

Salt Plains National Wildlife Refuge

*Comprehensive
Conservation Plan
2006-2021*



June 2006



United States Department of the Interior

FISH AND WILDLIFE SERVICE

P.O. Box 1306

Albuquerque, New Mexico 87103

APR 16 2007

In Reply Refer To:
R2/NWRS-PLN

Dear Reader:

The U.S. Fish and Wildlife Service is pleased to present to you the enclosed *Salt Plains National Wildlife Refuge Comprehensive Conservation Plan (CCP)*, which will guide the management of the refuge for the next 15 years. This CCP and its supporting documents outline a vision for the continued management of the refuge and specify how it will be maintained to conserve wildlife and their habitats for the enjoyment of the public for generations to come.

Thank you to all who participated in the planning and public involvement process. Your input helped us prepare a better CCP and is greatly appreciated. Active community participation and support is vital to the successful management of the refuge. By reviewing the CCP and visiting the refuge, you will have opportunities to learn more about its purpose and potential.

Additional copies of the CCP may be obtained by contacting the Salt Plains National Wildlife Refuge, Route 1, Box 76, Jet, Oklahoma 73749. For your convenience, this document can also be viewed and downloaded at our world wide website at: <http://southwest.fws.gov/refuges/Plan/completeplans.html> .

Your continued support and interest in our fish and wildlife conservation efforts is appreciated.

Sincerely,

Tom Baca
Chief, Division of Planning

Enclosure

SALT PLAINS NATIONAL WILDLIFE REFUGE

COMPREHENSIVE CONSERVATION PLAN

June 2006

Prepared by:

**U.S. Fish and Wildlife Service
Salt Plains NWR
Jet, Oklahoma**

and

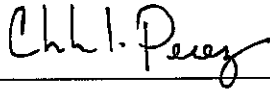
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Comprehensive conservation plans provide long term guidance for management decisions and set forth goals, objectives, and strategies needed to accomplish refuge purposes and identify the Service's best estimate of future needs. These plans detail program planning levels that are sometimes substantially above current budget allocations and, as such, are primarily for Service strategic planning and program prioritization purposes. The plans do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition.

**Salt Plains National Wildlife Refuge
Comprehensive Conservation Plan Approval
U.S. Fish and Wildlife Service, Region 2**

The attached Comprehensive Conservation Plan for the Salt Plains NWR has been prepared by Regional Office and Refuge staff. The contents and format are found to be in compliance with Service policy on the preparation of Comprehensive Plans, and is hereby submitted for approval.

Submitted By:

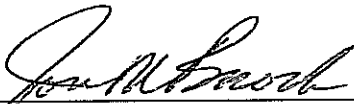


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6/22/06

Date

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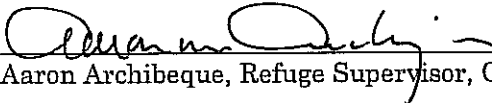


Jon Brock, Refuge Manager

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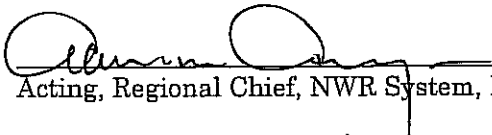
Concurrence By:



Aaron Archibeque, Refuge Supervisor, OK/TX

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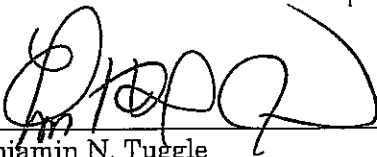
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Environmental Action Statement

Finding of No Significant Impact

Refuge Vision Statement

Salt Plains NWR is a key part of the Central Great Plains Ecoregion of the larger Arkansas/Red Rivers Ecosystem in northern Oklahoma. For millennia, the salt plains were the scenes of Indian gatherings, providing salt and important hunting grounds. Found nowhere else for hundreds of miles around, the salt plains provided essential shelter, foraging, and breeding habitat attracting multitudes of migrating waterfowl, breeding birds, and big game such as bison and deer. Today, this unique assemblage of biotic communities, surrounded by a patchwork of farmlands, continues to be a vital migratory stopover and breeding grounds for birds as well as providing a protected area for wildlife.

In the next 15 years, refuge staff will focus on reversing the impacts of invasive species on native grasslands and preserving the quality of the salt plains and surrounding upland habitats. Emphasis will be placed on increasing wetland habitat and management of moist soil units to provide high quality habitat for waterfowl and shorebirds. The refuge will increase wildlife-dependent activities such as wildlife observation, photography, and environmental education/interpretation. A healthy refuge environment will provide opportunities for visitors to enjoy wildlife viewing, hunting, and fishing in a natural setting. Improving facilities and interpreting wildlife and the refuge's unique heritage will enhance the visitor's experience while protecting cultural resources.

To meet future challenges, the refuge will continue to maintain and build federal, state, landowner, interest group, and local community partnerships. Through the Great Salt Plains Association and other community organizations, the refuge will increasingly be promoted as a regional tourist destination. These efforts will result in greater protection and appreciation for the unique fish and wildlife resources of Salt Plains NWR for generations to come.



1.0 INTRODUCTION AND BACKGROUND

This Comprehensive Conservation Plan (CCP) for the 32,028-acre Salt Plains National Wildlife Refuge (NWR) (refuge) will guide management decisions over the next 15 years and set forth goals, objectives, and strategies for achieving the refuge's vision. The refuge will help to conserve the natural biological diversity of the broader Arkansas/Red Rivers (Ark/Red) Ecosystem with emphasis on protection and enhancement of habitat for waterfowl, migratory birds, and federally-listed wildlife. The refuge will maintain and establish good working partnerships with stakeholders as well as provide the greatest opportunities for the public to learn about and enjoy the refuge experience. The refuge occurs within the Lower Salt Fork River Drainage which forms an area that will be considered in this plan as the "Area of Ecological Concern" (See *Figure 4*).

1.1 Purpose of and Need for the Plan

The purpose of comprehensive conservation planning is to "provide long range guidance for the management of national wildlife refuges." As such, all lands of the National Wildlife Refuge System (Refuge System) are to be managed in accordance with an approved CCP that will guide management decisions and set forth strategies for achieving refuge purposes (See *Section 1.6*). The Refuge Improvement Act of 1997 requires all refuges to have a CCP and provides the following legislative mandates to guide the development of the CCP:

- Wildlife has first priority in the management of refuges.
- Wildlife-dependent recreational activities such as hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation are priority public uses of the Refuge System, when compatible with the purposes of the refuge.
- Other uses have lower priority and, like the priority public uses above, are allowed if they are compatible with the purposes of the refuge.

This CCP provides long term direction for present and future refuge managers for the next 15 years. It describes management activities, important fish and wildlife resources that occur on the refuge, wildlife-dependent recreational and educational opportunities and provides goals, specific objectives, and strategies designed to fulfill the refuge's vision for the future.

1.2 Fish and Wildlife Service Mission

The U.S. Fish and Wildlife Service (Service) is the principal federal agency responsible for conserving, protecting, and enhancing fish and wildlife and their habitats for the continuing benefit of the American people. Specific responsibilities include enforcing federal wildlife laws, managing migratory bird populations, restoring nationally significant fisheries, administering the Endangered Species Act, conserving and restoring wildlife habitat such as wetlands, and helping foreign and Native American tribal governments with their conservation efforts. It also oversees the Federal Assistance Program, which distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies. The Service also manages the National Wildlife Refuge System. The mission of the U.S. Fish and Wildlife Service is:

"working with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people"

1.3 National Wildlife Refuge System Mission and Goals

Managing the National Wildlife Refuge System has evolved into a significant role for the Service. Founded in 1903 by President Theodore Roosevelt with the designation of Pelican Island as a refuge for brown pelicans, the Refuge System is the world's largest collection of lands specifically managed for fish and wildlife. The Refuge System is a network of more than 540 national wildlife refuges encompassing more than 95 million acres of public land and water. Refuges provide habitat for more than 5,000 species of birds, mammals, fish, and insects.

Like Pelican Island, many early national wildlife refuges were created for herons, egrets and other water birds. Others were set aside for large mammals such as elk and bison. Most refuges, however, have been created to protect migratory waterfowl. This is a result of the United States' responsibilities under international treaties for migratory bird conservation as well as other legislation, such as the Migratory Bird Conservation Act of 1929.

National wildlife refuges also play a vital role in preserving endangered and threatened species. Among the refuges that are well known for providing habitat for endangered species are Aransas NWR in Texas, the winter home of the whooping crane. Salt Plains NWR provides critical habitat for the whooping crane in migration. Other well known refuges include the Florida Panther Refuge, which protects one of the Nation's most endangered mammals; and the Hawaiian Islands Refuge, home of the Laysan Duck, Hawaiian monk seal, and many other unique species.

Refuges also provide unique opportunities for people. When it is compatible with wildlife and habitat needs, refuges can be used for wildlife-dependent activities such as hunting, fishing, wildlife observation, photography, environmental education and interpretation. Many refuges have visitor centers, wildlife trails, auto tours, and environmental education programs. Nationwide, approximately 35 million people visit national wildlife refuges annually.

The mission of the 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 goals of the Refuge System are to:

- a) *fulfill our statutory duty to achieve refuge purposes and further the System mission;*
- b) *conserve, restore where appropriate, and enhance all species of fish, wildlife, and plants that are endangered or threatened with becoming endangered;*
- c) *perpetuate migratory bird, inter-jurisdictional fish, and marine mammal populations;*
- d) *conserve a diversity of fish, wildlife, and plants;*
- e) *conserve and restore, where appropriate, representative ecosystems of the United States, including the ecological processes characteristic of those ecosystems; and*



The Blue Goose; Symbol of the National Wildlife Refuge System

- f) *foster understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use. Such use includes hunting, fishing, wildlife observation and photography, and environmental education and interpretation.*

1.4 Legal and Policy Guidance

The National Wildlife Refuge System started nearly 100 years ago with an Executive Order, signed by President Theodore Roosevelt, protecting a small island full of pelicans, ibises, and spoonbills from market hunters. It wasn't until 1997 that the National Wildlife Refuge System Improvement Act was passed which set the mission and administrative policy for all refuges in the Refuge System. This Act established many mandates aimed at making the management of national wildlife refuges more cohesive. The legislation requires the Secretary of the Interior to ensure that the mission of the Refuge System and purposes of the individual refuges are carried out. It also requires the Secretary to maintain the biological integrity, diversity and environmental health of the Refuge System (Integrity Policy; FR 66 3810-3823); a new process for determining compatible uses of refuges, and a requirement for preparing CCPs.

Other key legislative policies that direct management of refuges include the Endangered Species Act (1973), Clean Water Act (1977), Land and Water Conservation Fund (1965), Migratory Bird Treaty Act (1918), and Executive Order 12996, Management and General Public Use of the National Wildlife Refuge System (1996). These and other Acts and Executive Orders that guide Refuge System activities are listed in *Appendix F*. The Service also provides its own policy guidelines which can be found in refuge manuals.

Coordination with Oklahoma Department of Wildlife Conservation

In administering the Refuge System, the Service will ensure that the CCP complements State efforts to conserve fish and wildlife and their habitats, and to increase support for the Refuge System and participation from conservation partners and the public. During the development of the CCP, the Service is required to consult and coordinate with affected State conservation agencies, as well as adjoining Federal, local, and private landowners. The Service is required to ensure effective coordination, interaction, and cooperation with the state fish and wildlife agencies and ensure timely and effective cooperation and collaboration with the State during the course of acquiring and managing refuges. Under the Refuge Administration Act and 43 CFR 24, the Director and the Secretary's designee is required to ensure the Refuge System regulations and management plans are to the extent practicable, consistent with state laws, regulations and management plans.

1.5 Existing Partnerships

Salt Plains NWR staff work with a variety of individuals and organizations to accomplish habitat management, outreach, and environmental education projects. Some current partners include the Great Salt Plains Association (GSPA); Great Salt Plains State Park; Oklahoma Department of Wildlife Conservation (ODWC); U.S. Army Corps of Engineers (Corps); Natural Resources Conservation Service (NRCS); and several private landowners. Far less would be accomplished within and beyond the refuge boundaries without these partnerships (*See Section 5.4 for more information*).

1.6 Refuge Purposes

Salt Plains NWR was originally established “...as a refuge and breeding ground for birds...” - Executive Order 5314, March 26, 1930

The following are additional purposes that apply to Salt Plains NWR:

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

16 U.S.C. § 715d (Migratory Bird Conservation Act)

“...shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon...” - 16 U.S.C. § 664 (Fish and Wildlife Coordination Act)

“...for the development, advancement, management, conservation, and protection of fish and wildlife resources...” (16 U.S.C. § 742f(a)(4) (Fish and Wildlife Act of 1956)

“...for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude...” 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956)

Salt Plains NWR is also designated as *critical habitat* for the whooping crane (43 FR 20938, May 15, 1978).

1.7 Refuge History

The Great Salt Plains or “Grand Saline” as it was known in early American history, was important to many Native American tribes. The Wichita, and later Osage tribes occupied the land but were in conflict with the Comanches and other tribes over control of the land. The salt flats were a central feature of these excellent hunting grounds because the salt attracted buffalo and other game animals. The salt could also be used to cure meat and season food. In 1811, George Sibley was the first white man to visit the salt plains and described them as “glistening like a brilliant field of snow in the summer sun,” and estimated that “600 to 800 buffalo were wandering about the salt flats.” He also noted that it “has the effect of looming, as the sailors called it, producing to the unpracticed eye, much delusion” (objects look closer than they are), and reported the area has “many



1955 Refuge Entrance Sign



Billboard depicting early history of the Salt Plains area located along Hwy 64, in Jet, Oklahoma
USFWS Photo

thousands of bushels of salt." The Salt Fork of the Arkansas River, flowing around the plain, was known to the Osages as "Nescatunga" (big salt water).

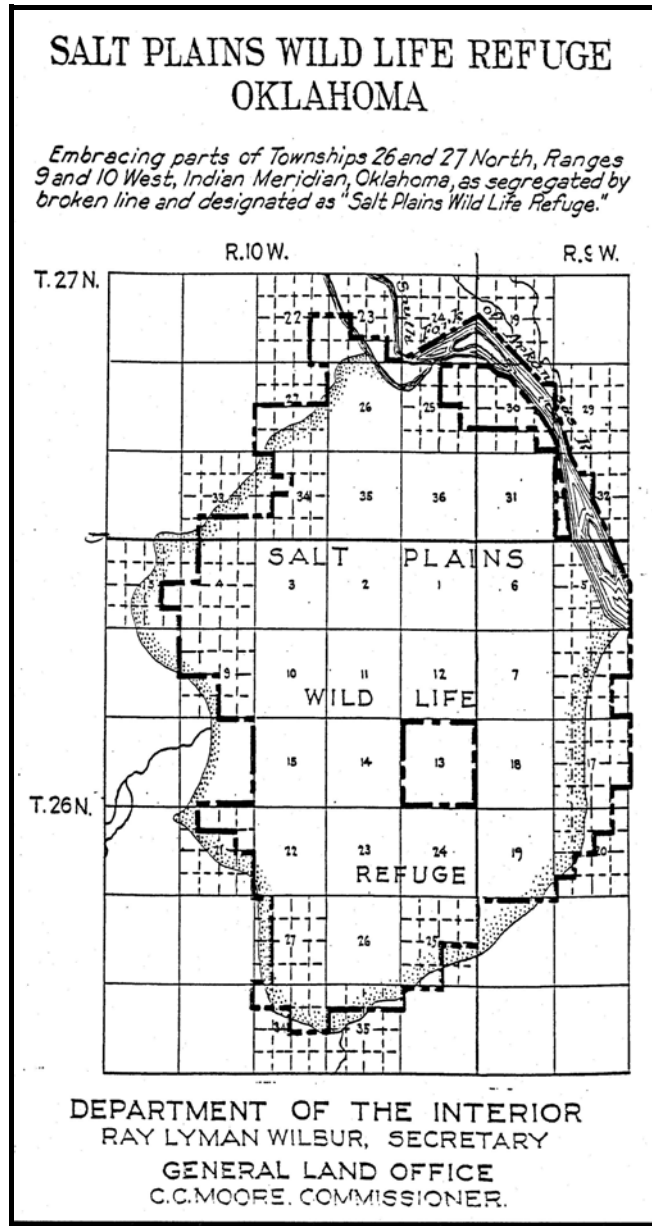


Figure 1. Original boundary map of Salt Plains NWR, March 26, 1930

A treaty in 1828 gave use of the land to the Cherokee Nation and lands that included the Salt Plains became part of the Cherokee Outlet or Strip in December 1835. In 1843, Captain Nathan Boone (son of Daniel Boone) visited the area to determine if there was potential for commercial development of the rich salt deposits but no such development was initiated. The area was an important supply point for traders, trappers, and overland expeditions during the 1800's. In 1890, the Cherokees were forced to sell the land to the U.S. Government. In 1893, the Outlet was opened to settlement through the famous "land run." Claims were never staked on the Great Salt Plains and the land remained in public trust until 1930 when 19,000 acres immediately surrounding the flats was designated by Executive Order as Salt Plains NWR (Figure 1).

The refuge was enlarged by acceptance of management responsibility for the Salt Plains Reservoir (Lake) from the U.S. Army Corps of Engineers and by purchase of tracts with Migratory Bird funds. Construction of the Great Salt Plains Dam began in 1938 and resulted in the formation of the Great Salt Plains Lake, which has been described as "the largest body of saltwater between Utah and the Atlantic." Public Land Order No. 144 of June 24, 1943, directed that the additional lands being acquired by the U.S. Army Corps of Engineers for the Salt Plains Dam and Reservoir Project would be added to and managed by the Service as part of the refuge. Adjacent small parcels of land to round out a manageable refuge were bought with Migratory Bird Hunting Stamp funds and Reverted Federal Aid monies (See Also: Appendix E).

During World War II, the salt flats were used as a bombing and machine gunnery range by the U.S. Air Corps, predecessors to the modern day Air Force. Remnants of World War II activity, such as concrete protective structures or "pill boxes," still exist on the refuge. In May 1978, the refuge was included in Critical Habitat designations for the endangered whooping crane. In 1983, the refuge was designated a National Natural Landmark as the largest saline flat in the Central Lowlands (the geographic area throughout North America between the west slope of the Appalachians and the east slope of the Rocky Mountains).

1.8 Refuge General Description

The refuge is located in Alfalfa County, Oklahoma, about 15 miles south of the Oklahoma/Kansas state line. The refuge headquarters is located 1.5 miles southwest of the junction of State Highways 11 & 38. The town of Cherokee is located 14 road miles to the west and the town of Jet is located 14 road miles south of the refuge headquarters. The refuge is approximately 50 miles northwest of Enid, Oklahoma.

Salt Plains NWR includes more than 32,000 acres, the majority comprising the Great Salt Plains Lake and the salt flats (*Figure 2*). The refuge consists of withheld lands, Corps overlay lands, and fee title lands. The Great Salt Plains Lake lies in the drainage of the Salt Fork of the Arkansas River and is a popular local and tourist recreational area.

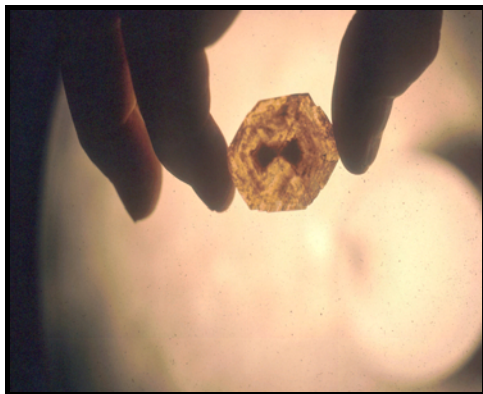
The refuge is divided into almost equal parts of salt flats, open water, and vegetated land. More specifically, the refuge encloses about 8,500 acres of the Great Salt Plains Lake; about 11,238 acres of level, salt-encrusted plains; 1,070 acres of manageable freshwater pools and moist soil units; 4,500 acres of grasslands; 3,700 acres of brushlands; 1,110 acres of woodlands, and 345 acres of riparian bottomlands. Additionally, there are 1,250 acres of cropland, and 315 acres of administrative lands including headquarters, roads, trails, etc. (*See Also Appendix I*)



*Salt Plains Lake, near the spillway
USFWS Photo*



*Salt Flats at Crystal Digging Area
USFWS Photo*



*Perfect selenite crystal with the unique
hourglass inclusion USFWS Photo*

The salt flats are located on the western side of the refuge, with the lake in the eastern portion. Ralstin Island is located in the northern portion of the lake and is used extensively for nesting by colonial water birds. The salt flats may not seem hospitable to wildlife, but are a major nesting site for the endangered least tern as well as the snowy plover, and American avocet. The flats are also a major migratory stopover for thousands of shorebirds during the spring and fall seasons. Shorebirds often feed on the swarms of salt brine flies that hatch when water is available.

