

Draft Comprehensive Conservation Plan and Environmental Assessment

Rainwater Basin Wetland Management District

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Prepared by the U.S. Fish and Wildlife Service

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Abbreviations

Administration Act	National Wildlife Refuge System Administration Act
ATV	all-terrain vehicle
the basin	Rainwater Basin
CAFO	concentrated animal-feeding operation
CCP	comprehensive conservation plan
CFR	Code of Federal Regulations
COMLG	Conservation Order for Mid-continent Light Geese
CWCS	comprehensive wildlife conservation strategy
the district	Rainwater Basin Wetland Management District
DUD	duck use-day
EA	environmental assessment
FGDC	Federal Geographic Data Committee
FMP	fire management plan
GIS	Geographic Information System
GS	general pay schedule
Improvement Act	National Wildlife Refuge System Improvement Act of 1997
IPM	integrated pest management
ME	metabolized energy
NASS	Natural Agricultural Statistics Service
NAWMP	North American Waterfowl Management Plan
NDEQ	Nebraska Department of Environmental Quality
NEPA	National Environmental Policy Act
NGPC	Nebraska Game and Parks Commission
NOI	notice of intent
NVCS	National Vegetation Classification System
NWR	national wildlife refuge
ORP	outdoor recreation planner
PILT	payments in lieu of taxes
PL	public law
PM	particulate matter
RWBJV	Rainwater Basin Joint Venture
refuge	national wildlife refuge
Refuge System	National Wildlife Refuge System
RONs	Refuge Operating Needs System
SAMMS	Service Asset Maintenance Management System
Service	U.S. Fish and Wildlife Service
SWG	state wildlife grant
UNL	University of Nebraska–Lincoln
USC	United States Code
USDA	U.S. Department of Agriculture
USDOE	U.S. Department of Energy
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USGS–BRD	U.S. Geological Survey’s biological resources division
WG	wage grade pay schedule
WMA	wildlife management area
WMD	wetland management district
WPA	waterfowl production area

Summary

Millions of ducks and geese glide into the flat plains of south-central Nebraska each spring. These migrants take their rest at the few remaining oases that dot the Rainwater Basin, where they find sanctuary and nourishment before continuing their annual migration.

Conserving the integrity of these important stopovers is the role of the Rainwater Basin Wetland Management District. The foundation for management of these public wetlands known as waterfowl production areas is the comprehensive conservation plan.

This environmental assessment includes the draft comprehensive conservation plan for the Rainwater Basin Wetland Management District. The final plan will guide management of the waterfowl production areas within the district for the next 15 years.

THE DISTRICT

The Rainwater Basin Wetland Management District is a part of the National Wildlife Refuge System of the U.S. Fish and Wildlife Service. The district, which covers 13 Nebraska counties, manages 230 tracts of land (more than 24,000 acres) that form 61 waterfowl production areas. In addition, the district manages 35 conservation easements (2,476 acres).



Each waterfowl production area typically contains wetlands that are managed for waterfowl and shorebirds. Most of the wetlands in the Rainwater Basin are small and surrounded by cropland. Extensive wetland drainage and alteration have reduced the number of wetlands in the basin to a level that threatens waterbird populations. Upland areas are managed for a high diversity of native vegetation to sustain grassland birds.

Nebraska's Rainwater Basin is internationally known for its spectacular bird migrations—329 species of birds have been observed. Common waterbirds include snow goose, northern pintail, green-winged



Due to its unique location on the Central Flyway, millions of birds funnel into the district's waterfowl production areas.

teal, and solitary sandpiper. Grasshopper sparrow, bobolink, and ring-necked pheasant are common grassland species.

Of the estimated 80,000 visitor days per year at the district, about 60% come for hunting and 40% for wildlife viewing. There is hunting that includes waterfowl, pheasant, and deer. Every spring and fall, thousands of tourists and locals visit the district to observe and enjoy the semiannual migration of cranes, waterfowl, and other birds.

VISION FOR THE DISTRICT

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.

GOALS FOR THE DISTRICT

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.

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.

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.

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.

THE DRAFT PLAN

The Service has prepared this environmental assessment and draft plan in cooperation with the Rainwater Basin Joint Venture, the Nebraska Game and Parks Commission, and the Biological Resources Division of the U.S. Geological Survey—along with public participation. After reviewing a wide range of public comments and management needs, the Service developed two alternatives for management of the district. 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)

Management of the district would remain the same, with changes in land management and public use occurring as opportunities arise. The current district staff would perform limited, issue-driven research and only monitor long-term vegetation change.

ALTERNATIVE B—INTEGRATED PARTNERSHIP APPROACH (PROPOSED ACTION)

Alternative B addresses resource management in a holistic manner. There would be a focus on cooperation, coordination, and better exchange of information. An expanded district staff would work with partners to improve the waterfowl production areas across the landscape of the Rainwater Basin. The emphasis would be on adaptive management—as more information is known, management would be changed to improve effects on the environment.

1 Introduction



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Northern pintails are abundant at the waterfowl production areas.

The U.S. Fish and Wildlife Service (Service) has developed this draft comprehensive conservation plan (CCP) to provide a foundation for the management and use of public lands within the Rainwater Basin Wetland Management District (district) located in south-central Nebraska (see figure 1, vicinity map).

When finalized, the CCP will serve as a working guide for management programs and actions over the next 15 years.

This draft CCP was developed in compliance with the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act) and Part 602 of “The Fish and Wildlife Service Manual.” The actions described within this draft CCP and environmental assessment (EA) meet the requirements of the National Environmental Policy Act of 1969 (NEPA). Compliance with the NEPA is being achieved through involvement of the public. Appendix A contains more detail on these laws and policies.

The final CCP will specify the necessary actions to achieve the vision and purposes of the Rainwater Basin Wetland Management District, which Congress established to manage waterfowl production areas (WPAs) in the Rainwater Basin (basin) (see figure 2, waterfowl production areas). Wildlife and their habitats is the first priority in refuge management, and public use (wildlife-dependent recreation) is allowed and encouraged as long as it is compatible with the district’s purposes.

The draft CCP and the EA have been prepared by a planning team composed of representatives from various Service programs including district and regional office staffs and from the Rainwater Basin Joint Venture (RWBJV), U.S. Geological Survey’s biological resources division (USGS–BRD), and Nebraska Game and Parks Commission (NGPC). In addition, the planning team used public input. Public involvement and the planning process are described in section 1.6, “The Planning Process.”

After reviewing a wide range of public comments and management needs, the planning team developed alternatives for management of the district. The team recommended one alternative to be the Service’s proposed action. This action addresses all substantive issues while determining how best to achieve the purposes of the district. The proposed action is the Service’s recommended course of action for management of the Rainwater Basin Wetland Management District. The proposed action is summarized in chapter 3, “Alternatives,” with its predicted effects described in chapter 5, “Environmental Consequences.” The details of the proposed action compose the draft CCP (chapter 6).

1.1 PURPOSE AND NEED FOR THE PLAN

The purpose of the draft CCP is to identify the role that the district will play in support of the mission of the National Wildlife Refuge System (Refuge System), and to provide long-term guidance for management of district programs and activities.

