. Such information will help direct management actions by the district.

Water-pumping decisions rely heavily on intuition because of the limited scientific information that is available. The district's intent for pumping is to provide water in those wetlands that provide the most food and resting area for birds. It is unknown how the hydrology of individual wetlands in the basin, in combination with water pumping, can provide optimal habitat conditions. For example, is it the wisest use of water to pump a wetland with wet soils and less preferred plant species or a wetland with dry soil and preferred plant species.

The distribution and abundance of amphibians, reptiles, invertebrates, and small mammals on the WPAs is unknown.

As part of the CCP development process, a Service-funded socioeconomic study determined the extent to which the existence and operations of the district benefit the local and state economies. Excerpts from this report are included in chapter 3, section 3.7.

Visitor Services

Hunting, fishing, wildlife observation, photography, environmental education, and interpretation are all uses allowed on WPAs. The high concentration of birds and the limited public lands available for public recreation in the basin makes this an issue of interest.

There is a demand for increased and improved recreational hunting opportunities on the WPAs. By regulation, lands acquired as WPAs are open to public trapping as well.

The public has a significant misunderstanding about the types and management of public lands in the basin, particularly those managed by the district and the NGPC. This is an issue because both agencies manage public uses differently and their respective missions, while complementary, are not exactly alike. This fact often causes confusion between wildlife enthusiasts and the public in general.

Many people in the local communities are not aware of the district's existence because district personnel are based more than 20 miles away from the WPAs. In addition, the district office is not easily located in an older industrial portion of Kearney.

Partnerships

The scattering of small public areas (WPAs) among privately owned lands increases the need to build partnerships throughout the Rainwater Basin. The district cannot address many of the opportunities without the help of partners. This is especially the case for visitor services, particularly in environmental education. Public involvement will strengthen local interest and increase the district's ability to manage and promote wildlife resources. The district is not fully using the skills and resources of other groups, organizations, and local communities. In turn, the district is not providing the resources and expertise that would help local conservation groups meet their objectives.

Operations

The basin encompasses 4,200 square miles in a 17-county area of southern Nebraska. The district extends across 13 of those counties. The distance from the easternmost to the westernmost WPA is 133 miles. The logistics of transporting equipment and traveling to WPAs makes it difficult to effectively manage the properties. It takes the district staff 2 hours each way to reach the farthest WPA, which reduces to 4–6 hours the amount of time to work at an area. Because of the long distances, fuel costs are a major burden. In a typical year, the staff drives approximately 110,000 miles.

The district faces immediate challenges with its headquarters. The Service leased the office/shop facility in 1977 when the staff consisted of four people. The office portion was an open foyer and three rooms. In 1994, to accommodate the new private lands staff and migratory bird biologist, a portion of the shop was converted to office space. In 2000, to accommodate the new fire staff and station biologist, the library/conference room was converted into a cramped, open-office setting for four desks. There are currently 12 people in the staff.

The heating system for the office was installed in the shop portion of the building. The office area has only one exit or opening leading to the outside. No windows exist in any of the offices. There is no exchange of fresh air, so the furnace recycles office and shop air continually throughout the office portion.

The development of a fire program brought with it two fire engines that have to be stored inside at all times—reducing the amount of working and storage area for other equipment. During the spring fire program, the shop area is crowded with fire engines, water tenders, and all-terrain vehicles (ATVs) to prevent freezing during the cold nights. The shop is the only storage facility on the site and ATVs used for weed spraying have to be stored in the shop during summer months. The high temperatures inside the shop during the summer cause the herbicide mixture to volatize and enter the office.

The district headquarters facility is located in an urban setting that consists of a mixture of trailer homes and an industrial park. Its location does not invite the public to visit the office and public visitation is very low. Theft and vandalism have increased.

The headquarters site does not include any cold storage facility and some equipment has to be stored at two WPAs—one in the eastern portion of the district and the other in the western portion. All heavy equipment is stored outside in an unsecured area. The storage facility in the east (McMurtrey WPA) has access only through a courtesy agreement with neighboring landowners.