Salt Plains NWR is the only known site where unique selenite crystals with hourglass inclusions are found. These crystals grow in a portion of the salt flats and are formed by the interaction of saline water and gypsum. Selenite crystals continue to grow in the salt flats as long as saline water conditions are maintained.

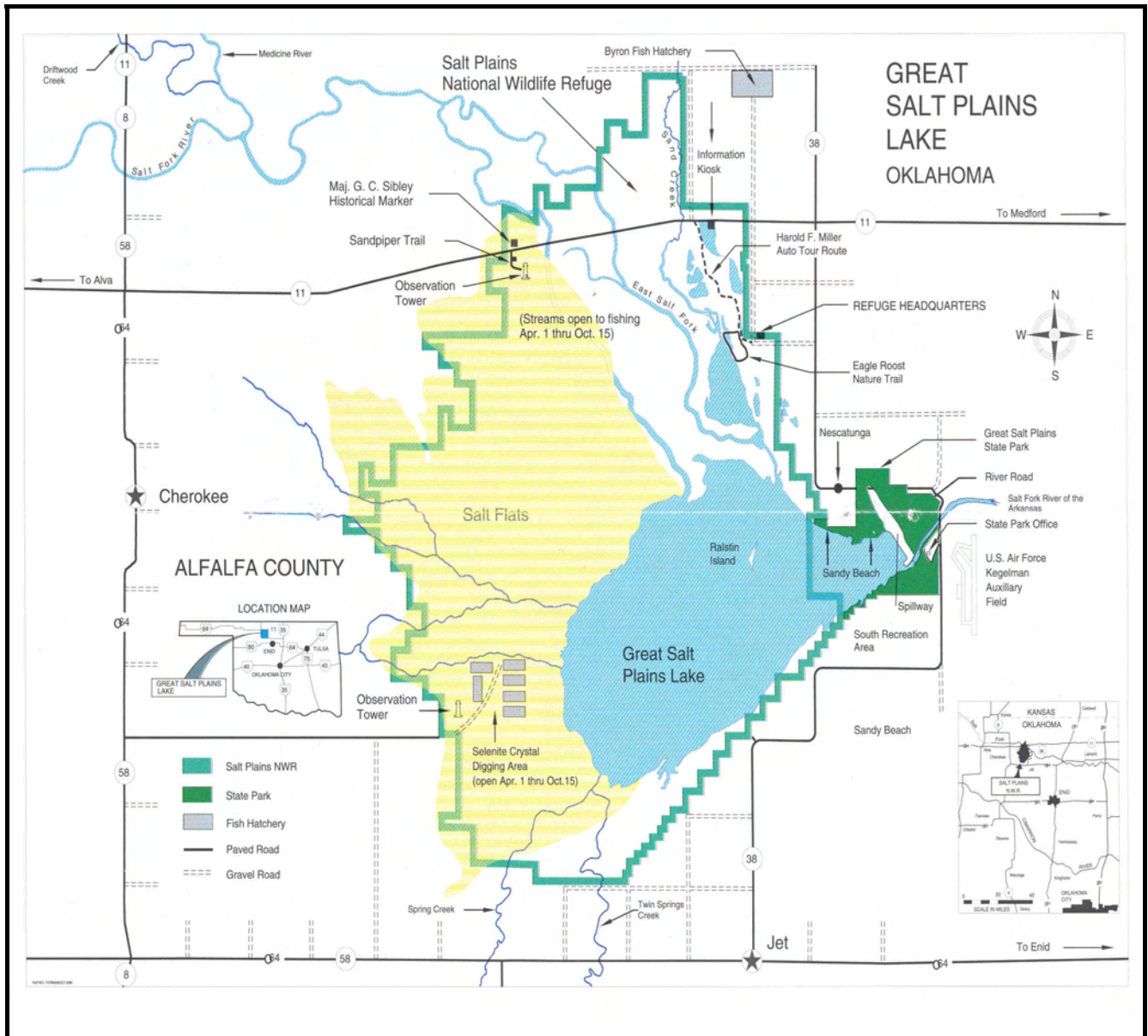


Figure 2. Map of Salt Plains NWR and surrounding area

2.0 PLANNING PROCESS: CONSIDERATIONS, PERSPECTIVES, AND ISSUES

The development of this CCP has incorporated the directives, policies, and regulations of the Service, the Refuge System, and the purposes for which the Refuge was established to assist in providing guidance to the refuge for long-range management. In addition, the CCP will help meet the goals and objectives of other applicable plans or initiatives such as those mentioned in *Sections 2.2 and 2.4*.

2.1 The Ecosystem Approach to Management

The Service has adopted an ecosystem approach to more effectively achieve its mission of fish and wildlife conservation for future generations. The ecosystem approach is defined as “protecting or restoring the natural function, structure, and species composition of an ecosystem while recognizing that all components are interrelated.” Ecosystem management includes preservation and enhancement of ecological integrity and sustainable levels of economic and recreational activity. The key to successful implementation of recommended management actions is involvement of partners from federal, state, and local governments, and the private sector, especially landowners. The Service has identified 52 ecosystems within the United States, based primarily on watershed designations. Salt Plains NWR occurs within the Ark/Red Ecosystem.

2.2 The Arkansas/Red Rivers Ecosystem

The Ark/Red Ecosystem Plan (1996) vision is:

“the efficient and effective management of federal trust fish and wildlife resources of the ecosystem to conserve and restore biodiversity for the benefit of the people”

Salt Plains NWR is centrally located within the Central Great Plains Ecoregion of the Ark/Red Ecosystem. This ecoregion extends in a broad band from Kansas through Oklahoma and into northern Texas, sloping from 2,000 feet elevation in the west to about 1,000 feet elevation in the east (*area within orange lines - See Figure 3*).

This area consists of rolling plains bisected by most of the major east-west flowing rivers of the Ark/Red Ecosystem. Annual precipitation is approximately 27 to 30 inches. Native vegetation communities are dominated by mid to tall (mixed) grass prairies, with riparian forest of varying widths occurring within the floodplains of major streams.

Management actions recommended in the Ark/Red Ecosystem Plan focus on migratory birds, other important fish and wildlife resources of special management concern, and habitats of significant importance (i.e., wetlands, streams, floodplain forests, native grasslands); but parallel concerns include water quantity and quality, invasive species, increasing public outreach efforts, and improving recreational opportunities. Based on these recommendations, the Service has incorporated several objectives and strategies in this CCP in support of the broader Ark/Red Ecosystem (*See Section 4.0*).

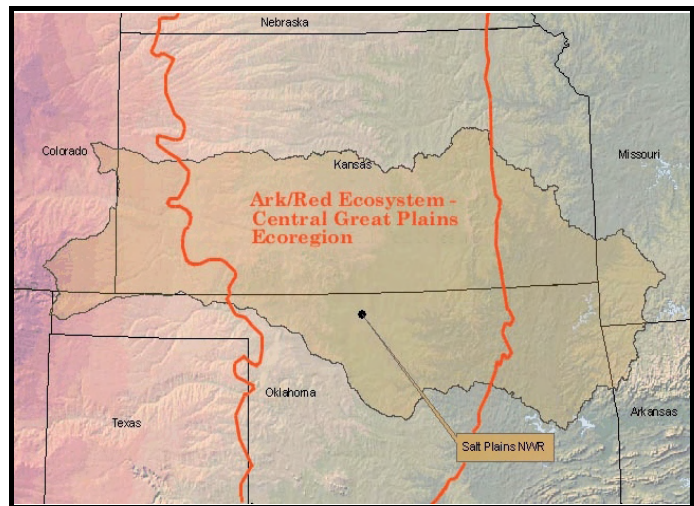


Figure 3. *Central Great Plains Ecoregion*

2.3 Area of Ecological Concern

Because the hydrology of the Lower Salt Fork River Drainage and Great Salt Plains Lake has a profound effect on the refuge and because land use and management practices conducted outside the refuge have an impact on the hydrology and natural resources of the watershed and the refuge, an Area of Ecological Concern has been identified. Salt Plains NWR manages more than 32,000 acres. This includes the majority of the Great Salt Plains Lake, the salt flats to the west, and wetlands and uplands along the drainages entering the lake. The surrounding area consists of flat prairies to gently rolling hills, much of which has been put into agriculture. The Area of Ecological Concern comprises the features of the Lower Salt Fork River Drainage and associated creeks that drain into the refuge (See *Figure 4*). The refuge will focus on partnerships and monitor migratory bird populations, invasive species, and water quality within this area.

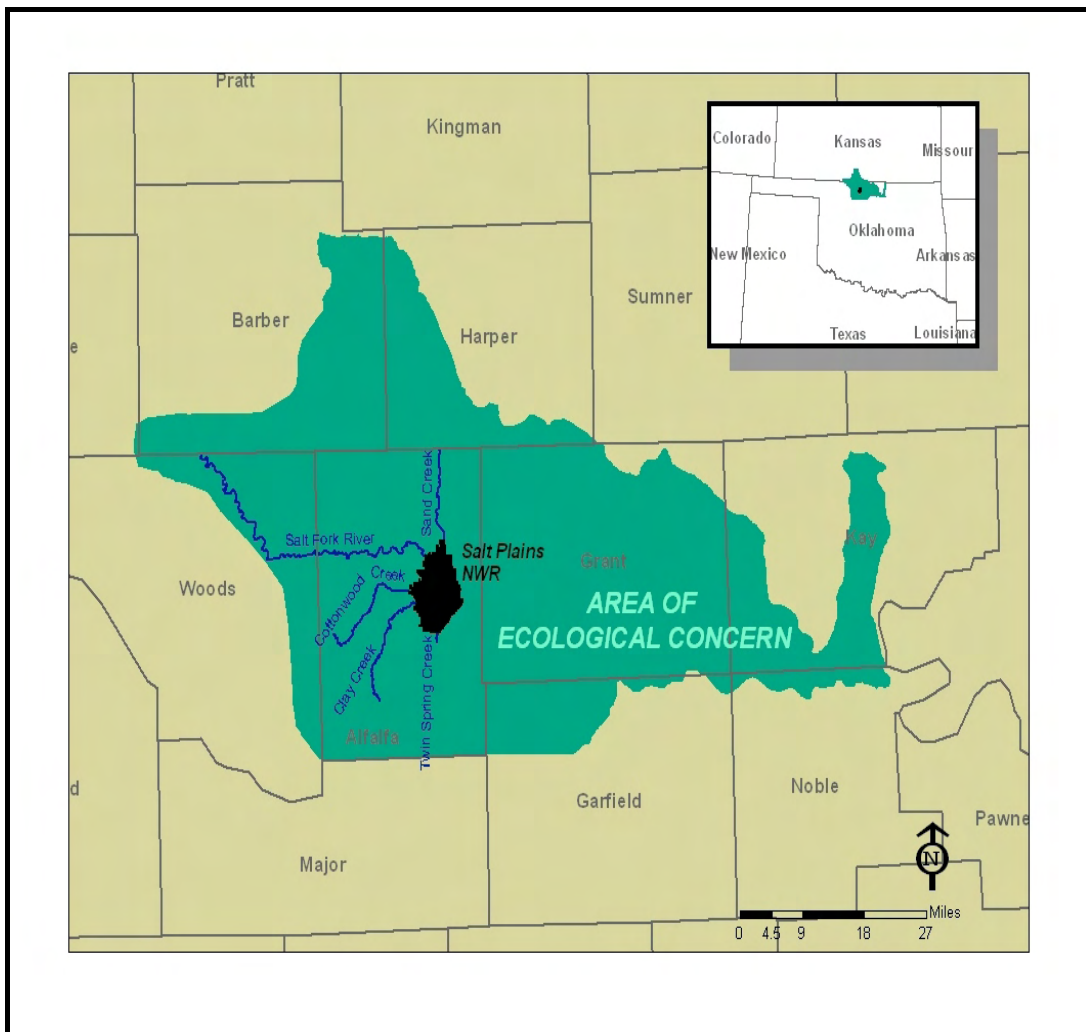


Figure 4. Area of Ecological Concern

2.4 Other Plans

Oklahoma Comprehensive Wildlife Conservation Strategy

This plan was completed by the ODWC in 2005 to focus on steps needed to protect, restore, and enhance habitat types (Conservation Landscapes) for the benefit of Oklahomans and all of Oklahoma's wildlife resources. The plan identifies priority issues and identifies a variety of Conservation Landscapes within six strategy regions. Salt Plains NWR occurs within the Mixed-grass Prairie Region and five conservation landscapes or habitat types occur on the refuge (mixed-grass prairies, wetlands, shrublands, streams and associated riparian forests, and woodlands). Priority issues addressed in this plan include the lack of data on species and trends, invasive and exotic species management, land and water uses that may impact species/habitats, and water quantity and quality. Recommended conservation actions include: field studies, conducting surveys, maintaining species databases, mapping the distribution and condition of habitats as well as identifying limiting factors and developing recommendations to enhance species populations and habitats, and monitoring species trends and responses to management practices. The plan also identifies "species of greatest conservation need"; of which 51 of these species occur on Salt Plains NWR (*See Also: Section 3.4*). Relevant strategies of this CCP and associated step-down management plans will incorporate many of the recommendations in this plan.

North American Waterfowl Management Plan

The North American Waterfowl Management Plan (NAWMP) was launched in 1986 in response to record low waterfowl numbers observed in the early 1980's. Recognizing the importance of waterfowl and wetlands to North Americans and the need for international cooperation to help in the recovery of shared resources, the Canadian and United States governments developed a strategy to restore waterfowl populations to levels seen in the 1970's through habitat protection, restoration, and enhancement. Most of the 48 species of North American ducks, geese, and swans depend on at least two or more countries to complete their life cycles.



Canada geese over refuge wetland habitats *USFWS Photo*

The NAWMP was last updated in 2003 to reflect a new 15-year horizon for waterfowl conservation. The Plan seeks the protection of 15.4 million acres of joint venture habitats and the restoration or enhancement of 10.9 million acres. Waterfowl population goals continue to work toward the restoration of population numbers of the 1970's. Planning objectives for Salt Plains include maintenance of sufficient habitat to support waterfowl populations as part of the original refuge purpose and in support of the NAWMP.

Partners in Flight

Partners in Flight (PIF) was launched in 1990 in response to growing concerns about declines in the populations of several land bird species, and to emphasize the conservation of birds not covered by existing conservation initiatives. The initial focus was on species that breed in the Nearctic (North America) and winter in the Neotropics (Central and South America), but has since expanded to include most land birds and other species requiring terrestrial habitats. Partners In Flight is a cooperative effort involving partnerships of federal, state, and local government agencies, philanthropic and professional organizations, conservation groups, industry, the academic community, and private individuals. The goal of PIF is to concentrate on the improvement of monitoring and inventory, research, management, and education programs involving birds and their

habitats. The PIF strategy is to stimulate cooperative public and private efforts in North America and the Neotropics to meet these goals. Relevant strategies of this CCP and associated step-down management plans will incorporate important PIF recommendations for priority species (*See Section 3.4*).

U.S. Shorebird Conservation Plan

The U.S. Shorebird Conservation Plan (Manomet Center, 2001) is a partnership involving organizations throughout the United States committed to the conservation of shorebirds. The organizations and individuals working on the Plan have developed conservation goals for each region of the country, identified critical habitat conservation needs and key research needs, and proposed education and outreach programs to increase awareness of shorebirds and the threats they face. A major goal of the Plan is to ensure that adequate quantity and quality of habitats is identified and maintained locally and to maintain or restore shorebird populations at the continental and hemispheric levels.

The Plan was developed by a wide array of state and federal agencies, non-governmental conservation organizations, and individual researchers throughout the country. Although the interior of the U.S. is not generally associated with important shorebird habitats, Salt Plains NWR is located within a major migratory corridor and is recognized by the Plan as a site which traditionally supports large numbers of migrating and breeding shorebirds. Salt Plains is so significant, it has been established as a part of the Western Hemisphere Shorebird Reserve Network. Management proposed in this CCP takes the Plan's recommendations into account such as providing and maintaining an invertebrate food base, gathering baseline shorebird use data, ensuring the quality and quantity of shorebird habitat, and providing optimal habitat for priority species such as piping plovers, snowy plovers (significant numbers breed on the refuge), long-billed curlews, and upland sandpipers.

Aransas-Wood Buffalo Population Whooping Crane Contingency Plan

This plan was developed consistent with the directives of the Endangered Species Act requiring federal agencies to conserve endangered and threatened species and "*utilize their authorities in furtherance of the purposes of this Act*". The plan outlines cooperative federal-state efforts to protect whooping cranes in the Aransas-Wood Buffalo Population in their migration corridor, and during summer and winter wanderings outside of traditional use areas. The primary emphasis of the plan is to list the response options when whooping cranes are observed in hazardous situations due to avian disease outbreaks, environmental contaminants, shooting/hunting activities, or when whooping cranes are found injured, sick, or dead. The plan also seeks to inform and educate hunters as to the occurrence of whooping cranes in areas open to sandhill crane and waterfowl hunting, to reduce whooping crane use of sites deemed to be a disease or pollution hazard, to reduce the likelihood of illegal shooting of whooping cranes by poachers or vandals, and to gain sighting information on the presence of whooping cranes outside of traditional summer and wintering areas.

Federally-listed Species Recovery Plans

Least Tern

The interior population of the least tern (*Sterna antillarum*) was listed as endangered on June 27, 1985, and the recovery plan was approved in 1990. Least terns breed in the Mississippi and Rio Grande Basins from Montana to Texas and from eastern New Mexico and Colorado to Indiana and Louisiana. From late April to August they occur on barren to sparsely vegetated river sandbars, sand and gravel pits, and lake or reservoir shorelines. Threats to the survival of the species include the loss of riverine sandbar habitat and disturbance. Channelization and river impoundments have

directly eliminated nesting habitats. With respect to the Ark/Red Ecosystem, recovery goals for the least tern specify that adult birds in the Arkansas River System should increase to 1,600 and remain stable for 10 years and adult birds in the Red River System should increase to 300 and remain stable for 10 years.

Salt Plains NWR is located in the Arkansas River System and has a significant nesting population of least terns with approximately 120 nests observed on the refuge in a typical season (U.S. Fish and Wildlife Service, 1997). Monitoring nesting sites and preservation of nesting habitats are significant activities on the refuge and thus, are reflected in the objectives and strategies of the CCP.

Whooping Crane

The Whooping Crane (*Grus americana*) was listed as endangered in 1970 with *critical habitat* designated in 1978 (43 FR 20938). The recovery plan was originally approved in 1980 and revised in 1994. Marshes, lakes, and ponds provide nesting and migration habitats for the main wild population of whooping cranes, known as the Aransas-Wood Buffalo Population. Each year, they nest at the Wood Buffalo National Park and adjacent areas of Canada and winter in the coastal marshes and estuarine habitats near Aransas NWR, in coastal South Texas. Population declines resulted from habitat destruction, shooting, and other human impacts.

Designated critical habitat includes nine sites in six states. Critical habitat is defined within the Endangered Species Act as habitat containing those physical or biological features, essential to the conservation of the species that may require special management considerations or protection (U.S. Fish and Wildlife Service, 1994). Salt Plains NWR was designated as one of the nine critical habitat sites for the whooping crane because it provides essential habitat in the migratory path of the main wild whooping crane population (*Figure 5*).

Although no de-listing goal has been currently identified for this species, down-listing to threatened status may be considered when a minimum of 40 nesting pairs in the main wild population, and a minimum of 25 pairs occurring in self-sustaining populations at each of two other discrete locations is reached. These levels must be maintained or exceeded for at least 10 years before down-listing may occur. Preservation and restoration of crane habitat is a major activity at the refuge. As the refuge is designated as *critical habitat* for the whooping crane, specific efforts to preserve and improve crane habitat are included in the objectives and strategies of this CCP.

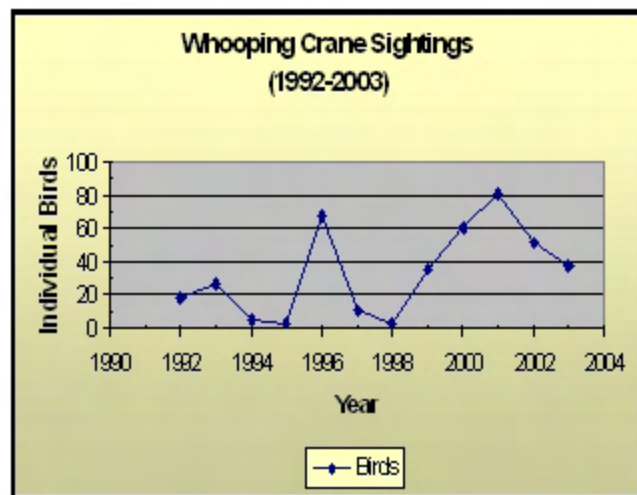


Figure 5. Whooping crane sightings at Salt Plains NWR

2.5 Planning Perspectives

This comprehensive planning effort will integrate the following perspectives so that management direction over the next 15 years will produce holistic management approaches for Salt Plains NWR:



Refuge Manager Jon Brock during CCP development *USFWS Photo*

1. Environmental issues affecting the refuge including ecological and wildlife trends, water supply/quality, contaminants, invasive species, etc.
2. Service policies, mandates, and legal requirements such as compatibility determinations, threatened and endangered species considerations, migratory bird conservation, wildlife and habitat management, staffing, etc.
3. Refuge public use and trends, public involvement in the planning process, environmental education and outreach, inter-jurisdictional and interagency cooperation, partnerships, research needs, etc.).