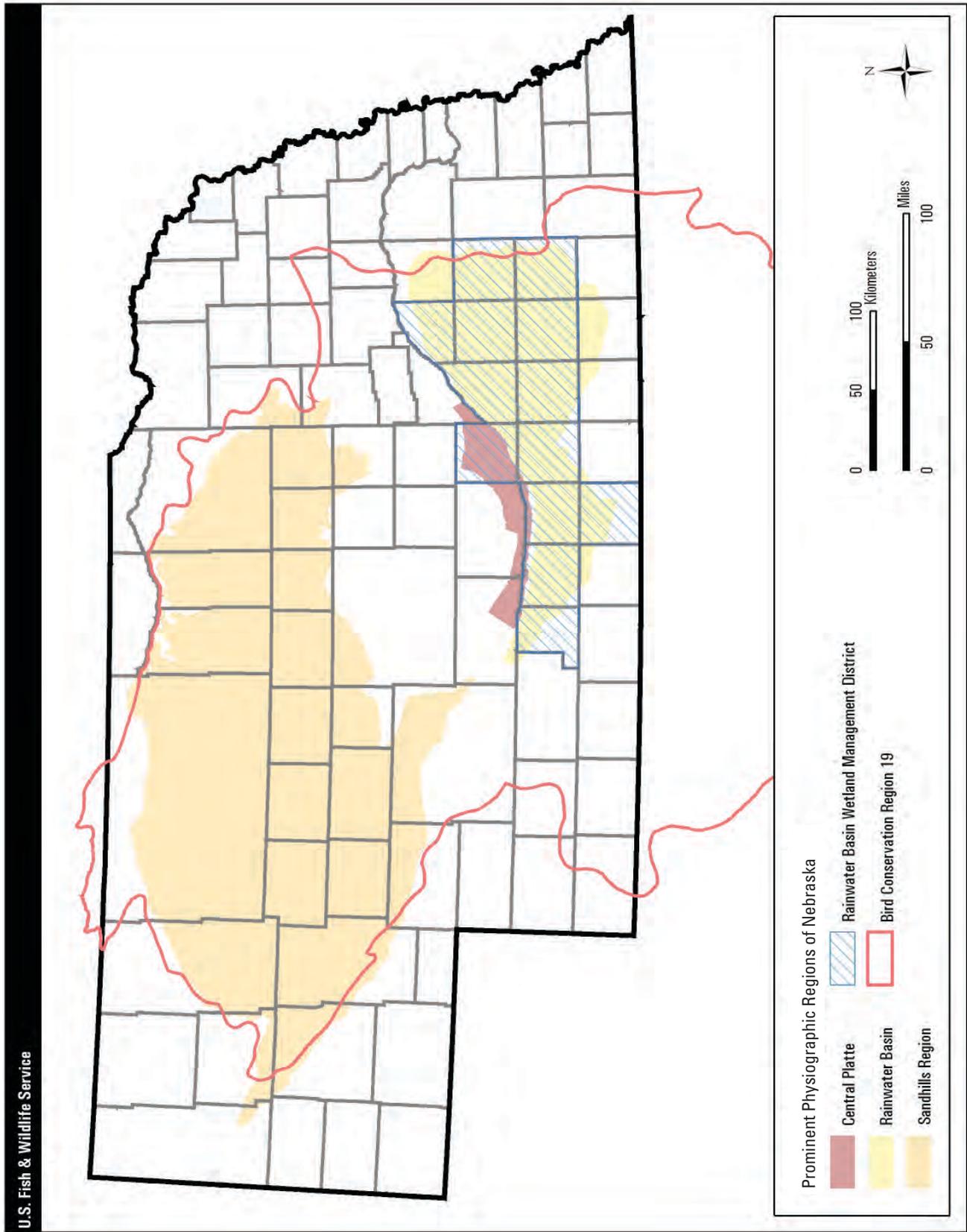


Figure 1. Vicinity map for the Rainwater Basin Wetland Management District, Nebraska.

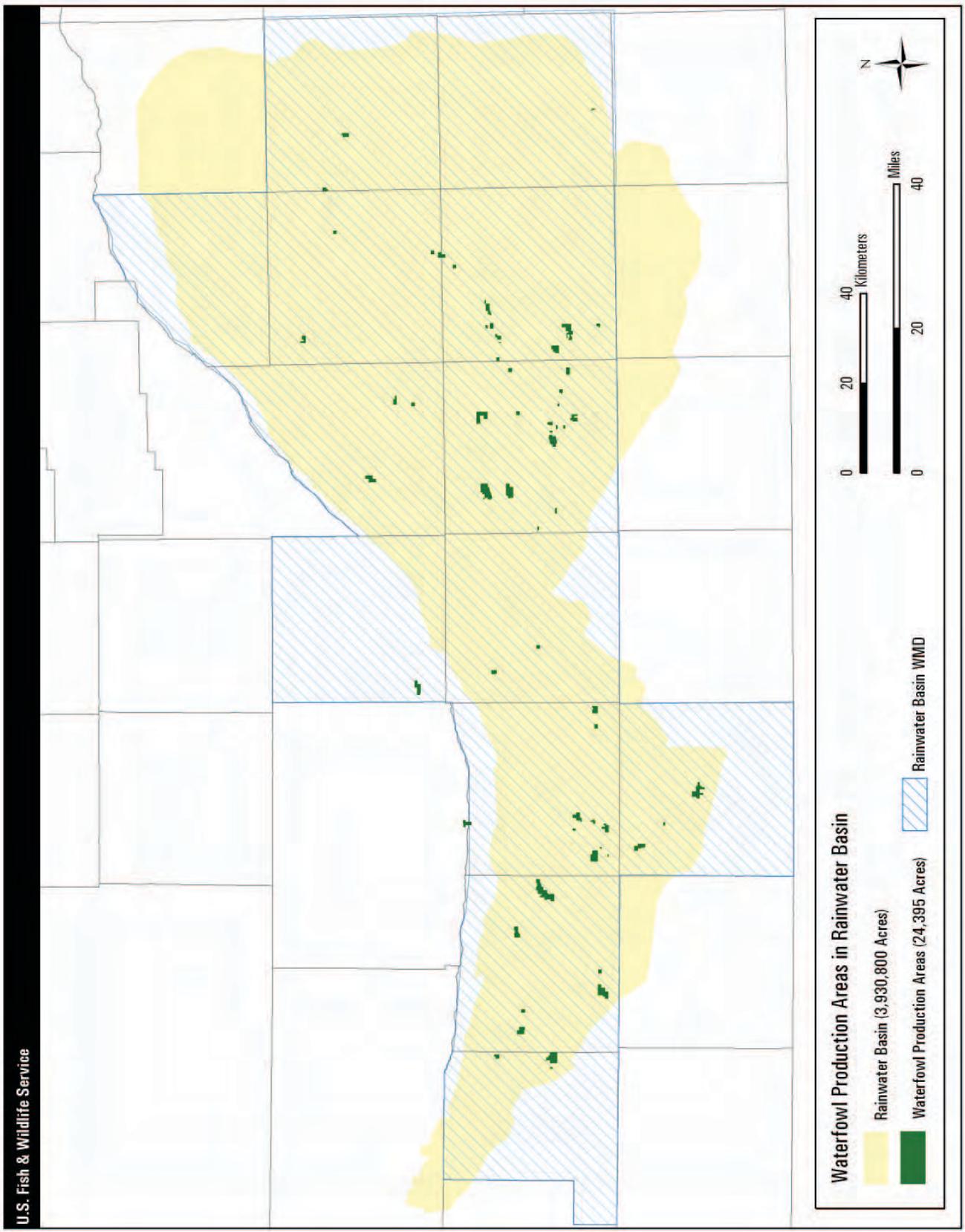


Figure 2. Waterfowl production areas in the Rainwater Basin, Nebraska.