2.6 Issues and Challenges

The following is a list of major issues and challenges associated with current refuge management. The questions under the issues that follow are addressed in the text of the CCP and/or within *Section 4.0*.

Issue 1. Threatened and Endangered Species Management

Three federally-listed species (whooping crane, least tern, and bald eagle) depend on the refuge on a seasonal basis. Endangered whooping cranes use Salt Plains as a key migratory stopover and feeding area and the refuge is designated *critical habitat* for the crane. Federally and state endangered least terns nest in fairly abundant numbers every year on the salt flats. Federally threatened bald eagles are regular winter residents that feed and roost on the refuge. Listed species management is a careful process involving monitoring, habitat enhancement or protection, and addressing any human activities that may impact these species.

- What additional actions are needed to benefit and/or protect federally-listed species?

Issue 2. Wildlife Management

New inventory and monitoring efforts are needed for more comprehensive population assessments of priority species (*See Section 3.4*). Existing inventory and monitoring efforts focus on waterfowl, shorebirds, colonial nesting birds, big game, upland game birds, and federally-listed species. The additional inventory and monitoring of priority species will help to integrate and better direct wildlife *and* habitat management activities to benefit these species.

- Which species are priorities for inventory and monitoring on the refuge?
- What are the status and trends of other wildlife groups (such as insects and herpetofauna) that priority species depend on?

Issue 3. Habitat Management and Restoration

The restoration of native grasslands (mixed-grass prairie) are a high priority focus of the Central Great Plains Ecoregion of the Ark/Red Ecosystem, the ODWC, and the refuge. Red cedar and non-native invasive species are threatening many habitats such as encroachment into the native grasslands. Habitat management approaches are needed to address priority species needs but must be balanced with other important habitat management activities. Additionally, the refuge is continually losing salt flat habitat due to siltation and concerns have been raised about the adequacy of the amount of wetlands and moist soil habitat available to wildlife.

- How will changes in habitat management activities for priority species affect other habitat management efforts focused on waterfowl, shorebirds, wintering and migratory birds, fisheries, threatened and endangered species, game species, etc?
- What actions should be taken to address the effects of siltation resulting in the loss of salt flat habitat and degraded aquatic habitat?
- Should the refuge add more wetlands and moist soil units?
- How much of a mix of grassland versus brush and forested habitat should the refuge manage for?

Issue 4. Water Supply and Quality

A reliable quality water supply for wetland management is a vital element for the refuge's wildlife.

- What redesigning of the water delivery system is required to reduce flood damage to the dikes?
- Is the refuge water supply sufficient for future projects?
- Is the acquisition of additional water rights feasible?
- What types of contaminants monitoring is needed?

Issue 5. Land Protection and Acquisition

In some cases, acquisition of lands to enhance or connect to existing refuge lands can be an important conservation tool.

- Should the refuge encourage private landowners to participate in private land initiatives?
- Should the refuge provide technical assistance in fish and wildlife resource management on private lands?
- Should the refuge provide technical assistance for wetland management on private lands?
- What needs does the refuge have to expand the refuge boundary?

Issue 6. Cultural Resources Management

The Salt Plains area has a long history of Native American use and World War II historic sites. Interpreting these sites will allow the public to learn more about this history and the connection between people and the land.

- What actions should be taken to better understand and protect cultural and historical resources on the refuge?

Issue 7. Interagency Coordination and Relationships

Strengthening current relationships while developing additional partnerships is a vital part of improving the quality of the refuge experience and appreciation for the refuge's natural resources as well as to achieve the refuge's vision.

- What additional relationships should be established to benefit wildlife, increase support for the refuge, and improve the quality of the visitor's experience?
- How can current relationships be improved for the benefit of the refuge, its wildlife, and visitor enjoyment?

Issue 8. Public Use, Environmental Education, and Outreach

Fishing, hunting, birding, wildlife observation, and crystal digging attract from 130,000 to 150,000 refuge visitors annually. Protecting natural resources while allowing for anticipated increases in public visitation will be a major challenge.

- What types of environmental education and interpretation and to which target audience?
- What information should be included in brochures and other literature distributed by the refuge?
- What educational services/experiences should be offered to local educators?
- What accessibility arrangements are needed on the refuge?
- What public use facilities should be re-evaluated for improvements, expansion, or construction?
- Are all public uses on the refuge needed?
- What public use opportunities exist with other agencies nearby?



*Eagle Roost Nature Trail
USFWS Photo*

Issue 9. Staffing and Funding

Acquisition of additional staff and funding for proposed actions is a major factor limiting the accomplishment of CCP goals. Therefore, additional staff are essential for CCP implementation.

- What level of staffing and funding is required in order to achieve the goals and objectives of this plan?
- Is the current funding adequate to meet the long-term goals of the refuge?

2.7 Expected Planning Outcomes

The following outcomes should result from this comprehensive conservation planning effort:

- Provide a “vision” of desired future conditions for Salt Plains NWR and goals, objectives, and strategies to achieve those conditions.
- Ensure that management of Salt Plains NWR reflects the policies and goals of the Refuge System and the purposes for which the refuge was established.
- To inform the public of the long term plans of the refuge and seek public and state participation in the planning process.
- Ensure that Salt Plains NWR contributes to the conservation objectives of the larger Ark/Red Ecosystem.
- Provide an effective approach for budget requests for operational, maintenance, and capital development programs on the refuge.
- Provide time-lines/priorities for plan implementation.
- Provide long-term management direction of the refuge despite staff changes.

2.8 Planning Process and Public Involvement

The CCP planning process consists of the following eight steps. Although the steps are listed sequentially, CCP planning and National Environmental Policy Act (NEPA) documentation can be iterative. Some of the steps may be repeated or more than one step can occur at the same time.

- Preplanning - form core team, identify needs
- Identify issues and develop vision - Public input gathered on issues
- Develop goals and objectives - from issues, resource relationships, legal responsibilities
- Develop and analyze alternatives, including the proposed action
- Prepare draft plan and NEPA document - assess environmental effects, public comments on draft plan gathered
- Prepare and adopt final plan
- Review and revise plan

Comprehensive planning efforts for Salt Plains NWR, began as the Service published a “Notice of Intent to Prepare Comprehensive Conservation Plans for 8 National Wildlife Refuges in the Southwest Region” in June 1998 (63 FR 33693-33694) to solicit public input. The Service prepared and distributed a fact sheet which included the history of the refuge, proposed goals, objectives, and long-range plans which were distributed at the refuge headquarters and mailed to interested parties in December 1998. Interested parties and stakeholders include federal, state, local agencies, groups, organizations, adjacent landowners, and the general public. The fact sheets, drafts, and other relevant information for public review have been available at the refuge headquarters. An open house was held at the refuge on February 11, 1999.

On December 4, 2003, a scoping notice was mailed out to seek additional comments to interested parties and stakeholders on a revised/updated Draft CCP. Several comments were received by the January 15, 2004, deadline. On November 21, 2005 (70 FR 70089-70090), the Service published a

Notice of Availability of the Draft CCP and Environmental Assessment (EA) to solicit public review and comment. The Draft CCP/EA was also made available on the Internet at: <http://www.fws.gov/southwest/refuges/Plan/index.html> Prior to the January 20, 2006 deadline, an open house was held at the refuge headquarters on January 12, 2006, to seek additional public comment and answer questions. Notifications of the public comment periods and open houses were announced in the Federal Register, local newspapers, and sent out to various agencies, local libraries, elected officials, organizations, stakeholders, and individuals. Copies of the CCP/EA were made available at the Salt Plains NWR headquarters and at the Cherokee Public Library. See *Appendix H* for comments and responses gathered during the CCP planning process.

The CCP will guide management on the refuge for the next 15 years. Plans are signed by the Regional Director, Region 2, thus providing Regional direction to the station manager and staff. Copies of the CCP will be provided to all interested parties when requested. Whenever there is a significant need or at least every 5 years, the refuge manager will review the plan and decide if a revision is necessary.

3.0 SUMMARY REFUGE AND RESOURCE DESCRIPTIONS

The confluence of several rivers and streams of the Salt Fork River drainage system forms part of the unique environment of Salt Plains NWR. The combination of salt flats, lakes, streams, and associated wetlands produce an extremely productive environment reminiscent of coastal estuaries. The unique salt flats, selenite concentrations, and other colored sediments found in the flats produce selenite crystals with unusual hourglass inclusions that are found only at Salt Plains.

In addition to the 8,500-acre lake and 11,238 acres of salt flats, there are 1,070 acres of marshes, ponds, and moist soils, 345 acres of river habitat, 4,500 acres of grasslands, 3,700 acres of brushland, and 1,110 acres of woodland. Additionally, there are 1,250 acres of cropland and 315 acres of administrative lands including headquarters, roads, trails, etc. *See Also: Appendix I.*

3.1 Vegetation

Several different plant associations occur on the refuge. The following contains a summary of the typical vegetation units, associated species, and the refuge acreage for each of the units. See *Appendix A* for a complete list of plants and corresponding scientific names.

3.1.1 Marshes, Ponds, and Moist Soils

The refuge has 1,070 acres of marshes, ponds and moist soils. The majority of these habitats are located on the northeastern side of the refuge. Species here include sedges, bulrushes, rushes, cattails, smartweed, American lotus, sago pondweed, willows, and buttonbush.

3.1.2 Grasslands

The refuge has about 4,500 acres of grasslands located primarily on the northeastern side of the refuge. Plants found here include switchgrass, little bluestem, Indiangrass, Scribner's panicum, and sand bluestem. In northern portions of the refuge, large areas of prairie cordgrass are found. In lower portions of the refuge, scattered stands of inland saltgrass are found.

3.1.3 Brushlands

The refuge has about 3,700 acres of brushland located primarily on the northeastern side of the refuge. Brushland plants include Chickasaw plum, aromatic sumac, smooth sumac, greenbriar, and coral berry.

3.1.4 Woodlands

The refuge has 1,110 acres of woodlands again with the major concentration on the northeastern and eastern side of the refuge. Species found here include roughleaf dogwood, hackberry, elms, woolly buckthorn, red mulberry, black locust, eastern red cedar, eastern cottonwood, green ash, white mulberry, and catalpa. Black willow and sandbar willow occur along ponds and waterways throughout the refuge.

3.1.5 Invasive Plant Species

There are several invasive, non-native plants occurring on the refuge. Non-native or exotic invasive trees and shrubs include: Siberian elm, Russian olive, salt cedar, Russian thistle, musk thistle, and multiflora rose. Although a native species, eastern red cedar has invasive characteristics and is

aggressively encroaching into grassland habitats both on and near the refuge. Weedy invasive species on the refuge include Johnson grass, field bindweed, and jointed goat grass.

Surveys are needed for early detection of other invasive species which are found in the Area of Ecological Concern and may appear on the refuge, such as Canada thistle, bull thistle, red-horned poppy, and sicklepod.



Eastern red cedar encroachment in the grasslands USFWS Photo

3.2 Fish and Wildlife

From freshwater to saline and from open wetlands to forested uplands; the high value and variety of habitats at Salt Plains NWR supports a wide array of plants and animals. There are 294 identified plant species, 312 bird species, 30 types of mammals, 35 reptile and amphibian species, and 14 fish species known to occur on the refuge. While there is no official list of invertebrates they provide a significant food source for the abundance of birds and other animals in the food web. *See Appendix A* for a complete list of refuge biota.

The refuge's unique saltflats and wetlands provide important resting and feeding habitats for migrating whooping cranes and wintering bald eagles. Salt Plains also provides protected nesting sites for other federally-listed species such as the least tern and snowy plover. Game animals on Salt Plains include white-tailed deer, ducks and geese, and upland game birds such as bobwhite quail, ring-necked pheasant, and mourning dove. Popular gamefish on the refuge include hybrid white/striped bass and channel catfish.

3.2.1 Mammals

There are 30 types of mammals known to inhabit the refuge. Mammals commonly seen on the refuge include white-tailed deer, eastern fox squirrels, and eastern cottontail. Other common but less obvious mammals include coyote, raccoon, American badger, beaver, muskrat, and porcupine. The refuge population of white-tailed deer has grown over the years and is abundant on the refuge. The deer can often be seen foraging and resting along wooded or brushy areas of the auto tour route, in farm fields, and along the access roads near the refuge headquarters.

3.2.2 Birds

Birds are the most varied wildlife group on the refuge with 312 recorded species and 97 nesting species. Salt Plains teems with migratory, wintering, and nesting waterfowl and shorebirds each year. More than 20,000 acres or about 65 percent of Salt Plains NWR comprises wetlands and saltflats; not only making it a significant wintering and migratory stopover, but a major shore and water bird breeding area amidst the agrarian Oklahoma landscape. Notable breeding shorebirds on Salt Plains include the American avocet, least tern, and snowy plover. Because of the unique wetland and salt flat habitats of the refuge, the American Bird Conservancy has designated Salt Plains NWR a "globally important bird area." Peak numbers of ducks, geese, and cranes can approach 100,000 during



Colonial waterbird nesting on Ralstin Island USFWS Photo

spring and fall migrations. During the fall through early spring months, geese outnumber all other birds averaging almost 50,000 each year (Figure 6). The giant Canada goose is the most common of the geese followed by the white-fronted and snow goose. Ross' goose, the smallest North American goose, is also present on Salt Plains during its migrations but is considerably rarer. To the delight of refuge visitors, spectacular large flocks of white pelicans can be seen feeding in the refuge ponds during spring and fall. Commonly seen waterfowl include mallard, northern shoveler, northern pintail, American coot, wood duck, redhead, gadwall, blue-winged teal, American widgeon, and common merganser. Long-legged birds likely to be seen on the refuge include the great blue heron, great egret, little blue heron, and sandhill crane. Ralstin Island is one of the most important colonial nesting bird areas in Oklahoma. In fact, Ralstin Island is the first known breeding record in the state for the white-faced ibis and is today the largest breeding site in Oklahoma for this species.

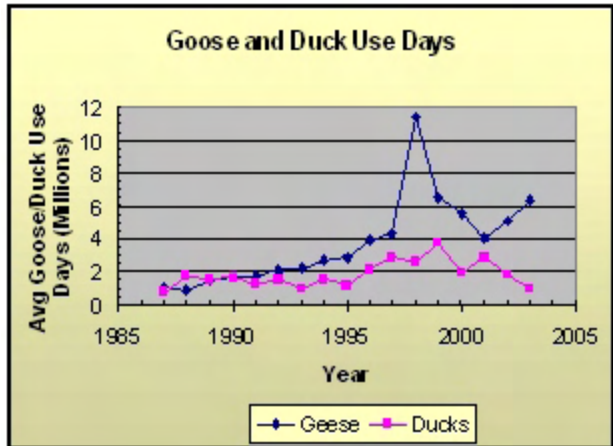


Figure 6. Average goose and duck use days

Although wetlands and saltflats dominate the refuge landscape, 10,560 acres of uplands or about 33 percent of Salt Plains provides a mosaic of grassy, shrubby, and wooded habitats for approximately 180 other bird species. The refuge supports 18 species of diurnal raptors and seven owl species. Commonly seen raptors include the bald eagle, red-tailed and Swainson's hawk, Mississippi kite, northern harrier, and American kestrel. Peregrine falcons have also been observed on the refuge, but are rare during all seasons.

Migrating and Wintering Waterfowl

The Flyway System was initiated in 1948 to allow for differing regulations relating to individual waterfowl populations migrating through each "flyway." The term "flyway" has long been used to designate the migration routes of birds. For management purposes, four flyways - the Pacific, Central, Mississippi, and the Atlantic, were established in the United States. This was the beginning of large-scale species management. Further efforts toward species management came into effect when bag limits were reduced or seasons were closed on specific bird species that were in danger of being over-hunted. Flock management within the flyways was put into effect to allow more refinement in regulations for specific bird groups (U.S. Geological Survey 2000). To varying degrees, the waterfowl populations using each of these flyways differ in abundance, species composition, migration pathways, and breeding ground origin. There are differences also in levels of shooting pressure and harvest. The refuge is located within the Central Flyway (Figure 7), which is an extensive geographical area that reaches from Alaska and Central Arctic Canada to South America. The portion of this flyway within the United States comprises Kansas, Nebraska, North Dakota, South Dakota, Oklahoma, Texas, and portions of Colorado, Montana, New Mexico, and Wyoming.

Management objectives at Salt Plains NWR contribute to those of the Central Flyway Management Program. The refuge provides a protected roost site for geese and quality winter habitat to sustain all migratory waterfowl populations. Although many factors within the lands of the Central Flyway can affect migratory birds, certain management activities that occur on this and other refuges can have wide-ranging effects on the bird populations of the entire flyway. Maintaining the health and condition of the birds wintering at Salt Plains NWR positively affects their spring migration and reproductive successes each year. Other factors influencing bird use at Salt Plains involve the

individual or cumulative activities of other countries, local farming practices on neighboring farms, the activities of federal and state agencies, private organizations, local governments, wildlife treaties, and finally, natural factors such as climate patterns.

3.2.3 Reptiles and Amphibians

At least 35 species of reptiles and amphibians inhabit Salt Plains NWR. Many of the turtles and snakes can be seen sunning themselves along the trails and ponds on the refuge during the warmer months. Snakes such as the coachwhip and bullsnake, and lizards like the prairie-lined racerunner are common here. Bullfrogs, leopard frogs, and toads such as the Rocky mountain toad and the Great Plains toad are well known for their calls that fill the air on spring and summer evenings. The red-eared slider and ornate box turtle are typical examples of the turtles and tortoises that are found on the refuge.

3.2.4 Fish and Invertebrates

Channel catfish, the predominant gamefish, are abundant in the lakes and streams of the refuge as well as varieties of bass and other native fishes. The nearby Byron State Fish Hatchery regularly stocks the lake with channel catfish, hybrid striped bass and saugeye. Other species present include: white crappie, bluegill, largemouth bass, carp, gizzard shad, and mosquito fish.

Invertebrates, particularly insects, have the highest known numbers of species of any animal group at well over 900,000 (Barnes 1987). Invertebrates are a critical part of the food web and play important ecological roles such as in nutrient cycling, energy transfer, and plant reproduction. For example, earthworms (*Oligochaeta*) mix the substrate soils and consume algae and detritus (Eldridge 1990 *after Pennak 1978*) and provide the first available food source for early nesters such as northern pintails and shovelers (Eldridge 1990). Snails, crustaceans, and insects are the most important invertebrate groups for breeding ducks. Wormlike midge larvae are especially important to waterfowl and occur in aquatic vegetation and in all types of wetlands (Eldridge 1990). Snails (Gastropoda) can be indicators of overall ecosystem health, since they usually require relatively uncontaminated wet environments. Sensitive wildlife, such as whooping cranes and shorebirds, are highly dependent on invertebrate food items during their migration. Common aquatic invertebrates on the refuge include snails as well as insect larvae, crayfish, and water fleas (Crustacea). Terrestrial invertebrates such as damselflies and dragonflies (Odonata) are common on the refuge, as well as mosquitoes and midges (Diptera), beetles (Coleoptera), backswimmers (Hemiptera), moths and butterflies (Lepidoptera). The shallow water, flats, and moist soil units present on Salt Plains create ideal conditions for many species of invertebrates.

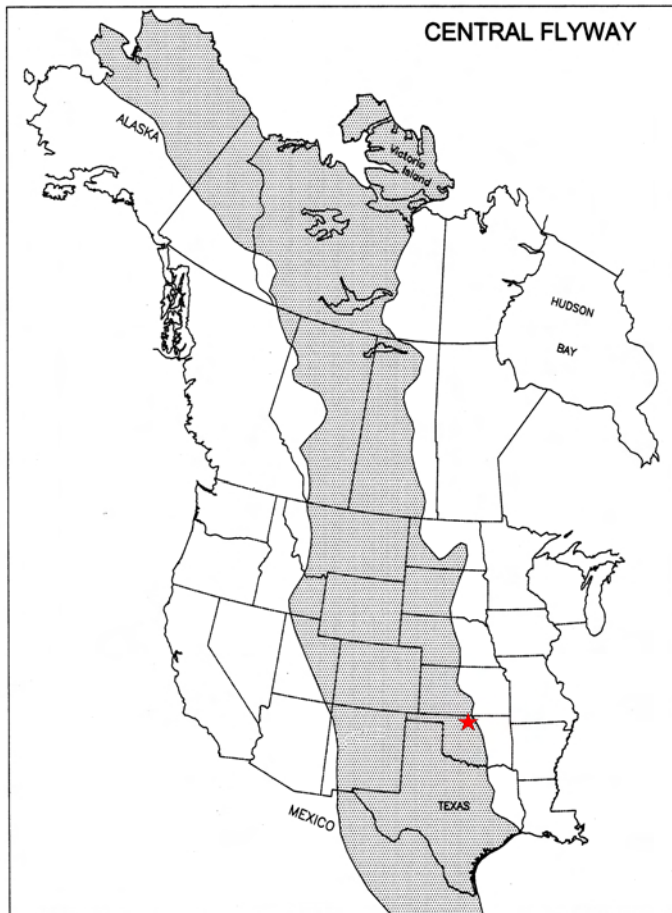


Figure 7. Central Flyway with refuge location

3.3 Federally-listed Species

A major purpose of the Endangered Species Act (ESA) is to “conserve the ecosystems upon which endangered and threatened species depend” and to provide a program for the conservation and recovery of listed species. Under the law, species may be listed as either “endangered” or “threatened.” Endangered means a species is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pests, are eligible for listing as endangered or threatened. Proposed species means any species of fish, wildlife, or plant that is proposed in the Federal Register to be listed under the ESA. *See also: Appendix B.*

Three federally-listed species (whooping crane, least tern, and bald eagle) depend on the refuge on a seasonal basis. Endangered whooping cranes use Salt Plains as a key migratory stopover and feeding area. In fact, the entire refuge is a designated *critical habitat* area for the crane. Federally and state endangered least terns nest in fairly abundant numbers every year on the salt flats. Federally threatened bald eagles are regular winter residents that feed and roost on the refuge. There are no known federally-listed plants on Salt Plains NWR. Refuge management actions involving federally-listed species will adhere to compatibility standards, the National Environmental Policy Act, ESA, and Service regulations to ensure that endangered species and other important fish and wildlife resources are not adversely impacted (*See Also: Appendix G*). The refuge will provide technical assistance on endangered species management to private landowners or the public whenever it is requested.

Whooping Crane - The whooping crane was listed as endangered on March 11, 1967 (U.S. Fish and Wildlife Service 1990). Oklahoma also lists the species as endangered. Once widespread in North America, by 1941 the crane had declined to an all-time low of 16 individuals in a single wild flock that migrated between Canada and coastal Texas (Lewis 1995). Several factors contributed to the historic decline of the species, including habitat loss and alteration, coastal and marine pollution, illegal hunting, disease, predation, collision with utility lines, loss of genetic diversity within the population, and vulnerability to natural and human caused disturbances (Lewis 1995). The whooping crane is ecologically dependent on inland wetland habitats (freshwater marshes, lake/reservoir margins, submerged river sandbars, etc.) for breeding and migration and on brackish wetlands for wintering (Lewis 1995). The whooping crane has begun a slow but seemingly steady recovery. As recently as December 2003, wild crane numbers have increased to approximately 294 individuals (194 in the Aransas-Wood Buffalo population, and 100 in the Florida flock).

Many of the whooping cranes (Aransas-Wood Buffalo population) migrate through the refuge each year. Since Salt Plains occurs within their narrow migration corridor and is a traditional migratory stopover or staging area, the entire refuge has been designated as *critical habitat* for the Aransas-Wood Buffalo population of whooping cranes. Although the cranes stop at the refuge during the fall, they seldom stop during their northward spring migration. According to Allen (1952), the whooping crane’s principal wintering locations included the tallgrass prairies of southwestern Louisiana although similar habitats occurred along the Gulf Coast of Texas from Louisiana to northeast Mexico. Now, this population winters exclusively in/near Aransas NWR in coastal South Texas. Fall migration from Wood Buffalo National Park and adjacent



Whooping cranes during migrational stopover *USFWS Photo*

breeding areas in Canada begins around mid-September and birds begin arriving on their wintering grounds by late October to mid-November. Spring migration back to Canada begins in mid-March through late April. Whooping cranes normally migrate singly, in pairs, or in small groups of 4-5, and occasionally migrate along with sandhill cranes (Lewis 1995). According to Austin and Richert (2001), anticipated migration dates for peak numbers of whooping cranes migrating through Oklahoma are October 23 - November 4 (southbound), and April 2-9 (northbound). Whooping cranes begin arriving on Salt Plains in early October through early November. Usually, several to tens of whooping cranes are observed on Salt Plains NWR. Although migrating whooping cranes may feed and roost in croplands, Salt Plains provides essential fresh and brackish wetland habitats that support whooping cranes during their migrations.

Least Tern - Least terns were fairly abundant throughout the late 1880s, but were nearly extirpated by market hunters around 1900 for their delicate plumage, used for fashionable hats at that time. After the passage of the 1918 Migratory Bird Treaty Act, commercial harvesting became illegal and the species began to increase through the 1940s. However, human development of tern nesting beaches for housing, resorts, and recreation subsequently led to another rapid population decline. In the interior United States, river channelization, the construction of dams, and irrigation diversions contributed to the destruction of much of the tern's sandbar nesting habitat. By the mid 1970s, least tern populations had decreased by more than 80 percent from the 1940s. This prompted the Service to list the least tern as endangered on May 28, 1985. The State of Oklahoma also lists this species as endangered.

The least tern is a colonially-nesting waterbird that seldom swims, spending much of its time on the wing (Hubbard 1985). Their flight is light, swift, and graceful, and it is developed to the point that allows the birds to easily snatch fish, crustaceans, and insect food from the surface, almost without missing a beat. They nest on the ground, on sandbars in rivers, lakes or pond edges, typically on sites that are sandy and relatively free of vegetation. Least terns are migratory and breed along the Red, Mississippi, Arkansas, Missouri, Ohio, and Rio Grande river systems. Salt Plains NWR is a major least tern nesting area and an important postnesting staging area (Thompson *et al.* 1997). They arrive on the refuge around May and more than a hundred pairs nest on the salt flats. Terns leave the refuge in late summer/early fall moving southward to Central and South America.

Bald Eagle - The bald eagle was listed as endangered on March 11, 1967, as a result of population declines resulting from pesticide-induced reproductive failure, loss of riparian habitat, and human disturbances such as shooting, poisoning, and trapping. On August 11, 1995, the bald eagle was down-listed from federally endangered to threatened status in the majority of the contiguous U.S. due to nationwide recovery efforts. In 1999, the bald eagle was proposed for de-listing (U.S. Fish and Wildlife Service 1999). The State of Oklahoma currently lists the bald eagle as threatened. On Salt Plains NWR, bald eagles are seasonal residents and as many as 115 have occurred at one time to feed and roost on the refuge during winter. Numbers of wintering bald eagles on Salt Plains normally range from about 20 to 80 individuals each year. Bald eagles are common on Salt Plains NWR from fall through spring returning to their nesting areas in late spring/early summer.

3.4 Priority Species

Priority species are any plants or animals which are rare or declining and for which further biological research and field study are needed to resolve their conservation status. They are on lists maintained by natural heritage programs, state wildlife agencies, other federal agencies, landscape level plans, or professional academic/scientific societies. This includes neotropical birds, shorebirds, non-game migratory birds, or any other species of management concern. For the purposes of this CCP, this also includes state-listed species not identified above and federally-listed species that occur as accidentals on the refuge. The following priority species are known to occur and/or there is potential habitat on the refuge:

Piping Plover - The piping plover is a federally and state threatened species. The piping plover has undergone serious declines related to direct and inadvertent harassment of birds and nests by people, dogs, and vehicles; destruction of beach habitat for development projects; increased predation due to human presence in formerly pristine beach areas; and water level regulation activities that endanger nesting sites along the Missouri, Platte, and Niobrara rivers (Haig 1992). In the Great Plains Region, this shorebird breeds along rivers and wetlands from the Nebraska/Kansas border to the southern Canadian prairie states. The piping plover winters along beaches and sand/mudflats from Florida to northern Mexico (Haig and Oring 1988). On Salt Plains NWR, this species is rare, but has been seen on the flats in the spring. The piping plover is not known to breed on Salt Plains NWR.

Snowy Plover - The snowy plover is a small cosmopolitan shorebird of the sand flats. In North America, the species breeds in Saskatchewan, Canada and ranges from the U.S. Pacific Coast and Gulf coasts to the Mexican coasts. Large breeding concentrations also occur in the Great Plains, including Oklahoma. Along the U.S. Pacific and Gulf coasts, the population is shrinking due to habitat degradation and expanding recreational use of beaches (Page *et al.* 1995). In response to these declines and threats to the species, the western population (found in California, Oregon, and Washington within 50 miles of the coast) of the western snowy plover (*Charadrius alexandrinus nivosus*) was listed as threatened on March 5, 1993.

Although the interior population that nests at Salt Plains is not part of the listed population, they are a high priority species according to the Central Plains/Playa Lakes Regional Shorebird Conservation Plan and breed in significant numbers (i.e., $\geq 20,000$) (Manomet Center 2001). Therefore, continued monitoring and habitat conservation efforts is appropriate. Nest sites typically occur in flat, open areas with sandy or saline substrates; vegetation is usually sparse or absent (U.S. Fish and Wildlife Service 1993). Snowy plovers nest in association with the least terns along the Great Salt Plains Lake. These birds are “site faithful”, often returning to nest in exactly the same locations as the previous year (U.S. Fish and Wildlife Service 1993). Wintering habitat resembles sites used for breeding. Snowy plovers forage on invertebrates in the wet salt pans, spoil sites, and along the edges of salt marshes and salt ponds.

The State of Oklahoma’s Comprehensive Wildlife Conservation Strategy has identified “species of greatest conservation need.” Many of these species identified in the State’s plan occur on the refuge within the Mixed-grass Prairie Region (See *Appendix A*). The refuge also occurs on the western periphery of the Osage Plains physiographic region which is characterized by mixed-grass prairie, shrub-grasslands, riparian forests, and rolling terrain. Several bird species have been identified as Priority Bird Populations by the Partners in Flight (PIF) Program for the Osage Plains physiographic region. These priority species include the *dickcissel*, *scissor-tailed flycatcher*, *loggerhead shrike*, *field sparrow*, *painted bunting*, and *Bell’s vireo*. These birds are also important indicators of the condition of the grasslands and shrub/brush habitats within this region (U.S. Geological Survey 2002). Therefore, their populations have been emphasized as a monitoring priority. All of these species occur and regularly nest at Salt Plains NWR. According to the PIF document, conversion of land to

agriculture and woodland increases resulting from fire suppression have greatly diminished grasslands in the Osage Plains. Other important species of management concern occurring on Salt Plains NWR include: *grasshopper sparrow* (shrub-grasslands), *prothonotary warbler* (riparian woodlands), *white-faced ibis*, and *tricolored heron* (wetlands, Ralstin Island). Salt Plains NWR (Ralstin Island) is the first known breeding site for the white-faced ibis in the State of Oklahoma. The PIF document recommends that a variety of wetland habitats be maintained for high priority in-transit migratory shorebirds. Consistent with the PIF recommendation, Salt Plains maintains high value habitats for migratory shorebirds and birds of management concern.

3.5 Climate

The climate of Salt Plains NWR and the surrounding region is semiarid. The average annual precipitation is 30 inches, with most occurring between March and October. Temperatures can vary greatly, ranging from 0° to over 100° Fahrenheit. Winds are commonly from the south or southwest and occasionally from the north. During spring and summer, severe thunderstorms accompanied by large hail and tornadoes can develop. Heavy rain events in the watershed have been common within the last eight to ten years.

3.6 Geology

During the Permian Period (about 225 million years ago), western Oklahoma was covered by a very shallow inland sea. For 50 million years, land changes caused the sea to evaporate several times depositing thick layers of gypsum and salt. During the next 225 million years, erosion of the Washita, Ouachita, Arbuckle, Ozark, and Rocky mountains covered the salt with layers of sediment 500-2,000 feet deep forming bedrock. Rivers fed by Rocky Mountain glaciers during the Quaternary Period (last 2 million years) have molded the present refuge landscape. The rivers left sediments covering the bedrock 10-25 feet deep which formed the sandhills along the auto tour route.

The salt layers below created the salt plains, which is the main geological feature of the refuge. The salt plains are an open, flat surface that is saturated with brine seeping up from the Permian strata. Artesian pressure moves water upward and laterally through the porous aquifers of the bedrock. The water carries the salt to the surface by capillary action, which then evaporates leaving a thin crust of salt on the plains. The most probable source of the salt is the Lower Cimarron Salt formation occurring at a depth up to 800 feet below the surface. One unique geologic character is the continuous growth of selenite crystals in the salt flats. These crystals grow as a result of the interaction of the brine and gypsum and produce a crystal that is known for the inclusion of particles in an hourglass shape.

The geology of the remainder of the refuge is topographically similar to the salt plains, but no upwelling of brine occurs to form salt deposits. The general area is in the Redbed Plains region on an outcrop of the Enid formation of the Permian System. This system consists of red clay, soft shales, and sandstone to a depth of 1,200 to 1,600 feet.

3.7 Soils

Soils within the approximately 12,000-acre salt flats area is classified as “river wash” and consists of the salt-encrusted floodplain of the Salt Fork River. The western edge of the flat is dotted with islands of “Enterprise Fine Sand.” These soils are highly subject to wind and water erosion. The eastern edge of the flat is also bordered by a larger expanse of Enterprise Fine Sands. Drummond Very Fine Sandy Loam of a slightly salty nature forms the river bottom and creek bottoms of most of the refuge streams. This soil type reaches out on the north and south portions of the refuge to support lush grasslands on the northern portion and croplands on the southern and eastern portions.

Along the floodplain of Sand Creek, “Yahola” Sandy Loam and Silty Clay loams are found. In the northeastern pasture lands and the region around the headquarters, “Puterbaugh Fields Pratt” loamy fine sand is found. “Nash” and “Reinach” loamy very fine sands are found on small portions of the southeast side of the refuge (USDA 1975).

3.8 Land Use

Historically, the refuge has not been the site of heavy farming or grazing use because of the erodible saline soils. However, there is some limited farming up higher, mostly along the southern boundary of the refuge. The majority of the land use surrounding the refuge is farmed or grazed.

3.8.1 Croplands

The refuge farming operation includes about 1,250 acres farmed through force account (force account refers to the use of refuge staff to accomplish a project or activity) and some cooperative farming. Each year, a portion of the farmland is left fallow due to soil saturation. The purpose of farming on the refuge is primarily to feed geese, ducks, and cranes; however, deer, upland game birds, and songbirds also benefit. Farming is important because it provides food resources widely used by wildlife during the winter when food is generally scarce. Farming on the refuge also helps to reduce wildlife depredation of private land crops. Typical crops planted include winter wheat, millet, sunflower, and cowpeas.

3.8.2 Grazing

Grazing is used on the refuge to maintain grasslands. Managed grazing can result in grasslands that have increased plant vigor, structural height, and overall diversity. A total of 1,251 acres is currently under grazing permits. Grazing occurs from May 1 to September 30.



*Agrarian landscape surrounding the refuge
USFWS Photo*



*Farming for wildlife - refuge farm field
USFWS Photo*

3.8.3 Water Management

The Great Salt Plains Lake makes up about 8,500 acres of refuge wetlands, with an additional 1,070 acres of freshwater marshes and ponds, and 345 acres of riparian environment. The freshwater impoundments lie in the northeast quarter of the refuge fed by Sand Creek and Powell Creek. The refuge has numerous water control structures that allow for the filling and draining of the impoundments to maximize moist soil plants for the benefit of wildlife habitat. Three channels of the Salt Fork River flow across the refuge into the lake. The west fork of the Salt Fork River is joined by Stink Creek as it passes through the salt flats. On the west side of the lake, Cottonwood Creek and west and east Clay Creek feeds into the lake. On the south side of the refuge, Spring Creek and Twin Springs Creek flow into the lake (*Figure 8*). Six water wells are located on the refuge; of these, one is used as a water supply for the refuge headquarters and residence quarters. Another well provides water at the Jet Recreation Area and two wells provide water for livestock. As groundwater is shallow, these wells are only 10 to 20 feet deep.



Aerial view of numerous refuge wetlands and moist soil units. The Great Salt Plains Lake is in the background. USFWS Photo



U.S. Fish & Wildlife Service

Salt Plains National Wildlife Refuge

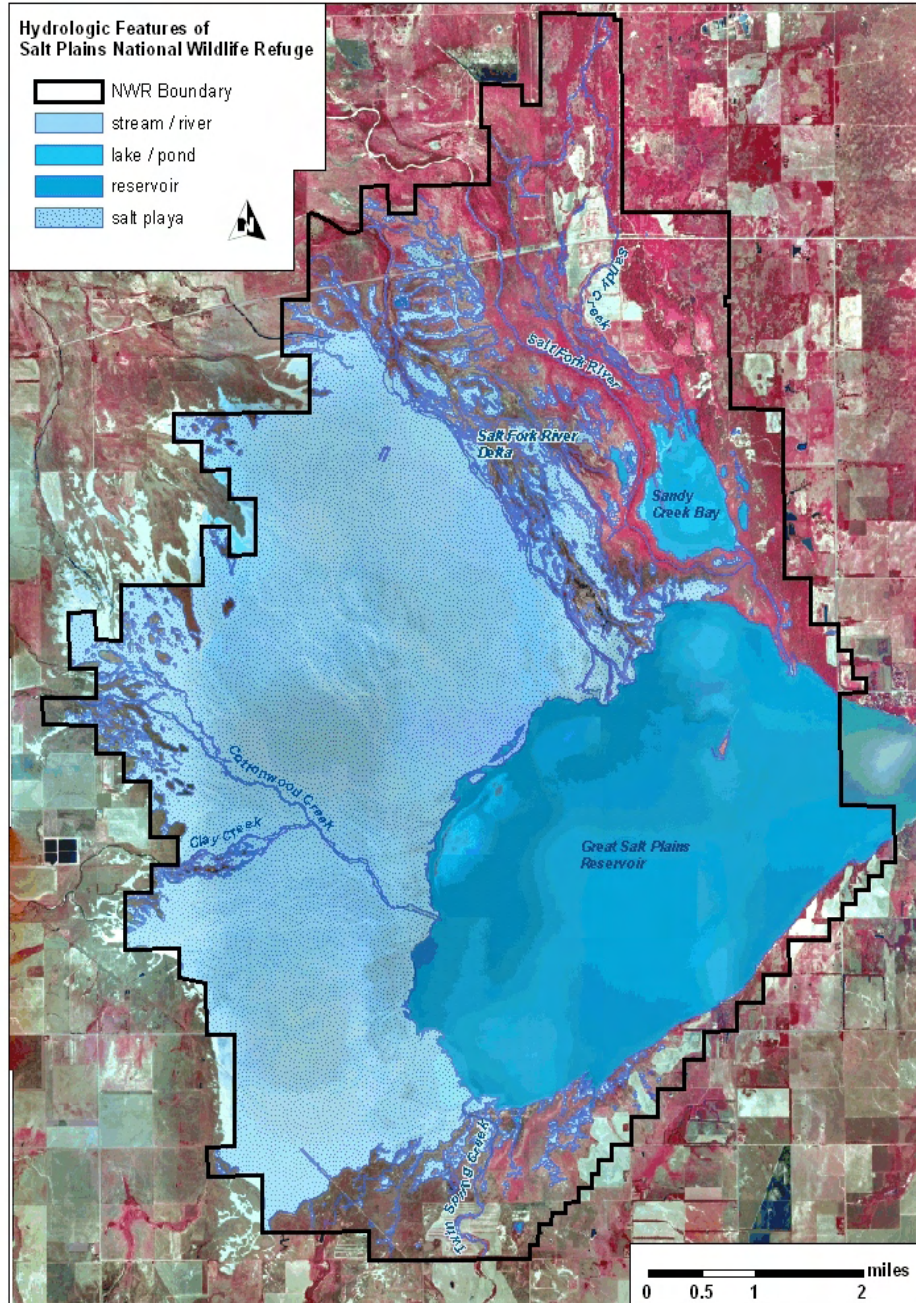


Figure 8. *Hydrological features*

3.9 Water Quality

While water quality on the refuge is considered good, localized weather conditions can vary the salinity of the Great Salt Plains Lake considerably. Extended dry periods can increase lake salinity through evaporation, but salinity can also be increased by the salt washing into the lake from the salt flats during heavy rain events. Periods of gentle rain allow better flushing of lake salinity. Even at its saltiest, the lake has no more than half the 30 g/kg dissolved solids of normal seawater. The lake has unusually high levels of copper in the water. Although the copper is from natural sources, levels are not harmful as per EPA water quality standards. Turbidity in the lake is also high due to the shallowness of the lake and the silty nature of lake sediments.

3.10 Fire Management

Occasional wildfires on or near the refuge require response by refuge personnel, particularly where life or property is concerned. Initial attacks on wildfires off the refuge are usually made by the local volunteer fire department. The refuge has cooperative agreements with the local fire departments such as Nescatunga, Jet, and Cherokee to assist in fighting fires on or near the refuge. Refuge firefighting equipment includes farming tractors, dozers, and a 250-gallon fire truck. Currently, seven refuge personnel are designated fire responders.