The CCP is needed

- to communicate with the public and other partners in efforts to carry out the mission of the Refuge System;
- to provide a clear statement of direction for management of the district's WPAs;
- to provide neighbors, visitors, and government officials with an understanding of the Service's management actions on and around the district's WPAs;
- to ensure that the Service's management actions are consistent with the mandates of the Improvement Act;
- to ensure that the management of the district's WPAs is consistent with federal, state, and county plans;
- to provide a basis for the development of budget requests for the district's operation, maintenance, and capital improvement needs.

Sustaining the nation's fish and wildlife resources is a task that can be accomplished only through the combined efforts of governments, businesses, and private citizens.

1.2 THE U.S. FISH AND WILDLIFE SERVICE AND THE REFUGE SYSTEM

The Service is the principal federal agency responsible for fish, wildlife, and plant conservation. The Refuge System is one of the Service's major programs.

U.S. Fish and Wildlife Service

*The mission of the
U.S. Fish and Wildlife Service,
working with others,
is to conserve, protect, and enhance
fish and wildlife and their habitats
for the continuing benefit of
the American people.*

Over a century ago, America's fish and wildlife resources were declining at an alarming rate. Concerned citizens, scientists, and hunting and angling groups joined together to restore and sustain America's national wildlife heritage. This was the genesis of the U.S. Fish and Wildlife Service.

Today, the Service enforces federal wildlife laws, manages migratory bird populations, restores nationally significant fisheries, conserves and restores vital wildlife habitat, protects and recovers endangered species, and helps other governments with conservation efforts. In addition, the Service administers a federal aid program that distributes hundreds of millions of dollars to states for fish and

wildlife restoration, boating access, hunter education, and related programs across America.

The Service manages the National Wildlife Refuge System including thousands of WPAs and other special management areas. It also operates 66 national fish hatcheries and 78 ecological services field stations.

Service Activities in Nebraska

Service activities in Nebraska contribute to the state's economy, ecosystems, and education programs. The Rainwater Basin Wetland Management District contributes to the economic benefits of hunting, wildlife observation, and photography in Nebraska. A report titled, "Banking on Nature 2004: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation," evaluated the effects of refuges on local economies.

Based on figures from 2004, the district is estimated to have generated \$900,000 in local economic effects from recreation visits (BBC Research and Consulting 2006). The majority of effects were associated with expenditures by nonresident visitors. In addition, the district's budget contributes a stimulus to the local economy with a significant portion of payroll, maintenance, and operation expenditures spent locally.

The district employs 12 full-time employees, has a current budget of \$1.8 million, and has an annual visitation of 80,000. The budget includes funds for the fire program and the Partners for Fish and Wildlife Program. In addition, volunteers contribute 240 hours to the district's operations.

The Nebraska Sport Fish and Wildlife Restoration Program is a source of federal excise taxes paid by hunters, anglers, and boaters on fishing and hunting equipment. The monies generated from this tax have economic benefits to Nebraska. In 2001, the economic impact of angler expenditures was \$146 million and hunters contributed \$198 million to the overall economy (U.S. Fish and Wildlife Service [USFWS] 2000).

THE NATIONAL WILDLIFE REFUGE SYSTEM

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 brown pelicans and other 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 Refuge System.

One hundred years later, the Refuge System has become the largest collection of lands in the world specifically managed for wildlife, encompassing over 96 million acres within 546 refuges and over 3,000 small areas for waterfowl breeding and nesting. Today, there is at least one refuge in every state including Puerto Rico and the U.S. Virgin Islands.

In 1997, the Improvement Act established a clear mission for the Refuge System.

The mission of the National Wildlife Refuge 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.

The Improvement Act states that each national wildlife refuge (that is, each unit of the Refuge System, which includes wetland management districts) shall be managed

- to fulfill the mission of the Refuge System;
- to fulfill the individual purposes of each refuge and district;
- to consider the needs of fish and wildlife first;
- to fulfill the requirement of developing a CCP for each unit of the Refuge System, and fully involve the public in the preparation of these plans;
- to maintain the biological integrity, diversity, and environmental health of the Refuge System;
- to recognize that wildlife-dependent recreation activities including hunting, fishing, wildlife observation, photography, environmental education, and interpretation are legitimate and priority public uses;
- to retain the authority of refuge managers to determine compatible public uses.

In addition to the mission for the Refuge System, the wildlife and habitat vision for each unit of the Refuge System stresses the following principles:

- Wildlife comes first.
- Ecosystems, biodiversity, and wilderness are vital concepts in refuge and district management.
- Habitats must be healthy.
- Growth of refuges and districts must be strategic.
- The Refuge System serves as a model for habitat management with broad participation from others.

Following passage of the Improvement Act, the Service immediately began to carry out the direction of the new legislation, including preparation of CCPs for all national wildlife refuges and wetland management districts. Consistent with the Improvement Act, the Service prepares all CCPs in conjunction with public involvement. Each unit of the

Refuge System is required to complete its CCP within the 15-year schedule (by 2012).

People and the Refuge System

The nation's fish and wildlife heritage contributes to the quality of American lives and is an integral part of the country's greatness. Wildlife and wild places have always given people special opportunities to have fun, relax, and appreciate the natural world.

Whether through bird watching, fishing, hunting, photography, or other wildlife pursuits, wildlife recreation contributes millions of dollars to local economies. In 2002, approximately 35.5 million people visited the Refuge System, mostly to observe wildlife in their natural habitats. Visitors are most often accommodated through nature trails, auto tours, interpretive programs, and hunting and fishing opportunities. Significant economic benefits are being generated to the local communities that surround refuges and wetland management districts. Economists report that Refuge System visitors contribute more than \$792 million annually to local economies.

1.3 NATIONAL AND REGIONAL MANDATES

Refuge System units are managed to achieve the mission and goals of the Refuge System, along with the designated purpose of the refuges and districts (as described in establishing legislation, executive orders, or other establishing documents). Key concepts and guidance of the Refuge System are in the Refuge System Administration Act of 1966 (Administration Act), Title 50 of the Code of Federal Regulations (CFRs), "The Fish and Wildlife Service Manual," and the Improvement Act.

The Improvement Act amends the Administration Act by providing a unifying mission for the Refuge System, a new process for determining compatible public uses on refuges and districts, and a requirement that each refuge and district be managed under a CCP. The Service has made draft compatibility determinations (see appendix B) for the following uses at the district: haying, grazing, farming, environmental education, interpretation, wildlife observation, photography, recreational fishing, recreational hunting, and timber harvest.

The Improvement Act states that wildlife conservation is the priority of Refuge System lands and that the Secretary of the Interior will ensure that the biological integrity, diversity, and environmental health of refuge lands are maintained. Each refuge and district must be managed to fulfill the Refuge System's mission and the specific purposes for which it was established. The Improvement Act requires the Service to monitor the status and trends of fish, wildlife, and plants in each refuge and district.

A detailed description of these and other laws and executive orders that may affect the CCP or the Service’s implementation of the CCP is in appendix A. Service policies on planning and day-to-day management of refuges and districts are in the “Refuge System Manual” and “The Fish and Wildlife Service Manual.”

1.4 DISTRICT CONTRIBUTIONS TO NATIONAL AND REGIONAL PLANS

The Rainwater Basin Wetland Management District contributes to the conservation efforts described here.

FULLFILLING THE PROMISE

A 1999 report, “Fulfilling the Promise, The National Wildlife Refuge System” (USFWS 1999), is the culmination of a yearlong process by teams of Service employees to evaluate the Refuge System nationwide. This report was the focus of the first national Refuge System conference (in 1998)—attended by refuge managers, other Service employees, and representatives from leading conservation organizations.

The report contains 42 recommendations packaged with three vision statements dealing with wildlife and habitat, people, and leadership. This CCP deals with all three of these major topics. The planning team looked to the recommendations in the document for guidance during CCP planning.

PARTNERS IN FLIGHT

The “Partners in Flight” program began in 1990 with the recognition of declining population levels of many migratory bird species. The challenge, according to the program, is managing human population growth while maintaining functional natural ecosystems. To meet this challenge, Partners in Flight worked to identify priority land-bird species and habitat types. Partners in Flight activity has resulted in 52 bird conservation plans covering the continental United States.

The primary goal of Partners in Flight is to provide for the long-term health of the bird life of this continent. The first priority is to prevent the rarest species from going extinct. The second priority is to prevent uncommon species from descending into threatened status. The third priority is to “keep common birds common.”

There are 58 physiographic areas, defined by similar physical geographic features, wholly or partially contained within the contiguous United States and several others wholly or partially in Alaska. The Rainwater Basin Wetland Management District lies within physiographic area 34 (see figure 3, physiographic areas).

The source of the following description is from the Partners in Flight website (Butcher, no date).

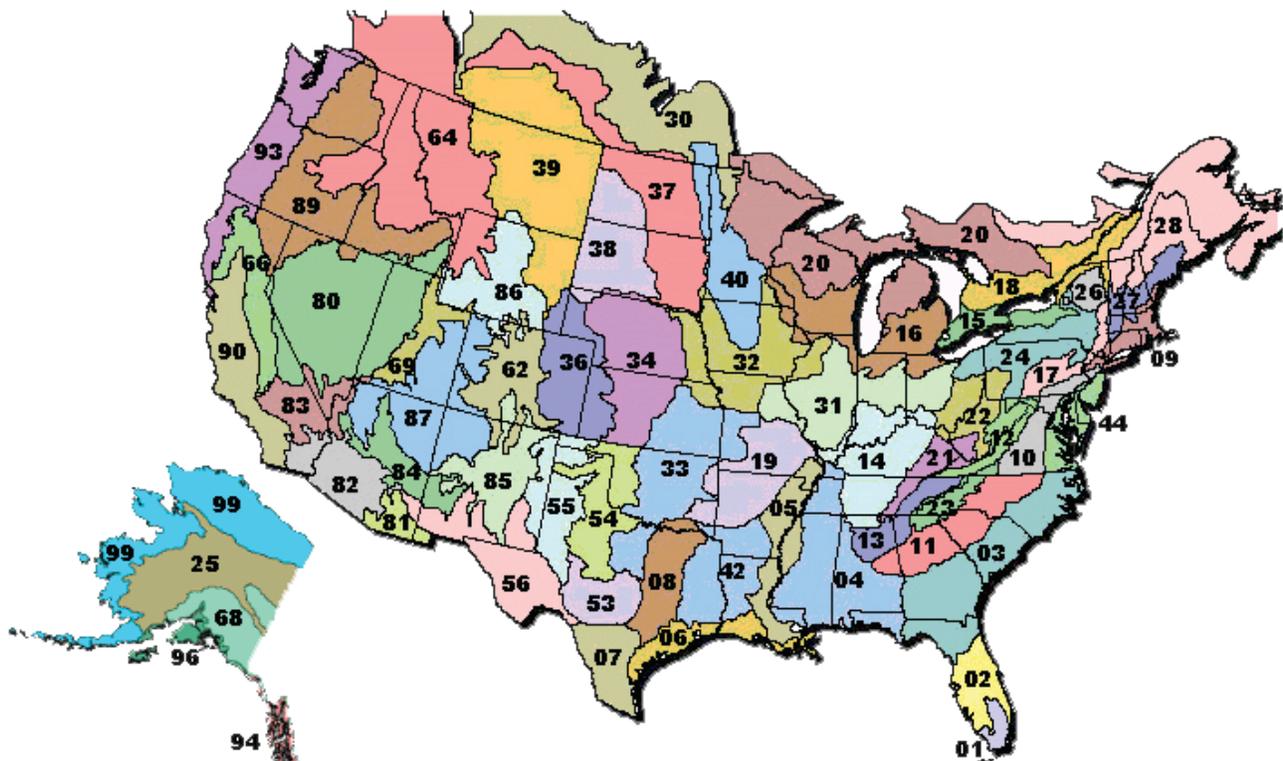


Figure 3. Physiographic areas of the United States.
(Source: Partners in Flight.)

Physiographic area 34, known as the “Central Mixed-grass Prairie,” includes the central portion of Nebraska and Kansas, and a small portion occurs in southern South Dakota. The Nebraska Sandhills cover the northern and western portions of the area. The sandhills are an area of rolling, irregular dunes interspersed with gently sloping valleys and numerous small wetlands. The remainder of the physiographic area is a dissected loess plain, drained by several major rivers. All of the uplands are natural mixed- and tall-grass prairie communities, and the larger river valleys support northern floodplain forests.

The Nebraska Sandhills is one of the few, large, productive areas for grassland birds on the continent. It remains in excellent condition due to long-term use of virtually 100% of private lands for grazing livestock. Historical grazing practices have been, largely, beneficial. To keep the area healthy for birds, it is important to maintain the health of the ranching economy.

Priority bird species and habitats of the Central Mixed-grass Prairie are listed below:

Grassland

lesser prairie-chicken
greater prairie-chicken
Swainson’s hawk
dickcissel
long-billed curlew
Bell’s vireo
Smith’s longspur

Big River Sandbars

pipit plover

Wetlands

American white pelican
black rail

Large wetland–grassland complexes benefit all of the high-priority birds and are essential to some. It is important to maintain all existing complexes. The black rail is a species that uses wet meadows; its ecology remains largely unknown and more survey work and retention of potential habitat are needed.

One of the most important features of the physiographic area is the close proximity of the Platte River to the district’s wetlands, which combine to form a large and diverse habitat complex. This complex provides midlatitudinal, migrational habitat for midcontinental populations of sandhill cranes (86%), snow geese (90%), white-fronted geese (90%), and mallards (50%). In addition, impressive numbers of shorebirds annually stop in the area.

Key areas are receiving attention through the RWBJV and other endeavors. The efforts—some of which involve repeated removal of woody vegetation from sandbars that have stabilized with altered hydrology—are important to continue to keep the area attractive for these birds.

Maintenance of large, unfragmented, grassland ecosystems is the conservation objective for areas such as the Missouri Coteau where agriculture is not dominant. On the drift prairie and other agricultural areas, it is important to conserve discrete blocks of grassland–wetland complexes.

NORTH AMERICAN WATERFOWL MANAGEMENT PLAN

The Rainwater Basin is located in the Central Flyway, which is one of four administrative waterfowl flyways in North America.

Due to its unique location on the Central Flyway, millions of birds—including sandhill cranes, Canada geese, snow geese, and mallards—funnel into the district’s WPAs to rest and eat before continuing on their journey (see figure 4, “hourglass” flight path of migratory birds).



Figure 4. “Hourglass” flight path of migratory birds.

The Central Flyway occurs in the following states and provinces: Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming in the United States; and Alberta and Saskatchewan in Canada. Federal, state, and provincial representatives from the United States and Canada make up the Central Flyway Council. The council meets regularly to coordinate population surveys, regulate and set hunting seasons, and plan for management of the migratory bird resource.

Canada, the United States, and Mexico united in 1986 to form the North American Waterfowl Management Plan (NAWMP) (USFWS et al. 1998), designed to restore diminishing continental waterfowl populations to the levels of the 1970s. The NAWMP envisioned a

15-year effort to achieve landscape conditions that could sustain waterfowl populations. Specific NAWMP objectives are to increase and restore duck populations to the average levels of the 1970s: 62 million breeding ducks and a fall flight of 100 million birds.