Wildland Urban Interface (WUI)

In 2000, a report entitled: *Managing the Impacts of Wildfires on Communities and the Environment* was released which provides an overall framework for fire management in the nation's forests and rangelands (FR 66: 751-770). The report requires federal agencies to increase investments in projects to reduce fire risk and to work with local communities to reduce fire hazards close to homes and communities. A wildland urban interface is defined as a community where humans and their development "meet or intermix with wildland fuel." Fire in the area could threaten the Union Valley Church, which is a historic structure. The communities of Cherokee and Nescatunga have been identified as urban-wildland interface communities in the vicinity of federal lands that are at high risk from wildfire (FR 66: 751-770). Under the National Fire Plan of 2002, funding for WUI can be used to help reduce the potential impacts of wildfires on these communities by reducing the "fuel loads" on the refuge nearby the communities. Such areas occur along Sand Creek, where brushy species and invasive species have increased fuel loads there.

Prescribed Fire

In the past, suppressing fires has been counterproductive in natural ecosystems. Although in 1995 federal agencies loosened the strict fire suppression policy of the past, fire managers now confront about 75 years of hazardous vegetation buildup. Prescribed fire is therefore used on Salt Plains to reduce fuel loads and also to maintain grassland or open habitat by controlling brushy species such as eastern red cedar, salt cedar, roughleaf dogwood, and black locust. Mechanical clearing or other means can be used, but there is no ecological equivalent to fire. About 1,500 acres per year are proposed for prescribed burning to restore grassland health. Units will be burned on a 3-5 year cycle. Prescribed fires are normally conducted with the assistance and expertise of the Wichita Mountains NWR fire personnel.



Controlled burn on the refuge's grasslands USFWS Photo

3.11 Archaeological, Cultural, and Historical Resources

During World War II, the salt flats were used as a bombing and strafing range by the War Department. Remnants of World War II activity (such as concrete protective structures or “pill boxes”) still exist on the refuge.

Although the area was used by native Americans, no significant prehistoric or native American sites have been documented as of yet on the refuge. Due to the lack of freshwater, there likely would have been few suitable areas for an encampment and the inhabitants of the area probably did not want to disturb the plentiful game that was attracted to the area.

3.12 Wildlife-Dependent Recreational Use

Under the National Wildlife Refuge System Improvement Act of 1997, six wildlife-dependent recreational uses (hunting, fishing, wildlife observation, photography, and environmental education and interpretation) are recognized as priority public uses of refuge lands. These and other uses are allowed on refuges provided that they are compatible with the purposes of the refuge (*See Section 1.6*). Except where otherwise mandated by law, the Service must determine whether a particular use is compatible with refuge purposes before permitting it. Compatibility determinations are normally made by the refuge manager, in accordance with guidelines developed by the Service. Under these guidelines, a compatible use is defined as one that “will not materially interfere with or detract from the purposes for which the refuge was established.” Compatible uses support refuge purposes or may have a neutral effect. In making a compatibility determination, the refuge manager must first determine if the use is compatible with refuge purposes based strictly on biological grounds. After making such a determination, the refuge manager must consider Service policy, other applicable laws, and public opinion (*See Appendix D*).

3.12.1 Hunting

Hunting for ducks, geese, cranes, pheasant, quail, mourning doves, and whitetail deer has been determined to be an appropriate wildlife-dependent use compatible with the purposes for which the refuge was established. Deer hunting on Salt Plains is one of the most popular public hunts in the state and is allowed on a majority of the upland areas by permit drawing only. Permit drawing is necessary to maintain the quality of the hunts by keeping hunters spaced out and to ensure public safety. Accessible deer hunts and youth deer hunts are also held each year. The refuge maintains approximately 1,200 acres suitable for upland game birds and waterfowl hunting on the north side of the refuge near Sand Creek.

3.12.2 Fishing

Fishing in the local area is limited to the Great Salt Plains Lake, Salt Fork River, and Sand Creek. The lake is well known for excellent channel catfishing. The state regularly stocks the lake (in the state park portion) with channel catfish, hybrid striped bass, and saugeye (walleye/sauger hybrid). The refuge allows fishing in certain areas from April 1 to October 15. Areas open to fishing during this time include: Sand Creek north of Highway 11, east and west branches of the Salt Fork River north of Highway 11, east branch of the Salt Fork River south of Highway 11, the Children’s Fishing Pond at the refuge headquarters, and the portion of the lake south and east of the buoy line from



*Fishing Derby Winners
USFWS Photo*

State Highway 38. In addition to the usual recreational fishing opportunities available on the lake and streams of the refuge, a fishing derby for children is held during National Fishing Week at the Children's Fishing Pond. The Children's Fishing Pond is also available for other group uses. The Bonham fishing pond is only for youth and persons with disabilities and is a "catch-and-release" pond. Recently, fishing activity on the refuge has declined as the reservoir has silted in and become shallower. Nonetheless, the majority of saugeye and bass are caught near the dam, which is the deepest part of the lake. Drift fishing and trotlines are also popular forms of permitted fishing.

3.12.3 Wildlife Observation and Photography

The .35-mile Sandpiper Trail on the north side of the refuge, just south of State Highway 11, is an accessible trail with two footbridges and an observation deck with spotting scope for viewing shorebirds that abound during the spring and fall migrations. The trail takes visitors to the edge of the salt flats, and panels at the end of the trail provide information on bird identification, migration, and management. The trail also has an access road and a parking area.

The 1.25-mile Eagle Roost Nature Trail, adjacent to the refuge headquarters, gives visitors the opportunity to enjoy a wide variety of wildlife and habitats. The trail is open year-round and allows visitors a chance to see the wildlife of Eagle Roost Pond and Sand Creek Bay.

The Harold F. Miller auto tour route provides a 2.5-mile meandering tour of refuge ponds and farm fields where deer and other wildlife abound. Along the route, the short .25-mile walk to Casey Marsh Tower provides visitors outstanding views of ducks, geese, and eagles in late fall and winter.

Big Marsh, along Highway 11, includes a kiosk with an observation platform and interpretive panels providing visitors an excellent opportunity to view shorebirds, waterfowl, colonial water birds, raptors, and other wildlife year-round.

3.12.4 Environmental Education and Interpretation

Refuge programs and events such as educator workshops, school group tours, the annual Crystal Festival, birding festivals, falconry exhibits, wildlife photography exhibits, and scouting programs are an essential part of environmental education efforts at Salt Plains. Other interpretation and education efforts include wildlife viewing, interpretive trails, auto tours, signs, and informational kiosks located throughout the refuge. Salt Plains NWR is the



*Another interesting birding opportunity
Photo: Anne Wilbur*



Young crystal diggers

USFWS Photo

only known site where the unique hourglass-inclusion selenite crystals are found. Currently, crystal digging is allowed from April 1 to October 15 and has been determined to be a compatible refuge use. Crystal digging is allowed on 20% of the total crystal digging area and is rotated annually. Although crystal digging itself is not a wildlife-dependent public use, the outdoor experience provides an opportunity to enjoy wildlife-dependent recreational activities (i.e., wildlife observation) as well as providing an educational experience of the natural resources of the refuge and its special geological history (Figure 9).

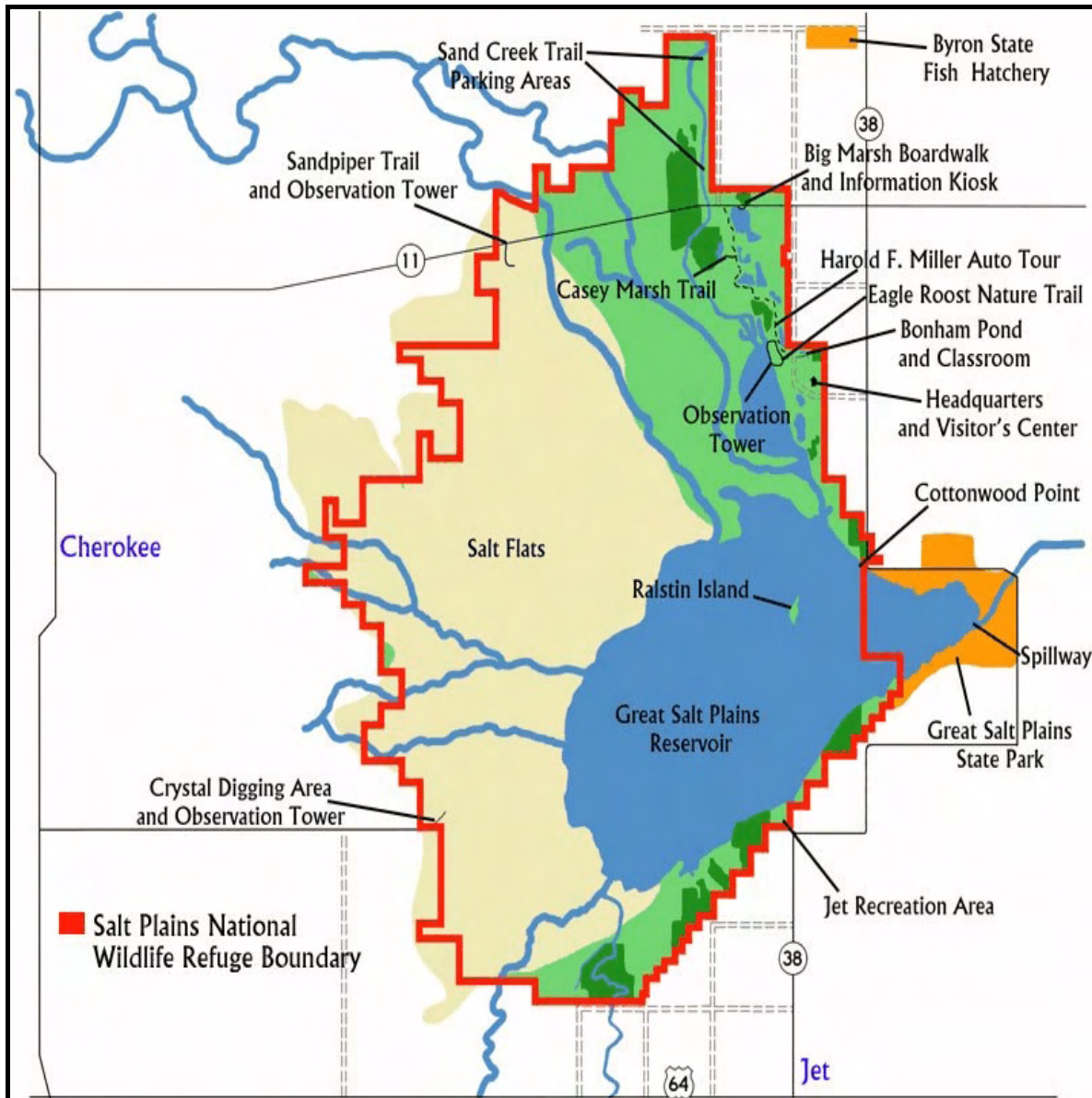
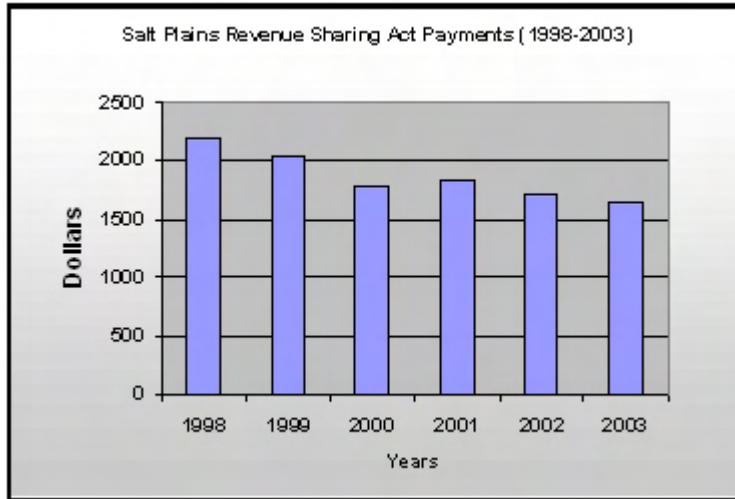


Figure 9. Public Use Features

3.13 Socioeconomic Features

The socioeconomic impact of Salt Plains NWR can be divided into three categories. First is the direct expenditure of refuge resources, such as salaries to local employees and expenditures for equipment and supplies; second is the impact generated by attracting between 130,000 and 150,000 visitors to



the refuge and the associated surrounding communities; and third is the federal revenue sharing that is intended to offset the lost county revenue due to property being removed from the tax rolls.

Annual refuge budget expenditures typically exceed \$400,000. These expenditures range from employee salaries to equipment and material purchases from local suppliers, as well as suppliers in Enid and Oklahoma City. The overall economic impact of refuge visitation is difficult to assess precisely. However, it is estimated that 60% of visitors make purchases from local stores, pay fees, and buy licenses, etc. during their visit to the refuge area. The refuge and annual events

Figure 10. Revenue Sharing Act Payments (USFWS Region 2 Realty Division)

such as the Crystal Festival bring in many visitors that provide positive economic and recurring benefits to the surrounding communities. Refuge Revenue Sharing Act payments from the Department of the Interior are designed to offset the burden that counties feel when properties are removed from the tax rolls through actions taken by the Department. Refuge payments to Alfalfa County from 1998 to 2003 are shown in *Figure 10*. The majority of the payment in lieu of taxes (over \$50,000) is made by the Corps which has primary jurisdiction over the lake and floodplain lands.

3.14 Population

The population of Alfalfa County has declined over the past two decades (*Figure 11*). According to the U.S. Census Bureau, the county population was 7,077 in 1980; 6,393 in 1990; and 6,105 in 2000. This represents a 14% drop in population since 1980 and is similar to population declines in other agricultural communities over the same time period. As of 2000, the average age of Alfalfa County residents was 43 with 74% of the population being 25 or older.

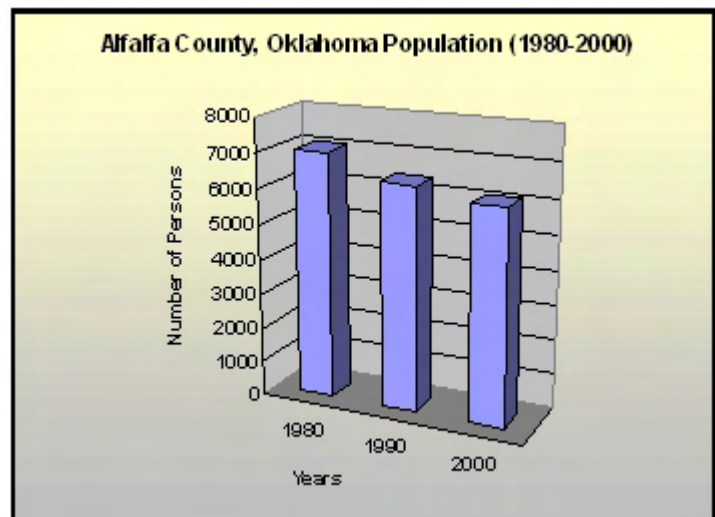


Figure 11. U.S. Census Bureau population figures

3.15 Economic Growth

In 1893, the Cherokee Outlet was opened to settlement through the famous “land run.” Since that time, agriculture has been the primary economic activity in Alfalfa County. In 1994, farm income accounted for 42% of all income in the county.

Retail sales income was the next highest category with 11.5%. No other category of income exceeded 10% of the total for the county.

Any economic community that is heavily tied to agriculture is susceptible to the economic fluctuations that are inherent in agribusiness. Diversification of the economic base can help alleviate some of the economic vulnerability that agricultural communities experience. In recent years, organizations such as the GSPA have made concerted efforts to utilize the resources of the Great Salt Plains Lake and the refuge to generate economic benefits through promoting tourism such as birding, the Crystal Festival, Pelican Celebration, and other events.



Crystal cluster unearthed

USFWS Photo

4.0 MANAGEMENT DIRECTION

The following goals, objectives, and strategies reflect the issues and concerns expressed by the planning team and the public. The main priorities for the refuge include protecting and restoring native habitats such as mixed-grass prairie and wetlands, protecting and providing habitat for waterfowl, migratory birds, federally-listed species, and providing increased opportunities for public use, environmental education, and interpretation. Unless otherwise noted in the text, the following items are expected to be implemented throughout the 15-year term of this plan.

4.1 Migratory Birds/Federally-listed Species Management

Goal 1: Protect and enhance migratory birds and federally-listed species and habitats of special concern to achieve refuge purposes.

Objective 1-1: Protect whooping cranes and enhance whooping crane habitat on the refuge.

Rationale for Objective: The refuge is designated as *critical habitat* for endangered whooping cranes (43 FR 20938, May 15, 1978). The Endangered Species Act directs federal agencies to conserve endangered and threatened species and designate *critical habitat*. Whooping crane protection and habitat enhancement are important refuge needs and responsibilities. Although migrating whooping cranes feed and roost in croplands, Salt Plains provides essential fresh and brackish wetland habitats that support whooping cranes during their migrations. Efforts to maintain and enhance the refuge's wetlands, lake/reservoir margins, and croplands are necessary to support whooping cranes.

Strategy: Participate in the implementation of the Aransas-Wood Buffalo Population Whooping Crane Contingency Plan, as it relates to Salt Plains NWR. **Ongoing**

Strategy: Continue to implement the refuge's contingency plan in cooperation with the ODWC to protect whooping cranes during the hunting season. This plan includes monitoring whooping crane occurrence, informing hunters, placing posters, and providing other visual aides to identification. This strategy is also to ensure compliance with the Endangered Species Act, as per the CCP's IntraService ESA Consultation (See Appendix G). **Ongoing**

Strategy: Control salt cedar along waterways and shorelines to enhance and increase whooping crane habitat. **Ongoing**

Strategy: Utilize prescribed fire to maintain and enhance approximately 1,100 acres of whooping crane feeding habitat on the south end of Salt Plains Lake. **Ongoing**

Strategy: Continue to produce grain and browse forage to help sustain whooping cranes annually through implementation of low input sustained agricultural efforts. **Ongoing**

Strategy: Participate with the ODWC, the State of Kansas, and the Regional Whooping Crane Coordinator to maintain current information on sightings and threats to responsible individuals along the migration corridor. E-mail lists have been developed for prompt notification of sightings. **Ongoing**

Objective 1-2: Increase least tern nesting and feeding habitat on Salt Plains NWR.

Rationale for Objective: The refuge is legally mandated to manage for threatened and endangered species. Recovery plans for threatened and endangered species provide specific guidance to monitor, study, and protect these species and their habitats. Enhancing and restoring least tern habitat is a priority in the recovery of least terns occurring at Salt Plains NWR. Least terns nest on the salt flats along with the threatened snowy plover.

Strategy: Construct least tern nesting areas consisting of pads of gravel and coarse sandy loam soil, chick shelters, electric fencing, and ponds for feeding areas on the abandoned railroad right-of-way through the refuge (RONS # 97015). **Year 2007**

Strategy: Provide feeding areas for the least terns that are close to their nesting areas by implementing moist soil management on the old Salt Creek floodplain which would provide an additional 180 acres of high quality wetlands (RONS #98101). **Year 2007**

Strategy: Direct efforts toward protection of least tern eggs from predation and flooding on the salt flat (RONS # 97006). **Ongoing**

Objective 1-3: Encourage wintering use by bald eagles and golden eagles by protecting and enhancing roost areas.

Rationale for Objective: The bald eagle and golden eagle are common winter residents on Salt Plains. Protecting and maintaining eagle roosting habitat is necessary to satisfy their sheltering requirements. Enhancing roosting habitat is intended to encourage more eagle wintering use.

Strategy: Annually assess the condition of existing trees used by bald eagles in the winter; remove underbrush (roughleaf dogwood, hackberry, and black locust) at roost sites in area C-9 and the northeast lake shoreline to modify habitats that otherwise attract predators (RONS #97020). **Ongoing**

Strategy: Install artificial roost sites in moist soil units and impoundments as perching sites where large trees are not available. **Year 2010**

Objective 1-4: Monitor the status of federally-listed species to identify the presence, population levels, and distribution of these species as determined by Service policy and regional endangered species biologists.

Rationale for Objective: Continuing long-term monitoring is an integral part of threatened and endangered species management as well as in carrying out recommendations described in species recovery plans.

Strategy: Monitor activities or conditions that may adversely affect an endangered or threatened species. The Service will ensure protection of the T/E species through compliance with Section 7 of the Endangered Species Act (RONS #97006). **Ongoing**

Strategy: Expand wildlife surveys to a 10-day shorebird and least tern census on the salt flats, and waterbird census on Ralstin Island (RONS #97006). **Year 2007**

Strategy: Conduct studies of young terns and shorebird survival that will include placing transmitters on the young (RONS #97006). **Year 2008**

Strategy: Continue nest monitoring and census activities for the least tern and snowy plovers that includes determining survival rates from fledgling to young adult stages (RONS # 97006). **Ongoing**

Strategy: Monitor the impacts of forage availability during drought years on the least tern's reproductive success (RONS #97006). **Ongoing**

Strategy: Monitor for contaminants, disease, or other threats to federally-listed species on the refuge and within the Area of Ecological Concern. **Ongoing**

Objective 1-5: Maintain wetland habitat to provide approximately 2 million goose use days and 3 million duck use days. Continue to plant cropland grain and green browse to supplement forage for waterfowl.