By 1985, waterfowl populations had plummeted to record lows. Habitat that waterfowl depend on was disappearing at a rate of 60 acres per hour. Recognizing the importance of waterfowl and wetlands to North Americans and the need for international cooperation to help in the recovery of a shared resource, the United States and Canada governments developed a strategy to restore waterfowl populations through habitat protection, restoration, and enhancement. Mexico became a signatory to the plan in 1994.

The plan is innovative because of its international scope, plus its implementation at the regional level. Its success depends on the strength of partnerships called “joint ventures,” involving federal, state, provincial, tribal, and local governments; businesses; conservation organizations; and individual citizens.

Joint ventures are regional, self-directed partnerships that carry out science-based conservation through a wide array of community participation in the United States, Canada, and Mexico. Joint ventures develop implementation plans focusing on areas of concern identified in the plan. The Rainwater Basin Wetland Management District lies within the administrative boundary of the Rainwater Basin Joint Venture.

Rainwater Basin Joint Venture

The Rainwater Basin Joint Venture (Gersib et al. 1992) is one of 14 joint ventures formed to undertake conservation projects. The joint venture was founded in 1992 with a goal to restore and permanently protect 37,000 acres of high-quality wetlands and 25,000 acres of associated uplands with adequate water and distribution to meet the needs of waterfowl and other migratory birds.

Location

Although the RWBJV’s focus is the basin, its boundary also encompasses that portion of “Bird Conservation Region 19” in Nebraska (see figure 1). Three prominent geographic features occur within the joint venture—the basin in south-central Nebraska, the Nebraska Sandhills in north-central Nebraska, and the central portion of the Platte River.

The Playa Lakes Joint Venture bounds the RWBJV on the west and south. On the east, the RWBJV borders the Upper Mississippi–Great Lakes Region Joint Venture. The RWBJV’s northern boundary is the Nebraska state line and it borders the Prairie Pothole Region and the Northern Great Plains Region joint ventures.

Description

Land use in the basin portion of the RWBJV is almost entirely agriculture, with corn and soybeans being the dominant crops. The topography of the basin is flat and it is poorly drained—forming thousands of shallow wetlands. Most of the wetlands are small and incorporated into cropland. Extensive wetland drainage and alteration has reduced the number of wetlands to a level that threatens populations of waterfowl and other waterbirds. The area is part of the tall- and mixed-grass prairie region of the Great Plains.

The sandhills portion is native, mixed-grass prairie that is used for livestock production. The topography is hilly, grass-covered, sand dunes. The porous sand allows for rapid percolation, forming a large groundwater reservoir. The groundwater is exposed in the low valleys and depressions—creating over a million acres of lakes, wetlands, and wet meadows.

The Platte River is a flat, braided river that has become forested in the last century. It is historically significant for settlement and for wildlife migrations. An approximately 150-mile stretch of the river transects the Central Flyway. Each spring nearly one-half million sandhill cranes and millions of ducks and geese use the river. River use by spring-migrating waterfowl increases dramatically when the basin’s wetlands are dry or frozen.

Conservation

Each joint venture includes the participation of individuals, corporations, conservation organizations, and government agencies (USFWS et al. 1998). The district contributes to and participates in the RWBJV through its Partners for Fish and Wildlife Program, participation on various committees, and management of WPAs.

RECOVERY PLANS FOR FEDERALLY LISTED THREATENED OR ENDANGERED SPECIES

Where federally listed threatened or endangered species occur at the Rainwater Basin Wetland Management District’s WPAs, management goals and strategies in their respective recovery plans will be followed. The list of threatened or endangered species that occur at the district will change as species are listed or delisted, or as listed species are discovered on district lands.

The district lies within the historical range of the whooping crane, least tern (interior population), bald eagle, American burying beetle, and western prairie fringed orchid. All of these species have recovery plans. If these species are found in the district, the staff will follow recovery plan guidelines.



STATE COMPREHENSIVE CONSERVATION WILDLIFE STRATEGY

Over the past several decades, documented declines of wildlife populations have occurred nationwide. Congress created the State Wildlife Grant (SWG) program in 2001. This program provides states and territories with federal dollars to support conservation aimed at preventing wildlife from becoming endangered and in need of protection under the Endangered Species Act. The SWG program represents an ambitious endeavor to take an active hand in keeping species from becoming threatened or endangered in the future.

According to the SWG program, each state, territory, and the District of Columbia must complete a comprehensive wildlife conservation strategy (CWCS) by October 1, 2005 to receive future funding.

These strategies will help define an integrated approach to the stewardship of all wildlife species, with additional emphasis on species of concern and habitats at risk. The goal is to shift focus from single-species management and highly specialized individual efforts to a geographically based, landscape-oriented, fish and wildlife conservation effort. The Service approves CWCSs and administers SWG program funding.

In 2005, the NGPC developed a statewide CWCS called the Nebraska Natural Legacy Plan. The planning team reviewed the legacy plan and the information obtained was used during the development of the draft CCP and EA. Implementation of the habitat goals and objectives in the draft CCP would support the goals and objectives of the legacy plan.

Nebraska Natural Legacy Plan

The planning process for the legacy plan solicited public input and the help of state, federal, and nongovernmental agencies. One of the plan's purposes was to identify areas in the state that have unique wildlife and habitat characteristics. These unique

areas—"biologically unique landscapes"—are focus areas for the conservation of the state's rarest species and natural habitats.

Nebraska's mission to "develop and implement a blueprint for conserving Nebraska's flora, fauna, and natural habitats" provides the state with a way to address pressing natural resource issues. When formulating proposed actions, planners must take into account the state's strong agricultural background. Farms and ranches cover 93% of the total land area and support a significant share of Nebraska's overall biological diversity. Maintenance of biological diversity throughout the state requires that conservation efforts be directed at a broad range of land issues and management practices on public and private lands. Maintaining and improving existing habitat on working farms and ranches is essential to conserving biological diversity and offers the greatest hope for success.

Nebraska plans to improve the efficiency and effectiveness of conservation by taking a more systematic approach to identifying and prioritizing the components of biological diversity through a "course filter/fine filter" approach. Monitoring of Nebraska lands becomes a priority as the state begins implementation of the plan. Monitoring of management actions is conducted at two levels: (1) response of individual species, and (2) response of habitats or ecological communities. Monitoring trends in abundance and distribution of different habitat types can be used to detect land use changes and can help direct conservation action toward those types that are showing the steepest decline.

Nebraska divides the state into four ecoregions for management purposes: tall-grass prairie, mixed-grass prairie, sandhills, and short-grass prairie. The ecoregions that occur in the basin—mixed-grass prairie and tall-grass prairie—are further described.

Mixed-grass Prairie Ecoregion

The mixed-grass prairie ecoregion lies between the tall-grass prairie to the east and the short-grass prairie to the west, acting as a transition zone for the two. The region's climate is semiarid with annual average precipitation ranging from 28 inches in the east to 20 inches in the west. Average annual temperatures range from 52°F to 57°F. Starting in 1940, the government put in place policies to subsidize and facilitate conversion of marginal land such as playa wetlands to croplands. Center-pivot irrigation facilitated cultivation of steeper slopes and lands isolated from surface irrigation sources. Two-thirds of the land in the ecoregion is engaged in cropland production with most of the remaining grasslands used for livestock grazing.

Tall-grass Prairie Ecoregion

The tall-grass prairie ecoregion covers primarily the eastern quarter of the state, with parts extending further westward. Loess and organic matter form the

basis for the deep, fertile soils that typify eastern Nebraska. Annual precipitation ranges from 25–36 inches, with summer temperatures reaching highs of 90°F and dropping to lows of 10°F in winter. The tall-grass prairie ecoregion is considered to have more diversified farming operations than the western part of the state.

Ecoregion Threats

Native animal species and ecoregion threats are essentially the same for all four regions in Nebraska. More than 300 species of resident and migratory birds have been found in the area. Most of the 55 mammal species are widespread with no distinct affiliation to the regions. Native, large predators have become extremely rare or extirpated from the regions. The 75 species of fish present in the ecoregions are “big river” generalists that can withstand a wide variation of environmental extremes. Wetlands are used for breeding by all the amphibians and reptiles. Insects are the most diverse and perhaps the most important group ecologically and economically because they play vital roles as herbivores, predators, pollinators, decomposers, soil aerators, and as food for other wildlife.

Several stresses face and affect the ecoregions, as follows:

- Conversion and fragmentation of natural habitats.
- Wetland drainage.
- Wetland sedimentation.
- Altered hydrology of wetlands.
- Fire plays an important role in prairie maintenance by promoting nutrient cycling, creating microhabitats, and increasing plant vigor and native plant diversity. Currently, less than 1% of the state’s grasslands and woodlands are burned annually. Loss of fire has resulted in the degradation of thousands of acres of prairie by invasive plant species.
- Most grazing takes place in the absence of fire and with relatively little variation in timing and intensity. Overgrazing can severely impact the composition of grasslands, and increase the amount of sediment and other pollutants entering waterbodies. Grazing systems used on prairie remnants cause losses of plant and animal diversity and ecological functions.
- Spread of invasive plants has threatened the ecoregions’ biological diversity.
- Altered hydrology and channel degradation of rivers and streams cause reductions in natural flows and reduce habitat available.
- Large-scale habitat fragmentation from conversion of native habitats to crop fields, housing developments, and roads has occurred over most of the state with the exception of the Nebraska Sandhills.

1.5 ECOSYSTEM DESCRIPTION AND THREATS

The Service has adopted watersheds as the basic building blocks for carrying out ecosystem conservation (see figure 5, ecosystem map). The district is located within the Platte–Kansas rivers ecosystem. In addition, the Nebraska Natural Legacy Plan (2005) identifies the Rainwater Basin as one of 40 “biologically unique landscapes.”

PLATTE–KANSAS RIVERS ECOSYSTEM

The Platte–Kansas rivers ecosystem includes almost all of Nebraska, southeast Wyoming, northeast Colorado, and northern Kansas (see figure 6). This ecosystem encompasses approximately 182,000 square miles and is home to the Nebraska Sandhills, the largest sand dune complex in the Western Hemisphere. The sandhills and many other areas provide vital habitat for numerous threatened and endangered wildlife and plant species.

The ecosystem spans from snow-capped, barren mountain peaks in Colorado to lowland riparian cottonwood forests along the Missouri River in eastern Nebraska and Kansas. The mountainous regions are predominately a mixture of coniferous forests comprised of Douglas-fir, ponderosa pine, lodgepole pine, Engelmann spruce, and subalpine fir. Pinyon pine and juniper woodlands and aspen communities are common throughout. Alpine meadows and lakes, willow shrub lands, and barren rocky areas are common at high elevations. Forests generally transition into shrub communities dominated by sagebrush with short grasses and forbs in eastern Wyoming and western Nebraska. Farther to the east, trees give way to short-grass prairie dominated by buffalograss, blue grama, hairy grama, and western wheatgrass. The short-grass prairie turns into mixed-grass prairie, due primarily to greater annual rainfall, in central Nebraska and Kansas.

Many federally listed endangered and threatened species including the bald eagle, piping plover, whooping crane, and Eskimo curlew have sought out this area as a refuge.

Threats to the Platte–Kansas rivers ecosystem that require attention include overgrazing, invasive plants, population growth and housing development, and groundwater and surface water depletion. To overcome these threats, priorities for the ecosystem are to ensure that (1) natural, healthy ecological processes dominate; and (2) economic development complements environmental protection.

The district contributes to the accomplishment of goals and objectives for this ecosystem through its Partners for Fish and Wildlife Program and existing partnerships.

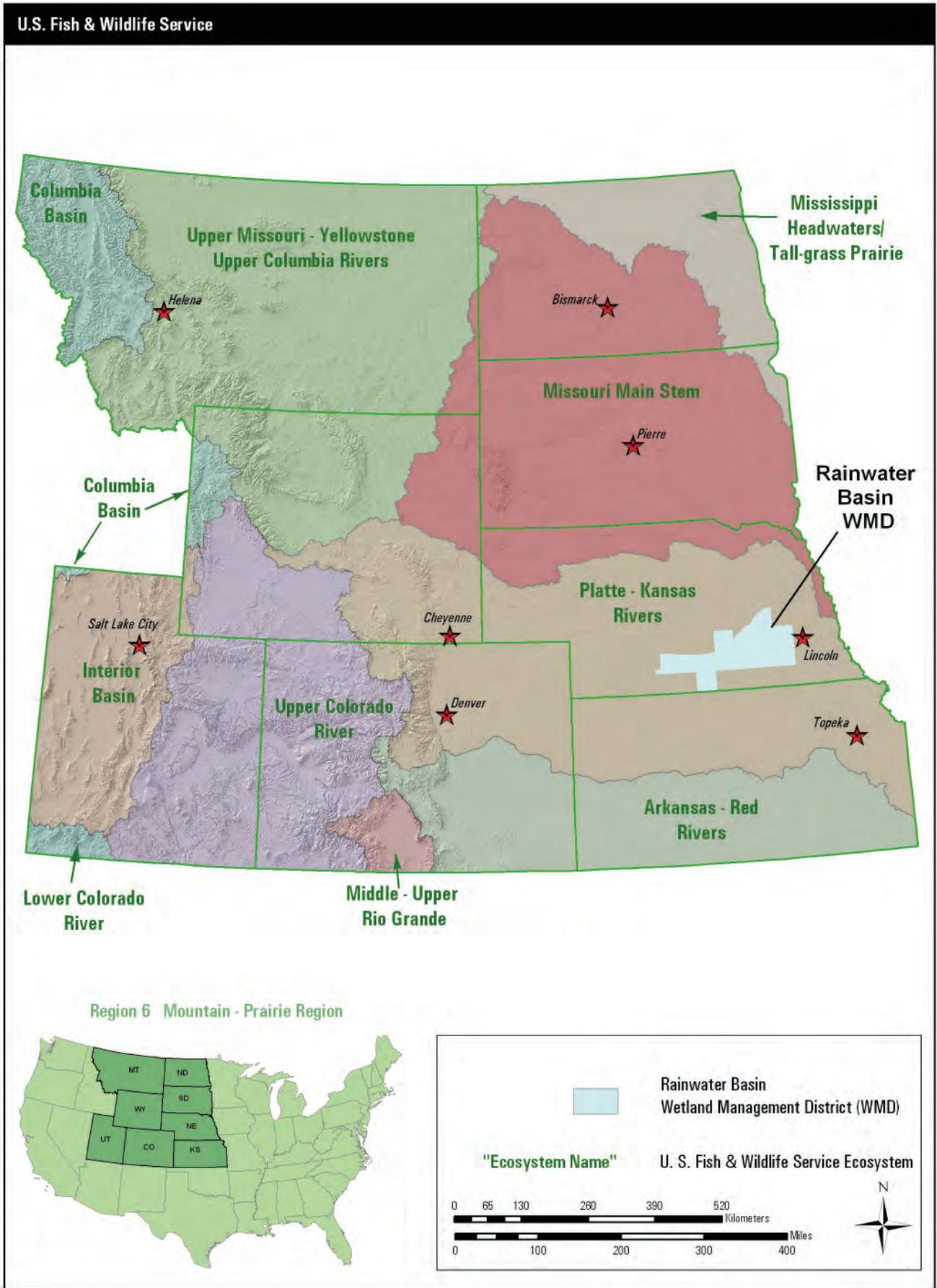


Figure 5. U.S. Fish and Wildlife Service ecosystem map.