Rationale for Objective: Maintain sufficient habitat to support waterfowl populations as part of the original refuge purpose as well as supporting the objectives of the NAWMP.

Strategy: Continue the waterfowl inventory and monitoring plan. **Ongoing**

Strategy: Maintain breeding and brood-rearing habitats for at least 75 pairs of ducks (mallards, wood ducks, hooded mergansers) and for 30-40 pairs of Canada geese (RONS #00005). **Ongoing**

Strategy: Enhance waterfowl habitats specifically to meet the objectives of the NAWMP focusing on target species including mallard, pintail, wood duck, and gadwall (RONS #00005). **Ongoing**

Strategy: Continue monitoring of the artificial islands, gradation of sediment, and erosion remediation on Ralstin Island. **Ongoing**

Strategy: Enhance/Increase waterfowl habitats by adding 180 acres of moist soil units in the floodplain between the east and west fork of the Salt Fork River (RONS #98101). **Year 2007**

Objective 1-6: Continue to cultivate existing cropland to maintain approximately 1,250 acres of forage crops for migrating waterfowl, geese, and cranes through force account.

Rationale for Objective: The refuge croplands consist of 1,250 acres of land. The majority of croplands are farmed through force account. The primary crops consist of winter wheat, millet, sunflower, and cow peas. A minimum of 600 acres is planted in winter wheat green browse. Grains and green browse from these crops provide forage for ducks, geese, cranes, and resident wildlife.

Strategy: Continue to produce grain and browse forage to help sustain over 2 million Canada geese use days and 3 million duck use days, and one-half million sandhill crane use days annually through implementation of low input sustained agricultural efforts. **Ongoing**

Strategy: Address the control of pests and removal/control of exotic invasive plants that impact food crop production. To be included in an integrated pest management plan. **Year 2007**

Strategy: Conduct annual surveys of the refuge, including wetlands, ponds, croplands, irrigation canals, and riparian habitats to identify and map areas with invasive plants to use in developing control strategies. **Year 2007**

Strategy: Within 5 years, reduce total area infested with invasive weed and woody species on the refuge by 20 to 40% through mechanical and biological means (RONS #97005, WUI). **Year 2011**

Objective 1-7: Improve water management to maintain and enhance wetlands in impoundments which on a good water year (refuge receiving 100% allotments) would provide at least 1,070 acres of managed wetlands.

Rationale for Objective: Effective maintenance and enhancement of the ponds, wetlands, and moist soils habitat of the refuge requires exceptional management of water resources. In addition, as a significant shorebird site, Salt Plains' water resources are important in providing and maintaining habitat and a detrital food base to enhance invertebrate populations (*See Also: Objective 4-3*).

Strategy: Utilize water level manipulation, mowing, and disking in moist soil units to control undesirable emergent vegetation on 15 to 20% of the wetlands annually. **Ongoing**

Strategy: Monitor and evaluate wetland habitat components through annual biological surveys of invertebrate diversity and vegetation response. **Ongoing**

Strategy: Establish moist soil units (180 acres) in the floodplain between the east and west forks of the Salt Fork River by building water control structures (RONS #98101). **Year 2007**

Strategy: Maintain water management methods to provide approximately 700 acres of emergent vegetation (bulrushes, sedges, wild millet, etc.) and 300 acres of aquatic plants (pondweeds, widgeon grass, etc.) (RONS #00005). **Ongoing**

Strategy: Implement moist soil management to provide seasonally flooded habitats for migrating shorebirds and waterfowl of which 50% will be less than 8 inches deep (RONS #00005 and #98101). **Ongoing**

Strategy: Annually clean and repair water control structures prior to the flood season. **Ongoing**

Strategy: Develop a monitoring program and GIS database to evaluate wetlands in terms of key habitat components such as acres of wetland types, wildlife use, water quality, and vegetation response in relation to water management. **Year 2008**

Strategy: Identify opportunities for establishing additional moist soil units to provide seasonally flooded emergent wetland habitats for migratory and nesting waterfowl. **Year 2010**

Strategy: Reduce slopes/gradients by grading the ground within moist soil units to make water levels consistent from 1 to 8 inches in depth. No more than 20% of the units will be dried and graded during any one year. **Ongoing**

4.2 Natural Diversity and Ecosystem Management

Goal 2: Protect and enhance the ecological integrity of the refuge and contribute to the objectives of the Ark/Red Ecosystem and other applicable plans.

Objective 2-1: Document, monitor, and maintain viable, diverse populations of native flora and fauna.

Rationale for Objective: More complete inventorying and monitoring populations of priority species such as neotropical birds, nesting birds, non-game migratory birds or any species of management concern is necessary to help achieve Goal 2. This includes incorporating priority species needs or any species of management concern into refuge wildlife and habitat management programs (*See Also: Objective 2-6*).

Strategy: Develop a thorough GIS database of and map flora and faunal distributions found in all habitat types on the refuge and vicinity. **Year 2008**

Strategy: Develop and implement an inventory and monitoring plan (as part of the Inventory and Monitoring Plans) for priority species to determine population size, distribution, trends in habitat use, and responses to management. **Year 2008**

Strategy: Analyze biological survey data to determine population trends every year once a database is established. Adjust population objectives into wildlife inventory plans and the Habitat Management Plan as appropriate (*See Also: Objective 2-6*). **Ongoing**

Strategy: Review and incorporate, as appropriate, applicable species-related elements of national and international plans for fish and wildlife (i.e., Oklahoma Comprehensive Wildlife Conservation Strategy, Central Flyway Program, Shorebird Conservation Plan, NAWMP, Partners in Flight, etc.). **Ongoing**

Strategy: Monitor shorebird food supply by conducting invertebrate surveys (RONS #97006). **Year 2008**

Strategy: Conduct a shorebird banding program as per the Western Hemisphere Reserve Shorebird Network (RONS #97006). **As requested**

Strategy: Continue nest monitoring and census counts from May through August for the American avocet and black-necked stilt (RONS #97006). **Ongoing**

Strategy: Continue to conduct raptor surveys on the refuge and document species occurrence (RONS #97006). **Ongoing**

Strategy: Implement breeding surveys to document species diversity, population levels of priority species, and trends by habitat type. Priority species include: Painted bunting, white-faced ibis, tricolored heron, snowy plover, grasshopper sparrow, and prothonotary warbler. **Ongoing**

Objective 2-2: Maintain native habitats, meet refuge management goals, and help meet national and state goals for controlling invasive species on the refuge.

Rationale for Objective: Preventing the introduction and spread of invasive species is an ongoing and serious threat to native habitats. Executive Order (EO) 13112 requires, among other things, that

federal agencies use relevant programs, authorities, and funds to monitor for, prevent, and control the spread of invasive species. In addition, the State of Oklahoma requires control of noxious weeds such as Canada thistle, musk thistle, and bull thistle.

Strategy: Develop and implement an integrated pest management plan to address refuge habitat and ecosystem management needs as well as protect waterfowl food crop production, and comply with federal and state mandates. The Integrated Pest Management Plan includes strategies for surveying, mapping, monitoring, and controlling invasive species in both croplands and wildlands and supports other objectives with complementary strategies identified herein. Currently, some invasive species control is ongoing as per existing budgets and staff. **Year 2007**

Strategy: Use mechanical and chemical control on salt cedar. Evaluate potential for using biological control and implement, if feasible. Continue to burn as part of an integrated management approach to discourage re-infestation. Re-treat areas as necessary to follow up initial control (RONS # 97005). **Ongoing**

Strategy: Monitor for early detection of exotic thistles (i.e., bull thistle, Canada thistle) and remove (along with musk thistle) prior to budding by mechanical or chemical means. **Ongoing**

Strategy: Survey and map red cedar on the refuge, and monitor for spread and to evaluate effectiveness of fire for controlling, not eliminating, red cedar. Use mechanical control as necessary for large trees (RONS # 97005). **Ongoing**

Strategy: Monitor for and map other invasive/exotic species as identified in the Integrated Pest Management Plan. **Ongoing**

Objective 2-3: Maintain/improve habitat to provide nesting, cover, and forage for game birds such as turkey and quail.

Rationale for Objective: While upland game bird habitat is good on portions of the refuge, grassland habitat has been lost due to encroachment of red cedar and salt cedar. Additional habitat can be added and maintained to offset the habitat that is frequently lost to flooding on the northern portion of the refuge.

Strategy: Determine population objectives in partnership with the ODWC for upland game bird species (mourning doves, bobwhite quail) and monitor their population status. Integrate population objectives of these species into wildlife inventory plans and the Habitat Management Plan as appropriate. **Ongoing**

Strategy: Continue to implement management activities to increase upland habitats and/or grassland restoration (such as red cedar and salt cedar control), particularly in the public hunt areas (RONS #97008, #97005). **Ongoing**

Strategy: Continue prescribed burning of Range Units 5 and 6. Initiate prescribed burning in Range Unit 4 and Hunting Units A and B to improve upland game habitat. **Ongoing**

Objective 2-4: Maintain a stable white-tailed deer population respective of the carrying capacity of the refuge. The current goal is approximately 500 animals.

Rationale for Objective: The current deer population is near the carrying capacity for available habitats on the refuge. Management activities will be initiated to maintain deer population levels suitable to the available habitat on the refuge, and to reduce crop depredations on adjacent lands and deer/car collisions.

Strategy: Implement management activities to maintain the deer population consistent with the carrying capacity of the refuge (currently about 500 deer) and encourage optimal fawn recruitment rates for annual habitat conditions (RONS #97008). **Ongoing**

Strategy: Conduct five spotlight surveys in late August and post hunt surveys in January to monitor the deer population. **Ongoing**

Strategy: Utilize deer surveys to determine number of hunting permits issued. **Ongoing**

Objective 2-5: Maintain and/or enhance aquatic habitats of the refuge to provide optimal fish habitat for native fish species. Manage fisheries to provide forage for water birds and to provide opportunities for a quality public fishing program through stocking efforts.

Rationale for Objective: Enhancement of aquatic habitats would benefit wildlife while also improving the opportunities for public fishing. Trotline depth in the public fishing areas on the refuge is a critical issue. Entanglement of water birds such as American white pelicans by trotlines is a concern. Efforts to reduce siltation can improve aquatic habitats.

Strategy: Coordinate with State Fishery Biologist on water manipulation/management of C-9 pond as a fish rearing pond for fingerlings or brood stock for later release on the refuge. **Ongoing**

Strategy: Continue to monitor the impact of trotlines on foraging water birds such as white pelicans and coordinate with ODWC to amend regulations to reduce impacts if needed. **Ongoing**

Strategy: Remove salt cedar and replant native vegetation along the banks to reduce siltation (RONS #97005). **Ongoing**

Strategy: Continue moist soil management to provide about 1,070 acres of shallow wetlands in April/May/June for shorebird use (RONS #98101, #00005). **Ongoing**

Strategy: Assist State Fishery Biologist with pumping water into Coon Hollow fish rearing pond for fingerlings for release onto the refuge. **Ongoing**

Strategy: Assist State Fishery Biologist with monitoring and stocking fish into Bonham Pond for children and persons with disabilities. **Ongoing**

Objective 2-6: Determine habitat objectives based on the requirements of priority species (*See Section 3.4*). Improve or re-create refuge habitats to increase ecological integrity and meet refuge population objectives, and contribute to the habitat objectives of the national, state, and regional conservation plans.

Rationale for Objective: Landscape level plans (*See Section 2.4*) that apply to the Ark/Red Ecosystem have identified important habitats that are under threat of alteration or development such as wetlands, streams, floodplains, forests, and native grasslands as well as the identification of priority species. As part of an inventory and monitoring (step down) plan of priority species to be developed by 2008 and Habitat Management Plan; the refuge can play a role in helping to expand, protect, or restore these important habitats and wildlife within this Ecosystem.

Strategy: Review landscape level plans that apply within the Ark/Red Ecosystem to incorporate into the development of a Habitat Management Plan to benefit priority species identified in these plans. **Year 2009**

Strategy: Create or improve habitats to provide quality wetland habitats for migratory birds using the Central Flyway (RONS #98101 and #00005). **Ongoing**

Objective 2-7: Through implementation of prescribed fire, enhance habitat for sandhill cranes.

Rationale for Objective: Prescribed burning is an effective method to manage and maintain the refuge habitat utilized by cranes.

Strategy: Continue to utilize prescribed burns to enhance sandhill crane habitat and monitor the effects. **Ongoing**

Strategy: Construct access structures to allow construction of fire lanes around the Range Unit 4. **Year 2009**

Strategy: Plant existing alkali flats with wheat grass. Remediate the ground to return to wheat products. **Ongoing**

Objective 2-8: Pursue opportunities to coordinate with other federal, state, and private landowners to protect or re-create unmodified wetlands for the benefit of migratory bird resources and ecosystem health (*See also: Objective 7-1*).

Rationale for Objective: The refuge alone cannot effectively contribute to the Ark/Red Ecosystem. Working with federal, state, NGOs, and private landowners regarding wildlife management techniques will benefit this ecosystem to a larger extent.

Strategy: Demonstrate and interpret the wildlife values of wetland habitats to the public, particularly private landowners (RONS #97009, #97011, and #97014). **Year 2007**

Strategy: Assist private landowners and state and federal agencies with habitat restoration and flood control projects through technical assistance. **Ongoing**

Strategy: Develop partnerships with local landowners through the "Partners for Wildlife" Program who may be interested in projects to enhance wildlife habitat. **Ongoing**

Objective 2-9: Through the use of appropriate land management programs (grazing, fire, mechanical, and herbicide), restore and maintain approximately 4,500 acres of native grass species on refuge lands to benefit native grassland nesting birds and other components of this community type and implement range monitoring to evaluate vegetation changes as a result of management activities.

Rationale for Objective: The refuge maintains about 4,500 acres of grasslands. This habitat type is managed to increase plant diversity and plant vigor using a combination of grazing and prescribed burning.

Strategy: Control red cedar and remove salt cedar from refuge grasslands by prescribed fire, mechanical means, or by herbicide application (RONS #97005). **Ongoing**

Strategy: Utilize a volunteer coordinator position (GS-7) to coordinate inmate volunteers and other volunteers to conduct upland restoration (RONS #97008 and #97005).
Year 2007

Strategy: Target and prioritize areas for restoration. Develop and implement a prescribed burn plan in those targeted areas for the reestablishment of native mixed-grass species.
Ongoing

Strategy: Implement long-term habitat monitoring programs to determine grassland condition and restoration progress in targeted areas with respect to desired species diversity.
Ongoing

Strategy: Continue to use grazing as a grassland management tool; to increase plant vigor and help maintain grassland communities. **Ongoing**

Objective 2-10: Encourage research with universities and other institutions that will contribute to the biological database of the refuge and/or contribute to habitat and population management. The research activities will be reviewed periodically by the Service and other representatives to evaluate research results. Research priorities include federally-listed and priority species monitoring and habitat management activities (*See also: Objectives 1-4, 2-1, 2-2, 2-6, and 2-9*).

Rationale for Objective: Research priorities on major ecosystem issues for the Ark/Red Ecosystem focus on habitat restoration that includes: restoring the native grassland habitat, riparian habitat, aquatic and terrestrial communities, and the monitoring of wildlife and plant response to management activities. This information can be used by the refuge staff to make better resource management decisions that support the purposes of the refuge along with contributing to the objectives of the Ark/Red Ecosystem Plan and other landscape level plans such as the Oklahoma Comprehensive Wildlife Conservation Strategy.

Strategy: Work with the Regional Office (RO) Biologist to prioritize research needs based upon biological resources and management activities (RONS #97020). **Ongoing**

Strategy: Identify information gaps regarding distribution and abundance of flora and fauna. Seek opportunities to conduct studies that meet high-priority research needs.
Ongoing

4.3 Stream and Riparian Habitat Management

Goal 3: To reestablish natural stream channel, floodplain characteristics, and provide optimal flow regimes to prevent or alleviate flooding potential on the refuge and adjacent private lands.

Objective 3-1: Alleviate flooding potentials on the refuge and adjacent private lands.

Rationale for Objective: Due to the relatively flat topography, the potential for flooding is extreme and flood conditions on the refuge can easily affect adjacent lands. Preventive flood control actions on the refuge can benefit the refuge as well as adjacent landowners and communities.

Strategy: Maintain the water diversion structure on the diversion reach of Sand Creek. Open diversion gates during floods. **Ongoing**

Strategy: Periodically excavate the high flow conveyance channel west of Sand Creek at the northern boundary to increase full bank conveyance. **Ongoing**

Strategy: Consult and coordinate with the RO hydrologist and Technical Services to investigate/identify hydraulic properties of the stream channels in relation to flooding potentials of the Salt Fork River, Twin Springs Creek, Clay Creek, and Cottonwood Creek. **Year 2009**

Strategy: Continue to coordinate with the NRCS, the Corps, and the ODWC regarding flood damage and prevention. **Ongoing**

Strategy: Maintain the floodplain of Cottonwood Creek and Twin Springs Creek as a grassland community by the control of salt cedar and brush through mechanical or chemical means. **Ongoing**

Strategy: Protect restored riparian sites from trespass cattle by fencing. **Ongoing**

4.4 Water Supply/Quality

Goal 4: To facilitate, maintain, and develop an adequate quality water supply for wetlands management.

Objective 4-1: Protect existing water rights by monitoring and documenting quantities of water delivered, timing, places of use, and complete an annual water use report.

Rationale for Objective: The refuge has two water rights permits, one for 907 acre-feet and another for 3,000 acre-feet per year taken from Sand Creek. On these two permits, the refuge utilizes between 2,605 and 3,607 acre-feet annually for wetland management.

Strategy: Continue to collect flow readings in the intermittent and spring fed streams that bring water to the refuge. **Ongoing**

Objective 4-2: Improve and maintain the water delivery system to decrease water losses during water delivery and distribution; to enhance refuge wetlands, and optimize production of moist soil plants that sustain migratory birds, aquatic plants, invertebrates, amphibians, and fish.

Rationale for Objective: Efficient use of water is always desirable, particularly during times of drought or periods of reduced water delivery.

Strategy: Determine where to install water control structures with the assistance of the NRCS. **Ongoing**

Strategy: Through bank stabilization, prevent dike erosion and continue with annual maintenance to protect water structures, canal crossings, and access roads. **Ongoing**

Strategy: Redesign and rebuild existing dikes on the refuge to reduce damage or loss during high water events with assistance from the NRCS. **Ongoing**

Objective 4-3: Determine levels of organic and inorganic contaminants in refuge surface and groundwater and monitor water quality of refuge wetlands to detect point source or non-point source contamination.

Rationale for Objective: Periodic monitoring of water quality is necessary for detecting contaminant problems as well as determining the relative health of the aquatic habitat.

Strategy: Conduct contaminant investigation of waters entering the refuge for organic and inorganic contaminants. The Service's Ecological Services division, in coordination with the USGS and in consultation with the refuge, will perform the sampling. **Ongoing**

Strategy: Coordinate with the Department of Environmental Quality and EPA for contaminant monitoring on the refuge. **Ongoing**

Strategy: Monitor aquatic vertebrates and invertebrates as indicators of water quality. **Ongoing**

4.5 Land Protection and Acquisition

Goal 5: Establish a land protection program that fully supports accomplishment of species, habitat, and refuge management objectives.

Objective 5-1: On a willing seller basis, evaluate adjacent or nearby properties as they become available, particularly private lands with high flood potential; to increase habitats suitable for moist soil management, enhance corridors linking public lands, and ensure continuity of refuge management efforts. This includes evaluating wetland properties near the refuge for potential mitigation lands.

Rationale for Objective: Properties adjacent to or nearby the refuge that have potential for benefiting wildlife and are available for purchase from a willing seller should be evaluated and possibly acquired. Such properties may enhance the habitat provided for species already on the refuge or may provide habitat for species not currently found on the refuge.

Strategy: Establish acquisition priorities based upon habitat values (potential for wetland or moist soil management) or threats to existing resources. **Ongoing**

Strategy: Explore refuge boundary expansion to protect natural resource values of the area through coordination with the Service's Realty Division. **Ongoing**

Strategy: Acquire 140 acres from the ODOT for wetland mitigation and replacement lands for the Highway 11 project. This land (Allen Tract) is located 3 miles north of the current refuge boundary and has been identified as an “Alfalfa County Birding Hotspot.”
Ongoing

Strategy: Continue to identify potential acquisition lands for mitigation banking which have high wetland values. **Ongoing**

4.6 Cultural Resources

Goal 6: To protect and interpret the prehistoric and historic cultural resources associated with Salt Plains NWR.

Objective 6-1: Ensure all refuge management activities are in compliance with federal historic preservation mandates and Service policy and procedures.