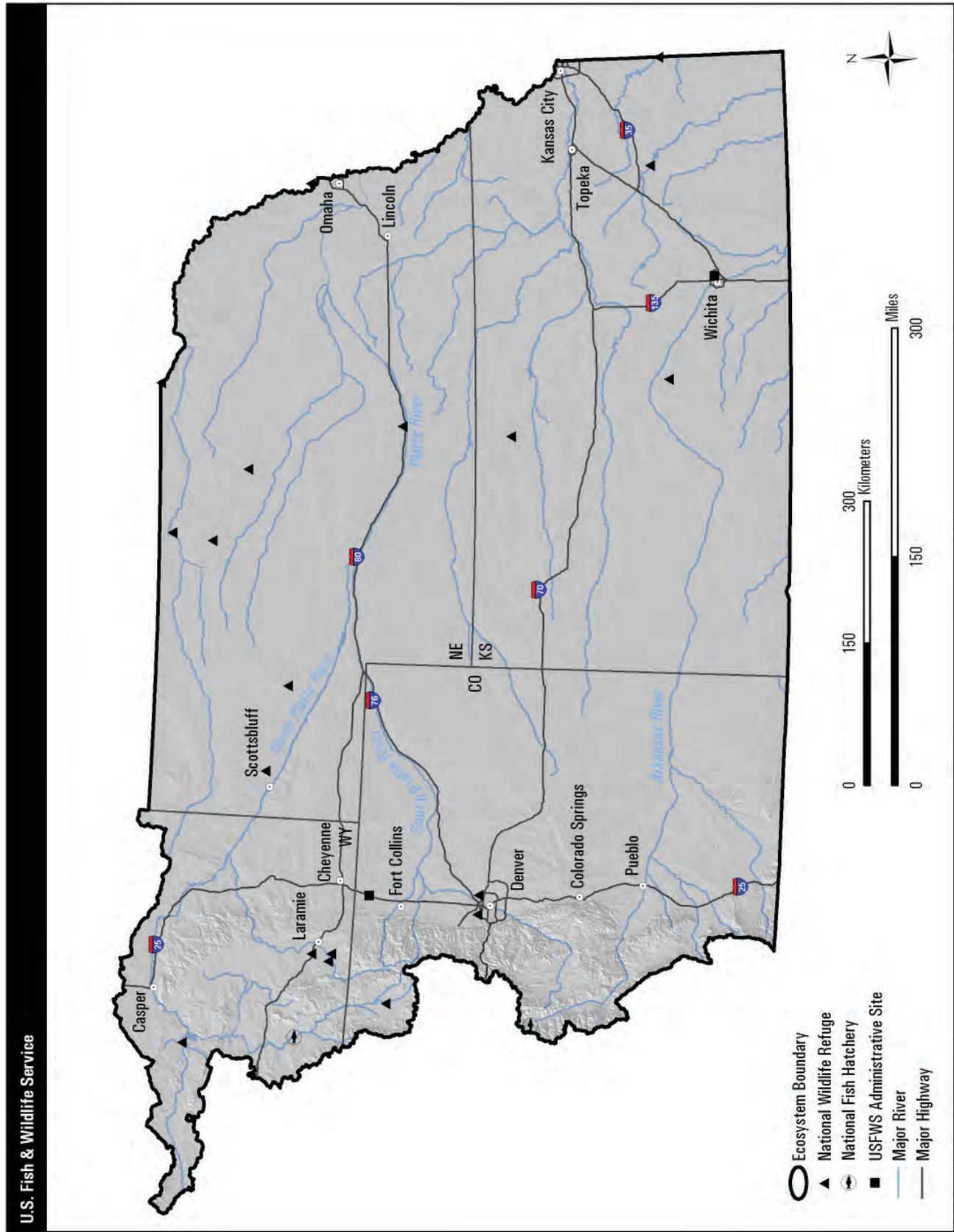


Figure 6. Platte-Kansas rivers ecosystem and Arkansas-Red rivers ecosystem map.

1.6 THE PLANNING PROCESS

This draft CCP and EA for the district are intended to comply with the Improvement Act, the NEPA, and the implementing regulations of the acts. The Service issued a final refuge planning policy in 2000. This policy established requirements and guidance for refuge and district plans—including CCPs and step-down management plans—to ensure that planning efforts comply with the Improvement Act. The planning policy identified several steps of the CCP and environmental analysis process (see figure 7, steps in the planning process).

Table 1 displays the planning process to date for this draft CCP and EA. The Service began the pre-planning process in September 2005 (see appendix C, public involvement). The planning team is personnel from the district, RWBJV, NGPC, USGS–BRD, and region 6’s refuge planning division (see appendix D, preparers). During pre-planning, the team developed a mailing list, internal issues, and a special qualities list. The planning team identified current district program status, compiled and analyzed relevant data, and determined the purpose of the refuge.

Scoping is the process of obtaining information from the public for input into the planning process.

Over the course of pre-planning and scoping, the planning team collected available information about the resources of the district and the surrounding areas. Chapter 4 summarizes this information.

The draft CCP (chapter 6) outlines long-term guidance for management decisions; sets forth proposed objectives and strategies to accomplish district purposes and meet goals; and identifies the Service’s best estimate of future needs.

The draft CCP details program levels that are sometimes substantially above current budget allocations and, as such, are primarily for Service strategic planning purposes.

A notice of intent (NOI) to prepare the draft CCP and EA was published in the “Federal Register” in November 2005. Scoping began in December 2005 with public meetings.

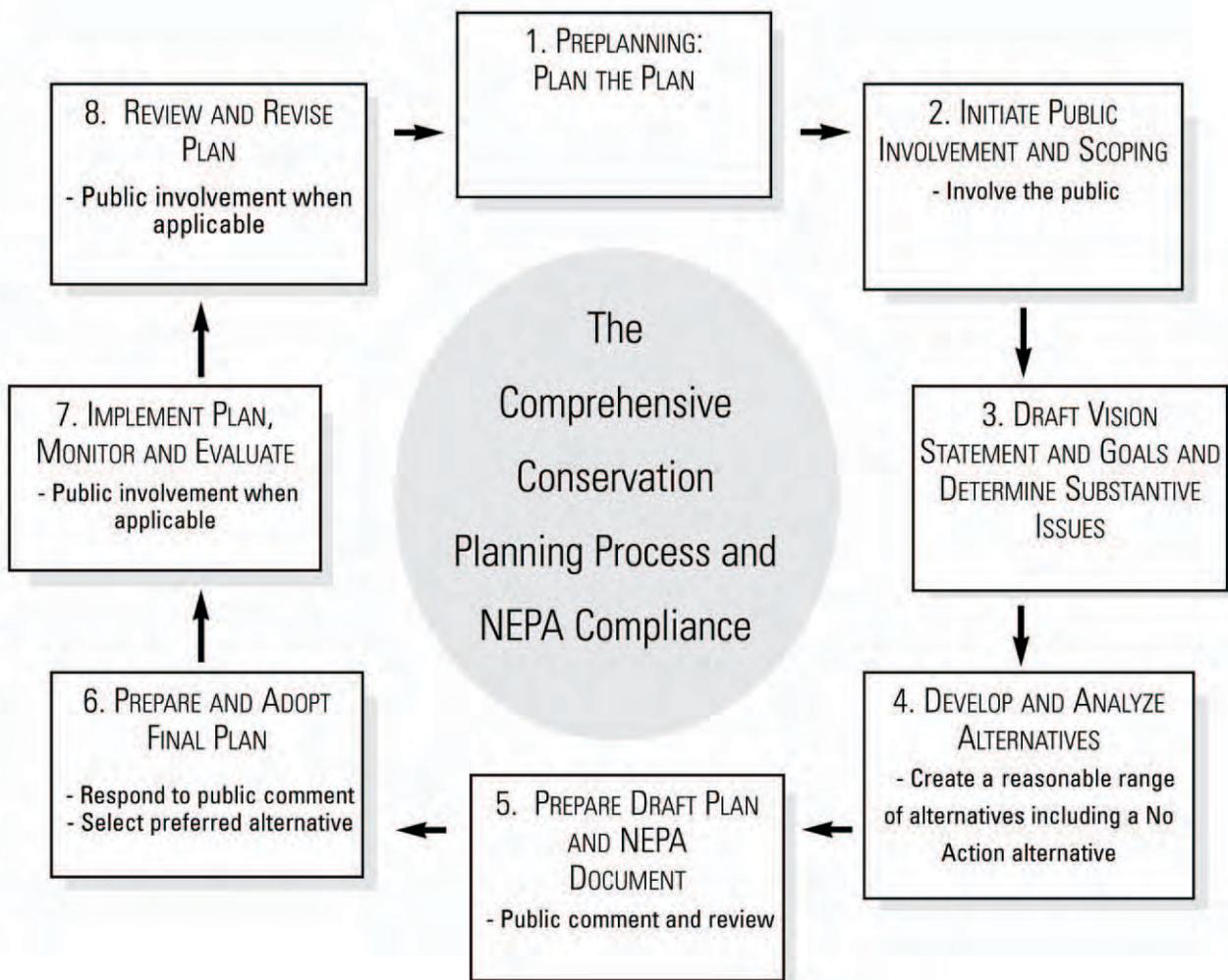


Figure 7. Steps in the planning process.

Table 1. Planning process summary for Rainwater Basin Wetland Management District, Nebraska.

<i>Date</i>	<i>Event</i>	<i>Outcome</i>
June 10, 2005	Initial conference call between the district staff and regional office planning staff.	Initiated contacts to organize development of the CCP and an overview of district issues. Started development of a mailing list.
July 13–15, 2005	Site visit to the district and initial meeting with the proposed planning team.	Acquainted regional office staff and state personnel with district activities and issues. Developed a preliminary list of qualities and issues.
October 13–14, 2005	Purposes, vision, and goals workshop; Kearney, NE.	Reviewed purposes for the district. Developed a vision statement and set of goals for the draft CCP and EA.
December 5, 2005 (5–8 p.m.)	Public scoping meeting; Kearney, NE.	Presented the district's background information and the CCP process. The public queried staff and provided comments.
December 6, 2005 (5–8 p.m.)	Public scoping meeting; York, NE.	Presented the district's background information and the CCP process. The public queried staff and provided comments.
December 7, 2005 (5–8 p.m.)	Public scoping meeting; Clay Center, NE.	Presented the district's background information and the CCP process. The public queried staff and provided comments.
December 8, 2005 (5–8 p.m.)	Public scoping meeting; Holdrege, NE.	Presented the district's background information and the CCP process. The public queried staff and provided comments.
December 6–7, 2005	CCP kickoff meeting.	Finalized the planning team. Updated list of issues and qualities. Identified biological and mapping needs. Determined the CCP steps and schedule.
February 28– March 2, 2006	Alternatives development workshop; Grand Island, NE.	Developed a range of alternatives for managing the district.
March 23–24, 2006	Impacts assessment workshop via conference calls: Kearney–Lincoln–Denver.	Assessed environmental impacts, by focus area, from each alternative developed. Recommended a proposed action.
August 1–3, 2006	Biological objectives, strategies, and rationale development workshop; Kearney, NE.	Drafted the biological objectives, strategies, rationale, and bibliography for the proposed action.
August 29–31, 2006	Nonbiological objectives, strategies, and rationale development workshop; Kearney, NE.	Drafted the nonbiological objectives, strategies, rationale, and bibliography for the proposed action.
December–March 2007	First draft CCP and EA preparation.	Prepared the first draft of the CCP and EA.
Spring 2007	Internal Service and state review of the draft CCP and EA.	Collected internal comments about the draft CCP and EA. Addressed comments; prepared the draft CCP and EA for public review.

COORDINATION WITH THE PUBLIC

A mailing list was developed by the planning team, consisting of more than 500 names—private citizens; local, regional, and state government representatives and legislators; other federal agencies; and interested organizations (see appendix C, public involvement).

The Service held four public scoping meetings, in open-house format, during December 2005 (see table 1 for details). Attendees provided written and oral comments and were informed that comprehensive planning was an open process where they could submit their comments at any time and by any means (letter, telephone, or Internet) until the time the CCP is final.

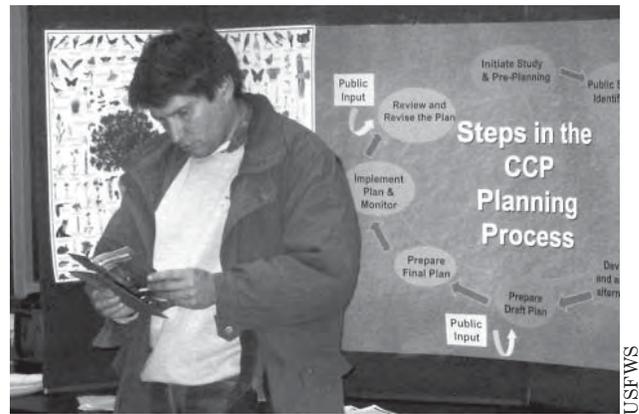
The combined total attendance to these public meetings was 63 persons. The planning team received additional written comments via mail. Seventeen written comments were received throughout the scoping process. Input obtained from meetings and correspondence, including emails, were considered in development of this draft CCP and EA.

STATE COORDINATION

In November 2005, an invitation letter to participate in the CCP process was sent by the Service's region 6 director to the director of the NGPC. Two representatives from the NGPC are part of the CCP planning team. Local NGPC wildlife managers and the district staff maintain excellent and ongoing working relations that precede the start of the CCP process.

TRIBAL COORDINATION

The planning team contacted Native American tribal representatives of the Pawnee Tribe and Otoe–Missouria Tribes. The tribal governments are part of the mailing list.



The public came to four open houses to learn about the district and offer ideas and concerns.

RESULTS OF SCOPING

Table 1 summarizes all scoping activities. Comments collected from scoping meetings and correspondence, including comment forms, were used in the development of a final list of issues to be addressed in this draft CCP and EA.

The Service determined which alternatives could best address these issues. The planning process ensures that issues with the greatest effect on the district are resolved or given priority over the life of the final CCP. Identified issues, along with a discussion of effects on resources, are summarized in chapter 2.

In addition, the Service considered suggested changes to current district management presented by the public and other groups.