Strategy: Consult with the Regional Historic Preservation Officer prior to all proposed construction actions and upon receiving requests for archaeological investigations on refuge lands. **Ongoing**

Strategy: Protect all cultural resources on refuge lands as federally mandated, such as ARPA, and according to Service policies and procedures, including appropriate law enforcement measures. **Ongoing**

Strategy: Complete a Cultural Resources Management Plan by 2012.

Objective 6-2: Interpret the cultural resources of the refuge.

Rationale for Objective: Interpretation of the history of the area is an important aspect of highlighting the refuge’s resources and people’s connections with the land. Although people are more removed from the environment today than in times past, they are nonetheless a part of it.

Strategy: Continue to work with the community to document more of the refuge’s history and collect historic photographs and integrate this information into the refuge’s programs.
Ongoing

Strategy: Develop exhibits to inform and interpret the history of the area and its connection to wildlife and people. **Year 2009**

4.7 Interagency Coordination and Relationships

Goal 7: To maintain or strengthen existing interagency and jurisdictional relationships and establish new partnerships within the community for improving wildlife and habitat resources on the refuge and the Area of Ecological Concern.

Objective 7-1: Strengthen partnerships and pursue agreements with other agencies, organizations, groups, and individuals of the public to benefit the fish and wildlife resources of the refuge and surrounding lands within the Area of Ecological Concern.

Rationale for Objective: Partnerships are an effective method for enhancing wildlife habitats within and beyond the boundaries of the refuge. Fish and wildlife resources, public use, and educational opportunities can all be fostered and enhanced through the coordination with state,

federal, NGOs, and private organizations. Coordination and combining efforts of the Service with the ODWC, Great Salt Plains State Park, NRCS, ODOT, Tulsa Corps of Engineers, Oklahoma Department of Corrections, etc., would mutually benefit many programs such as public use, biological, species and habitat management, and law enforcement.

- Strategy: Refuge staff will participate in and encourage programs involving the cooperation of the NRCS, ODWC, other agencies, and stakeholders within the community for the protection of natural resources or the resolution of resource issues within the Area of Ecological Concern (Lower Salt Fork River Drainage) (RONS #03001). **Ongoing**
- Strategy: Work with the schools and community groups to further the awareness of the Service and refuge mission (RONS #97011). **Ongoing**
- Strategy: Work with county and local state highway personnel to maintain road signs in the area and seek partnerships in the “Adopt-a-Highway” and “Leave No Trace” programs. **Ongoing**
- Strategy: Develop partnerships with outdoor associations and volunteers for trail maintenance and other refuge maintenance needs. **Ongoing**
- Strategy: Continue to coordinate under the cooperative agreement with the BJCC for the use of prison inmates to assist refuge staff with maintenance projects, such as brush removal, fence building, trail maintenance, and construction projects, etc. (RONS #97003, #97005, #97008, #97014, and #00003). **Ongoing**
- Strategy: Pursue opportunities with local businesses, schools, scouts, and other organizations to adopt the refuge for projects or special community programs such as Earth Day, Green Team, etc. **Ongoing**
- Strategy: Partner with the NRCS and the Corps to help address the issue of siltation effects occurring in the salt flats and Great Salt Plains Lake and identify potential solutions. **Ongoing**
- Strategy: Seek partnerships with NGOs (non-government organizations) such as the Audubon Society, Ducks Unlimited, Nature Conservancy, etc., that are interested in opportunities to enhance or to protect important wildlife habitats. **Ongoing**
- Strategy: Establish partnerships with landowners adjacent to the refuge to participate in habitat and population management activities and resource protection on private lands. Assist with Partners for Wildlife projects and other private land programs with adjacent landowners. **Ongoing**
- Strategy: Identify adjacent lands which would be suitable for other government programs such as the Wetland Reserve Program. **Ongoing**
- Strategy: Work with ODOT to develop a “mitigation bank” of wetlands for current and future mitigation of wetlands in the watershed. **Year 2007**
- Strategy: Coordinate with the ODWC to assist in the implementation of the Oklahoma Comprehensive Wildlife Conservation Strategy. **Ongoing**

4.8 Public Use, Environmental Education, and Outreach

Goal 8: To further the public's involvement with the refuge and to develop a broader base of public support through wildlife interpretation, education and outreach programs, and quality wildlife-dependent recreational opportunities.

Objective 8-1: Increase wildlife-dependent recreational opportunities that further the public's involvement and appreciation of the Refuge System through the development and implementation of a Visitor Services Plan. Public use will be monitored to determine the effectiveness of programs, levels and kinds of use, and for funding requests.

Rationale for Objective: Salt Plains NWR is extremely popular with the local community for a variety of activities, but is also gaining more recognition on a national and international scale. Digging for selenite crystals provides a unique one-of-a-kind outdoor experience but the refuge also offers quality hunting and fishing programs, interpretive nature trails, an auto tour route, observation towers, and picnicking. Current refuge visitation ranges from 130,000 to 150,000 visitors annually with most visits occurring at the refuge headquarters area followed by the auto tour, crystal digging area, and fishing at the Jet Recreation Area.

Strategy: Develop a Visitor Services Plan by **2007**.

Strategy: Phase out activities such as overnight camping to focus efforts and resources towards the six priority recreational uses as outlined by the National Wildlife Refuge Improvement Act of 1997. **Year 2007**

Strategy: Work with the RO to have the ODOT install signs for Salt Plains NWR (including mileage to the refuge) on Interstate Highway 35 and a display at the visitor information center at the Blackwell Exit by **2007**.

Strategy: Maintain refuge entrance signs and replace all current signs to meet the Service standards by **2010**.

Strategy: Monitor public use with permits, observations, and vehicle counters. This includes the repair of vehicle counters and the installation of additional counters where appropriate to improve baseline data on visitor use by **2008**.

Strategy: Work with the RO to secure funding to redesign existing interpretive panels, develop new interpretive signs on the refuge auto tour route, and expand and develop the nature trails, associated directional and interpretive signs, and brochures. **Ongoing**

Strategy: Continue to use the Youth Conservation Corps (YCC) Program and encourage other volunteers to assist with public use improvements. **Ongoing**

Strategy: Construct a 1.7 mile interpretive trail along Sand Creek (RONS #00001). **Year 2008**

Strategy: Construct a 1.6 mile hiking and waterfowl viewing trail along the abandoned railroad tracks right-of-way with a six-foot high viewing tower at the trail terminus. The trail will be made accessible, if feasible (Const #00002). **Year 2008**

Strategy: Construct a accessible fishing pier on Sand Creek and enhance the existing parking area along State Highway 11 (Const #00004). **Year 2008**

Objective 8-2: Encourage/Increase refuge visitation by offering educational opportunities for the public to observe wildlife, engage in interactive displays, interpretive programs, and foster visitor appreciation and understanding of fish and wildlife resources.

Rationale for Objective: The public usually has few opportunities to understand the relationship between the natural world and the quality of human life. Increasing the public's awareness, understanding, and appreciation of fish and wildlife resources can be achieved through interactive environmental education, partnerships, demonstrating management practices, developing site-specific curriculums, and providing interpretive materials. Several existing programs and facilities currently in place offer these educational and interpretive opportunities but could be expanded or improved. The following strategies are intended to further engage the public and increase the value and quality of the refuge experience and the refuge's role in the community.

- Strategy: Expand refuge relations with schools and universities (RONS #97011). **Ongoing**
- Strategy: Upgrade and maintain other interpretive kiosks and viewing platforms to encourage participation by groups. **Ongoing**
- Strategy: Construct a nature center to be operated jointly by the Service and the Oklahoma Department of Tourism. **Year 2010**
- Strategy: Enlist SCA volunteers to present school programs and staff the Visitor Center on weekends (RONS 97001). **Ongoing**
- Strategy: Develop a "backyard habitat" demonstration area at the refuge to educate the visitor on the values of urban landscaping for wildlife. Provide workshops to the public and educators interested in developing backyard habitats (RONS #97003). **Year 2008**
- Strategy: Work with ODWC coordinators to host a schoolyard habitat workshop for educators interested in developing wildlife habitats on their school campuses (RONS #97003). **Year 2007**
- Strategy: Have the Outdoor Recreation Planner (ORP) work with the ODWC to host educator workshops periodically. The workshops will use activities specific to the refuge from nationally developed curriculums of Project Wild, Aquatic Wild, Project Wet, and Wild Wonders of Wetlands. This workshop would also serve as partial training for teachers or non-formal educators wanting to use the refuge as an outdoor classroom. The target audience for the workshops will be teachers. The majority of the outdoor classroom activities will be aimed at 3rd grade through 9th grade students. **Ongoing**
- Strategy: Develop and design refuge-specific education and interpretive materials (displays, brochures, posters, pamphlets, etc.) with information on Ark/Red Ecosystem issues, the value of the Salt Plains wetlands, migratory birds, migration patterns, current research, and the role of fire management (RONS #03001). **Year 2010**
- Strategy: Develop refuge curriculum packages with activities, investigations, and equipment for teacher-led outdoor classrooms. **Year 2010**
- Strategy: Develop a refuge volunteer program for environmental education and interpretive programs, weekend nature walks, special refuge events, and opportunities to foster wildlife observation programs on the refuge (RONS #97008). **Year 2010**

- Strategy: Develop exhibits and panels for the new part of the Visitor Center. The exhibits will be aimed at the general public (RONS #97009). **Ongoing**
- Strategy: Prepare proposals and pursue funding sources through programs such as Challenge Cost Share, Partners for Wildlife, Watchable Wildlife and Service flexible funding sources to provide 2 to 3 interactive exhibits and/or interpretive panels of key Ark/Red Ecosystem habitats, species, and major issues for visitors at the refuge headquarters. **Ongoing**
- Strategy: Pursue partnerships with organizations such as the GSPA, Jet and Cherokee Chambers of Commerce, and other community civic groups to help develop special refuge events to foster wildlife observation at the refuge, and assist with nature tours and other public use events. **Ongoing**
- Strategy: Communicate and develop relationships with regional and state environmental educators and environmental education organizations (RONS #97011 and #97014). **Ongoing**

Objective 8-3: Increase outreach efforts to develop a broader base of public support for the refuge. Increase community outreach over present levels for the next five years through increased community presentations, special events, community-involved habitat restoration projects, and refuge staff representation at public events (county fairs, festivals, high school career days, etc.)

Rationale for Objective: Outreach programs are instrumental in expanding the refuge constituency in Oklahoma. The refuge has the potential for a wide range of outreach opportunities with staff, funding, and a volunteer program. The refuge currently presents between 40 to 50 programs reaching more than 2,000 people. In recent years the refuge has become more involved in community activities and has hosted the following events: Refuge Open House, children's fishing clinics and derbies, outdoor classrooms, and teacher workshops. Additionally, the refuge participates in various local festivals and special events, such as the Crystal Festival. Volunteers and a community support group would provide long-term consistent outreach efforts in the community, encouraging public awareness of the refuge and stewardship of our natural resources. The community of Cherokee recognizes the refuge as a major asset to their economic future. Community members are working with the Service to develop a partnership to showcase the refuge and its mutual economic benefits to the community.

- Strategy: Continue to recruit YCC youths from the communities and improve the program to offer youths opportunities to become involved in the stewardship of natural resources in the area. **Ongoing**
- Strategy: Use the ORP position to create and develop outreach products (programs, posters, brochures, press releases, website maintenance, art contests, etc.) that interpret the resources of the area to generate interest in the refuge. **Ongoing**
- Strategy: Promote resource education in the community by identifying audiences and providing programs specific to their needs. Develop partnerships with schools, youth groups, and civic groups for opportunities to provide presentations on natural and managed habitats within the Ark/Red Ecosystem. **Ongoing**

Strategy: Continue to work with the “Friends” support group and the GSPA in order to gather support for the refuge. The Friends group can generate support in the local community and serve as an advocate for the refuge and its goals. **Ongoing**

Objective 8-4: Expand/improve compatible hunting opportunities on the refuge.

Rationale for Objective: According to the ODWC, the availability of public land for hunting access is extremely limited in Alfalfa and adjacent counties in that part of Oklahoma. Hunting for ducks, geese, cranes, pheasant, quail, mourning doves, and whitetail deer has been determined to be an appropriate wildlife-dependent use compatible with refuge purposes. While hunting is a priority public use, the refuge is also managed for multiple uses and is *critical habitat* for whooping cranes and provides important feeding and resting areas for migratory and resident wildlife. Therefore, hunting opportunities can be expanded and/or improved to meet an increased demand, but must be balanced with other priority uses, remain compatible with refuge purposes, and be in compliance with applicable policies and mandates.

Strategy: Revise the Deer Hunt Plan. **Year 2009**

Strategy: Provide for improved public waterfowl hunting opportunities by implementing moist soil management (180 acres) within the floodplain between the east and west forks of the Salt Fork River (RONS #98101). **Year 2007**

Strategy: Conduct controlled turkey hunts on the refuge when turkey populations are at huntable levels, as determined by census. Revise the upland small game plan when turkey hunting is added.

Strategy: Pursue opportunities with the ODWC and other organizations to provide wildlife-oriented recreation programs (RONS #97014). **Ongoing**

Strategy: Construct a .25 mile accessible waterfowl hunting trail with a blind at the trail terminus to allow wheelchair bound or other disabled individuals an opportunity to hunt (Const #00003). **Year 2009**

4.9 Improvement of Staffing and Funding

Goal 9: To provide the necessary staffing, facilities, equipment, and operational funds to achieve the refuge’s vision.

Objective 9-1: Acquire an adequate and consistent amount of annual base funding to operate the refuge and provide additional staff specialists to achieve the goals of this CCP in support of the refuge vision. (See Section 5.2 for current and proposed funding and personnel)

Rationale for Objective: Base funding continues to be a problem for the refuge. Approximately 95% of the base funding is used to cover salaries. Operation and Maintenance (O&M) funding for Salt Plains NWR is so limited that current operations consume all funding. Implementation of the majority of CCP strategies will require additional O&M funding as well as proposed staffing increases.

Strategy: Document and justify base funding budget needs. **Ongoing**

Strategy: Utilize internal mechanisms such as RONS to justify and acquire the additional funding and personnel to accomplish most objectives within 5 to 10 years. **Ongoing**

- Strategy: Pursue agreements with other interested agencies and organizations to provide the needed personnel (interns, volunteers, co-op students, etc.), volunteer housing and other services, supplies, and funds to help accomplish goals and objectives. **Ongoing**
- Strategy: Work with the community to pursue an avenue to receive private funding through grants, donations, and partnerships with businesses, corporations, and institutions to subsidize environmental education programs, habitat restoration projects, or other community-based efforts benefiting wildlife habitats on refuge lands. **Ongoing**
- Strategy: Staff a seasonal biological technician position to assist in the biological program (RONS #97006). **Year 2007**

Objective 9-2: Use the Maintenance Management System (MMS) to provide a safe, efficient, and productive work environment for refuge employees and a safe infrastructure for refuge visitors. The Service will update the Health and Safety Plan addressing the needs of visitors to refuges in **2008**.

Rationale for Objective: Providing the basic, safe infrastructure for all refuge employees and visitors is essential for all refuge activities.

- Strategy: Use MMS to upgrade and maintain a safe infrastructure for refuge employees and visitors that reflects pride in the organization. **Ongoing**
- Strategy: Use RONS and the MMS to upgrade computers, office equipment, field equipment, and vehicles as needed in order to provide an efficient and productive support system for refuge staff. **Ongoing**
- Strategy: Use MMS to repair and/or replace/construct refuge equipment storage buildings and farm equipment to support agricultural efforts. **Ongoing**
- Strategy: Hire a maintenance worker to maintain visitor facilities such as trails, roads, viewing areas, parking lots, and restrooms. **Year 2007**

5.0 PLAN IMPLEMENTATION

Refuge objectives are intended to be accomplished over the next 15 years. Many of the management activities for Salt Plains NWR will require the development of step-down management plans. Implementation of new management activities will be phased in over time as described within the step-down plans and will be contingent upon funding, staffing, regional, and national Service directives. This section identifies major resource projects or planning to be accomplished within 5 to 10 years, staffing and funding needs, step-down management plans, and partnership opportunities.

5.1 Resource Projects

Listed below is a summary of major resource project needs addressing the goals and objectives of this plan. Each project summary includes planning links to this CCP. This list may be modified depending on future conditions and needs.

Project 1. Inventory and Monitoring

This involves developing a more comprehensive database of priority species by 2008. This project would include determining population levels, community diversity, and distribution. The database will allow for better wildlife management decisions to benefit these species and their habitats on the refuge. Planning Links: Goal 1, Objectives 2, 4, and 5; Goal 2, Objectives 1, 3, 4, 5 and 10; Goal 9, Objective 1

Project 2. Habitat Management

Develop and implement a Habitat Management Plan by 2009 that incorporates any new species information and includes management strategies for habitat for additional priority species as identified by regional and national conservation plans. Planning Links: Goal 2, All Objectives; Goal 9, Objective 1

Project 3. Visitor Services Management

A Visitor Services Plan will be developed in 2007 to guide present and future public use opportunities occurring on Salt Plains NWR. Planning Links: Goal 8, All Objectives; Goal 9, Objective 1

5.2 Funding and Personnel

Current Staff

The refuge has a current staff of 9 permanent full-time employees:

• Project Leader	GS-13	PFT
• Office Assistant	GS-7	PFT
• Wildlife Biologist	GS-11	PFT
• Refuge Operations Specialist	GS-11/12	PFT
• Eng. Equipment Operator	WG-10	PFT
• Maintenance Worker	WG-8	PFT
• Maintenance Worker	WG-8	PFT
• Outdoor Recreation Planner	GS-5/7/9	PFT
• Refuge Law Enforcement	GS-9	PFT

Additionally, there is a Youth Conservation Corps or YCC Leader and 5 YCC enrollees each year as well as numerous volunteers. Two Student Conservation Association (SCA) enrollees have been hired during the summer. The YCC Leader works for 10 weeks and the enrollees for 8 weeks. From 2 to 4 temporary maintenance workers (WG-6) are hired for construction or major maintenance.

Proposed Staff

To accomplish many of the objectives and strategies of this plan over the next 5 to 10 years, the following proposed staff and base funding would be required:

- Maintenance Worker/Volunteer Coordinator WG-7 PFT
- Biological Technician GS-5 TFT

The staffing requirements identified in this CCP would increase the staff level to 11 positions (11 full time employees). If all positions are filled, the refuge could carry out all aspects of the CCP. If some positions are not filled, all aspects may not be completed or those completed may be done over a longer period of time. Staffing and funding are expected to be accomplished over the 15-year life of the plan.

Current base funding and other funds

Total annual budget (k) for the refuge varies depending on the Service priorities for the resource projects each year and the national and regional allocation of Refuge Operating Needs System (RONS) and Maintenance Management System (MMS) funds (*See Appendix C*). The following is a general breakdown of the annual operation budget of the refuge:

Year	O&M 1261*	MMS 1262*	YCC	Const 20190* 21630	Acid Rain 1975	Total
2000	434.1**	514.0	15.5	286.1	2.95	1252.9
2001	439.4	196.0	16.0	119.8	3.00	774.2
2002	551.3	196.0	16.0	61.0	3.00	827.3
2003	569.3	290.2	15.5	88.3	4.32	967.6
2004	644.3	195.0	16.5	45.75	4.12	905.7
2005	618.5	261.7	19.0	–	–	899.2

* Description of funding categories:
 ** includes 12,100 for environmental compliance.

- 1261 funds include refuge operations and all personnel salaries including those used for maintenance. (Operations include annual fixed costs; salaries, utilities, gasoline, diesel, equipment repair, mandatory training/travel, as well as annual operations of refuge programs.) 1261 funding once distributed, may be used at the discretion of management to accomplish the refuge’s goals.

- 1262 funds are in three categories; annual maintenance (except salaries), deferred maintenance (maintenance that cannot be accomplished with current O&M funding and equipment replacement with costs greater than \$25,000), and equipment replacement (items costing between \$5,000 and \$25,000). 1262 funds in the deferred maintenance and equipment replacement categories are distributed for specific projects and, with few exceptions, cannot be used to accomplish alternative projects.

In fiscal year 2005, Salt Plains NWR had a baseline budget of \$618,500 to fund annual operating expenses, including salaries. An additional \$63,700 was received for annual maintenance. Current guidance requires that no more than 80 percent of the operating budget be used for permanent salaries. Station backlogs and proposed construction identified in the MMS totaled \$12,959,000. The RONS identifies \$891,500 in projects. The CCP proposes to accomplish more resource protection and habitat management, which can only be realized through funding MMS and RONS projects.

5.3 Step-down Plans and Other Documents

The following is a list of step-down management plans that include mandatory plans, programmatic, and special use plans. Often these plans will require compatibility determinations, EAs, or other supporting justification before they can be implemented. The preparation and execution of these plans are dependent on funding and the availability of staff or technical support.

5.3.1 Completed Plans

Station Safety Plan

This plan describes actions and improvements necessary to make station facilities and operations comply with federal occupational health and safety standards and other applicable regulations. The station Safety Plan was updated and completed in 1998.

Fire Management Plan

This plan determines the best use of fire in managing and enhancing the refuge habitats. The Fire Management Plan provides for specific strategies, conditions, and parameters for the use of fire in accomplishing habitat objectives for targeted grassland and wetland areas. For example, fire will be used as a tool to manage decadent emergent wetland vegetation and maintain 50% open water habitat in wetlands. Through cooperation with the Wichita Mountains NWR Fire Management Team, the refuge will implement prescribed burning as determined in the plan. The plan proposes to apply prescribed fire to burn approximately 1,500 acres annually to control red cedar and restore grassland health. Units will be burned on a 3-5 year cycle. This plan was completed in 2003.

Sign Plan

This plan provides a record of all signs installed throughout the refuge and guidelines for sign replacement. Although it was completed in 1985, significant changes have occurred since the plan was written. Therefore, it will be reviewed and updated in conjunction with the Visitor Services Plan by 2007.

Hunting Plans

This plan addresses specific aspects of the refuge hunting program defining the types of game to be hunted, season, hunting methods, and applicable refuge-specific hunting regulations. The Deer Hunting Plan was completed in 1990. The Upland Game and Migratory Bird Hunting plans were

completed in 1988. However, hunting plans will be revised, as necessary, as a result of CCP implementation.

Migratory Bird Disease Contingency Plan

This 1988 plan describes strategies to be implemented during migratory bird disease outbreaks. The Playa Lakes Disease Contingency Plan will be modified to now include Salt Plains NWR. Refuge staff will work with the Playa Lakes Disease Council to update that contingency plan by 2006. The Council consists of Service staff as well as staff from the ODWC, Texas Parks and Wildlife Department, Colorado Game and Fish, New Mexico Department of Game and Fish, and Kansas Parks and Wildlife. This revised plan will also address newer protocols and monitoring for avian influenza.

5.3.2 Future Plans and Documents

Visitor Services Plan

This plan addresses specific wildlife-related public recreation issues and needs. This plan is to be updated along with the Sign Plan at the same time. Anticipated completion is 2007.

Inventory and Monitoring Plans

These plans describe specific wildlife inventory activities and techniques to be conducted to monitor specific wildlife populations including species population objectives, census/survey methods, data analysis, and reporting requirements. These plans include the waterfowl, shorebirds, colonial nesting birds, deer, bald eagle, etc. As part of these Inventory and Monitoring Plans, an inventory and monitoring plan is to be developed by 2008 for priority species (*See Section 3.4*). This plan will include consideration of other applicable plans, such as those described in *Section 2.4*.

Habitat Management Plan

This plan describes the most appropriate management strategies for habitat protection, enhancement and restoration, emphasizes specific habitats and areas for management activities, and provides monitoring methods and evaluation criteria. The plan will include consideration of other applicable plans, such as those described in *Section 2.4*, and is intended to include more specific actions to implement the CCP strategies. This plan is anticipated to be completed by 2009.

Cultural Resources Management Plan

This plan identifies areas with significant sites and develops methods for the management of these resources (*See Section 4.6*). This plan is anticipated to be completed by 2012.

Integrated Pest Management Plan

This plan describes biological, mechanical, or chemical methods for the most effective eradication and control of invasive weeds and woody vegetation and specific pests including those damaging crops without impacting the natural resources of the area. The Integrated Pest Management Plan will provide complete and specific methods and time lines for preventing introductions, prioritizing (including rapid response), surveying, mapping, monitoring, treating, and controlling or eradicating invasive plants, feral animals, crop insect pests, or other native and non-native species. Treatment methods may include mechanical clearing, chemical applications, prescribed burning, biological control, or combinations of those, depending on the particular pest species. This plan will dovetail

with the national management plan (EO 13112) and comply with state mandates requiring prevention, monitoring, and control or eradication of invasives. The Integrated Pest Management Plan for Salt Plains NWR is anticipated to be completed by 2007.

5.3.3 *Wilderness Review*

Salt Plains NWR does not conform to the definition of a wilderness, as described in the Wilderness Act of 1964. The refuge includes Corps lands and about 2,000 acres of the refuge are Service lands. Because of fragmentation and impact by roads and agricultural use, the limited amount of Service land does not possess the requisite undisturbed landscape needed for wilderness designation. Corps lands within the refuge have been impacted by the presence of the Great Salt Plains Lake including the use of a major portion of the lake for recreational purposes as well as the historic use of the salt flat area as a target range by the War Department during World War II.

5.4 **Partnership Opportunities**

The refuge was established in 1930 on withheld lands which were never settled. The Corps of Engineers acquired additional land as part of the Salt Plains Dam and Reservoir Project (completed in 1940) that occurs on the refuge. Approximately 2,000 additional acres of the refuge was acquired by the Service. The Service has a cooperative working relationship with the Corps regarding management of the wildlife resources on the refuge. The refuge has an agreement with the Bill Jones Correctional Center (BJCC) in Alva, OK for the use of prison inmates to assist the refuge staff with maintenance projects. The refuge has agreements with the local volunteer fire departments of Cherokee, Jet, and Nescatunga; along with excellent partnerships and working relationships with a variety of organizations such as the GSPA, Oklahoma Department of Wildlife Conservation (ODWC), State Department of Tourism, Alfalfa Electric Cooperative, Alfalfa Emergency Preparedness Committee, Great Salt Plains State Park, NRCS, and the Oklahoma Department of Transportation (ODOT). In the future, establishing new partnerships and agreements with interested parties and stakeholders is expected to result in greater wildlife and habitat protection and enhancement as well as greater opportunities for public outreach and recreation. The benefits of existing and potential partnerships or agreements are emphasized below:

- Establishing relationships with private landowners and conservation organizations resulting in the development of conservation agreements or other options for land protection, habitat enhancement, restoration, and opportunities for continuity of management. Through agreements, the Service can work on private land initiatives with permit holders on state and federal lands managed by the ODWC, and State Lands Office.
- Strengthening partnerships with the ODWC, ODOT, Great Salt Plains State Park, NRCS, and the GSPA to coordinate lake management activities and flood damage control and repair.



Salt Plains partners at the Outdoor Classroom Dedication. From left to right: Max Ott (Alfalfa Electric Cooperative), Senator David Myers, Steve Spade (Byron Fish Hatchery), Jon Brock (Refuge Manager), Representative Jeff Hickman USFWS Photo

- Strengthening partnerships with the GSPA, ODWC, Great Salt Plains State Park, Chamber of Commerce, city officials, schools and other groups from the towns of Cherokee and Jet would enhance the refuge outreach program and assist the refuge in achieving its goals and objectives for environmental education and public use.
- Strengthening relationships with academic institutions such as Oklahoma State University to coordinate research needs and activities on the refuge.
- Strengthening the relationship with the BJCC, which provides inmate volunteers for refuge projects.

5.5 Monitoring and Evaluation

Where possible, the CCP identifies and incorporates monitoring and evaluation activities as objectives or strategies. Specific guidelines for monitoring and evaluation will vary by program and will be included in the appropriate step-down plan. As new information becomes available through baseline data, research, or outcomes of management projects, the appropriate refuge program would be adjusted accordingly. Step-down plans including the monitoring and evaluation sections would require periodic review, program evaluation, and adjustments, as necessary.

The Salt Plains CCP will be a useful working document for present and future managers. Periodic review, evaluation, and the addition of information will be required to achieve effective implementation of the CCP, even as refuge programs change over time.

5.6 Plan Amendment and Revision

The Salt Plains refuge manager will refer to the CCP annually to ensure station priorities and work guidance is on track with the CCP. Appropriate staff members will be assigned tasks and projects identified in the CCP to accomplish the objectives stated in the plan. The refuge manager will review the CCP at least every 5 years to determine if it needs revision. Any necessary revisions will be incorporated into the plan, with proper public participation. The CCP will be revised no later than 2021.

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GLOSSARY

Biological Diversity: The variety of life and its processes, including the variety of living organisms, the genetic differences among them, and communities and ecosystems in which they occur.

Biological Integrity: Biotic composition, structure, and functioning at genetic, organism, and community levels comparable with historic conditions, including the natural biological processes that shape genomes, organisms, and communities.

Biotic Community: A set of plants, animals, and microorganisms occupying an area interacting directly or indirectly with each other and their physical environment.

Compatible Use: A wildlife-dependent recreational use, or any other use on a refuge than will not materially interfere with or detract from the purposes for which the refuge was established.

Comprehensive Conservation Plan: A document that describes the desired future conditions of a refuge or planning unit and provides long-range guidance and management direction to achieve the purposes of the refuge; helps fulfill the mission of the Refuge System; maintains and, where appropriate, restores the ecological integrity of each refuge and the Refuge System; helps achieve the goals of the National Wilderness Preservation System; and meets other mandates.

Cultural Resources: The remains of sites, structures, or objects used by people in the past.

Ecological Integrity: The relative intactness of biotic and abiotic components and their interrelated structure and function within a given ecosystem.

Ecosystem: Dynamic and interrelating complex of plant and animal communities and their associated non-living environment.

Ecosystem Approach: A strategy or plan to protect and/or restore the natural function, structure, and species composition of an ecosystem, recognizing that all components are interrelated.

Ecosystem Management: Management of an ecosystem that includes all ecological, social, and economic components which make up and/or that affect the whole of the system.

Endangered Species: A plant or animal species listed under the Endangered Species Act that is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment: A systematic analysis to determine if proposed federal actions would result in a “significant effect on the quality of the human environment” thereby requiring either the preparation of an environmental impact statement (EIS) or a determination of a “Finding of No Significant Impact.”

Exotic: A non-native plant or animal species to the ecosystem under consideration introduced intentionally or unintentionally.

Invasive Plant Species: A non-native plant to the ecosystem under consideration that lacks natural controls and tends to aggressively dominate the plant community, often forming extensive mono-cultures. Invasive species generally reduce the diversity and health of ecosystems when they become dominant.

National Wildlife Refuge: A designated area of land or water or an interest in land or water within the Refuge System, such as refuges, wildlife management areas, waterfowl production areas, and other areas under Service jurisdiction for the protection and conservation of fish and wildlife, and plant resources. A complete listing of all units of the Refuge System may be found in the current “Annual Report of Lands Under Control of the U.S. Fish and Wildlife Service.”

National Wildlife Refuge System: All lands, waters, and interests therein administered by the U.S. Fish and Wildlife Service as wildlife refuges, wildlife ranges, wildlife management areas, waterfowl production areas, and other areas for the protection and conservation of fish, wildlife, and plant resources.

Playa lake: Shallow, depressional wetlands that periodically fill with water from rainfall and associated runoff.

Priority Public Use: Wildlife-dependent recreational uses involving hunting, fishing wildlife observation and photography, environmental education and interpretation are the priority general public uses of the system and shall receive priority consideration in refuge planning and management.

Priority Species: Wildlife or plants which may be federally-listed species but also include rare, declining, or species of management concern that are on lists maintained by natural heritage programs, landscape level plans, state wildlife agencies, other federal agencies, or professional academic/scientific societies. Further research and field study are needed to resolve the conservation status of these species.

Riparian: Of or relating to land lying immediately adjacent to a water body and having specific characteristics of that area, such as riparian vegetation. A stream bank is an example of a riparian area.

Scoping: A process for identifying the “scope of issues” to be addressed by a CCP. Involved in the scoping process are federal, state, and local agencies, private organizations, and individuals.

Stakeholders: Those agencies, organizations, groups, and individuals of the public, having an interest or stake in an organization’s program and that may be affected by its implementation.

Threatened Species: A plant or animal species listed under the Endangered Species Act that is likely to become endangered within the foreseeable future.

Watershed: The entire land area that collects and drains water into a stream or stream system.

Wetland: Areas such as lakes, marshes, ponds, swamps, or streams that are inundated by surface or groundwater that is enough to support plants and animals that require saturated or seasonally saturated soils.

Wildlife-dependent Recreational Use: A use of a refuge that involves hunting, fishing, wildlife observation, and photography, or environmental education and interpretation, as identified in the National Wildlife Refuge System Improvement Act of 1997.

Wildlife Diversity: A measure of the number of wildlife species in an area and their relative abundance.

ABBREVIATIONS AND ACRONYMS

Ark/Red	Arkansas/Red Rivers (Ecosystem)
ARPA	Archeological Resources Protection Act
AUM	Animal Use Month
BJCC	Bill Jones Correctional Center
CCP	Comprehensive Conservation Plan
CFR	Code of Federal Regulations
CORPS	U.S. Army Corps of Engineers
CRM	Cultural Resource Management
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FTEs	Full Time Employees
FR	Federal Register
GIS	Geographic Information System
GPS	Global Positioning System
GSPA	Great Salt Plains Association
MMS	Maintenance Management System
NAWMP	North American Waterfowl Management Plan
NEPA	National Environmental Policy Act
NGOs	Non-governmental Organizations
NRCS	Natural Resources Conservation Service
NWR	National Wildlife Refuge
ODOT	Oklahoma Department of Transportation
ODWC	Oklahoma Department of Wildlife Conservation
O&M	Operation & Maintenance
ORP	Outdoor Recreation Planner
PFT	Permanent Full Time (Employee)
PIF	Partners in Flight
RO	Regional Office
RONS	Refuge Operating Needs System
SCA	Student Conservation Association
Service	U.S. Fish and Wildlife Service
T/E	Threatened and Endangered Species
TFT	Temporary Full Time (Employee)
USGS	United States Geological Survey
Refuge System	National Wildlife Refuge System
YCC	Youth Conservation Corps
WUI	Wildland Urban Interface
WWII	World War II

APPENDICES

APPENDIX A - Refuge Biota

FISHERIES

Channel catfish	<i>Ictalurus punctatus</i>
Blue catfish	<i>Ictalurus furcatus</i>
Flathead catfish	<i>Pylodictis olivaris</i>
Black bullhead	<i>Ictalurus melas</i>
Yellow bullhead	<i>Ictalurus natalis</i>
Bluegill	<i>Lepomis macrochirus</i>
Green sunfish	<i>Lepomis cyanellus</i>
Redear sunfish	<i>Lepomis microlophus</i>
Longear sunfish	<i>Lepomis megalotis</i>
Orange spotted sunfish	<i>Lepomis humilis</i>
Gizzard shad	<i>Dorosoma cepedianum</i>
Largemouth bass	<i>Micropterus salmoides</i>
Striped bass	<i>Morone saxatilis</i>
White bass	<i>Morone chrysops</i>
Freshwater drum	<i>Aplodinotus grunniens</i>
Walleye	<i>Stizostedion vitreum</i>
Smallmouth buffalo	<i>Ictiobus bubalus</i>
River carpsucker	<i>Carpionodes carpio</i>
Mosquito fish	<i>Gambusia affinis</i>
Mississippi silverside	<i>Menidia audens</i>
Plains killifish	<i>Fundulus zebrinus</i>
Carp	<i>Cyprinus carpio</i>
Golden shiner	<i>Notemigonus crysoleucas</i>
Flathead minnow	<i>Pimephales promelas</i>
Plains minnow†	<i>Hybognathus placitus</i>
Red shiner	<i>Notropis lutrensis</i>
Sand shiner	<i>Notropis stramineus</i>
Goldfish	<i>Carassius auratus</i>
White crappie	<i>Pomoxis annularis</i>
Black crappie	<i>Pomoxis nigromaculatus</i>

Hybrids

Green sunfish x bluegill
Walleye x sauger
White x striped bass

The following fish occur below the dam, just off the refuge:

Shovelnose sturgeon†	<i>Scaphirynchus platorynchus</i>
Paddlefish†	<i>Polyodon spathula</i>
Goldeneye mooneye fam.	<i>Hiodon alosoides</i>
Spotted gar	<i>Lepisosteus aculatus</i>
Longnose gar	<i>Lepisosteus osseus</i>
Shortnose gar	<i>Lepisosteus platostomus</i>

† – Identified in the Oklahoma Comprehensive Wildlife Conservation Strategy Plan (2005) as a “species of greatest conservation need”

REPTILES AND AMPHIBIANS

Turtles

Common snapping turtle
Midland smooth softshell†
Spiny softshell†
Ornate box turtle
Three-toed box turtle
Yellow mud turtle
Red-eared slider
Painted turtle

Chelydra serpentina
Apalone mutica
Apalone spinifera hartwegi
Terrapene ornata
Terrapene carolina
Kinosternon flavescens
Trachemys scripta
Chrysemys picta

Lizards

Prairie lined racerunner
Ground skink
Common lesser earless lizard†
Western slender glass lizard
Texas horned lizard†
Fence lizard

Cnemidophorus sexlineatus viridis
Scincella lateralis
Holbrookia maculata
Ophisaurus attenuatus attenuatus
Phrynosoma cornutum
Sceloporus undulatus

Snakes

Eastern yellowbelly racer
Plainbelly water snake
Ringneck snake
Blind snake
Black rat snake
Brown snake
Prairie kingsnake
Western coachwhip
Diamondback water snake
Bullsnake
Western massasauga†
Western ribbon snake
Common garter snake

Coluber constrictor flaviventris
Nerodia erythrogaster
Diadophis punctuatus
Leptotyphlops dulcis
Elaphe obsoleta obsoleta
Storeria dekayi
Lampropeltis calligaster
Masticophis flagellum testaceus
Nerodia rhombifera
Pituophis melanoleucus
Sistrurus catenatus
Thamnophis proximus
Thamnophis sirtalis

Salamanders

Barred tiger salamander

Ambystoma tigrinum mavortium

Frogs

Blanchard's cricket frog
Strecker's chorus frog
Bull frog
Plains leopard frog

Acris crepitans blanchardi
Pseudoacris streckeri streckeri
Rana catesbeiana
Rana blairi

Toads

Woodhouse's toad
Red-spotted toad
Great Plains narrowmouth toad

Bufo woodhousei
Bufo punctatus
Gastrophryne olivacea

† – Identified in the Oklahoma Comprehensive Wildlife Conservation Strategy Plan (2005) as a “species of greatest conservation need”

BIRDS

Loons

Common loon

Gavia immer

Grebes

Pied-billed grebe*

Podilymbus podiceps

Horned grebe

Podiceps auritus

Eared grebe*

Podiceps nigricollis

Western grebe

Aechmophorus occidentalis

Pelicans

American white pelican

Pelecanus erythrorhynchos

Brown pelican

Pelecanus occidentalis

Cormorant

Double-crested cormorant*

Phalacrocorax auritus

Anhinga

Anhinga

Anhinga anhinga

Bitterns and Herons

American bittern

Botaurus lentiginosus

Least bittern*

Ixobrychus exilis

Great blue heron*

Ardea herodias

Great egret*

Ardea alba

Snowy egret* †

Egretta thula

Little blue heron* †

Egretta caerulea

Tricolored heron*

Egretta tricolor

Cattle egret*

Bubulcus ibis

Green heron*

Butorides virescens

Black-crowned night heron*

Nycticorax nycticorax

Yellow-crowned night heron

Nyctanassa violaceus

Ibises and Spoonbills

White ibis

Eudocimus albus

White-faced ibis*

Plegadis chihi

Roseate spoonbill

Ajaia ajaja

Swans, Geese, and Ducks

Greater white-fronted goose

Anser albifrons

Snow goose

Chen caerulescens

Ross' goose

Chen rossii

Canada goose*

Branta canadensis

Brant

Branta bernicla

Trumpeter swan†

Cygnus buccinator

Tundra swan

Cygnus columbianus

Wood duck*

Aix sponsa

Gadwall*

Anas strepera

American wigeon*

Anas americana

Mallard*

Anas platyrhynchos

Mottled duck

Anas fulvigula

Blue-winged teal*

Anas discors

Cinnamon teal

Anas cyanoptera

Northern shoveler*

Anas clypeata

Northern pintail* †

Anas acuta

Green-winged teal

Anas crecca

Canvasback†

Aythya valisineria

Redhead*

Aythya americana

Ring-necked duck
Greater scaup
Lesser scaup†
Oldsquaw
Bufflehead
Common goldeneye
Hooded merganser*
Common merganser
Red-breasted merganser
Ruddy duck

Aythya collaris
Aythya marila
Aythya affinis
Clangula hyemalis
Bucephala albeola
Bucephala clangula
Lophodytes cucullatus
Mergus merganser
Mergus serrator
Oxyura jamaicensis

Vultures

Black vulture
Turkey vulture*

Coragyps atratus
Cathartes aura

Kites, Eagles, and Hawks

Osprey
Mississippi kite*
Bald eagle†
Northern harrier
Sharp-shinned hawk
Cooper's hawk*
Northern goshawk
Red-shouldered hawk*
Broad-winged hawk
Swainson's hawk* †
Red-tailed hawk*
Ferruginous hawk†
Rough-legged hawk
Golden eagle
Crested caracara

Pandion haliaetus
Ictinia mississippiensis
Haliaeetus leucocephalus
Circus cyaneus
Accipiter striatus
Accipiter cooperii
Accipiter gentilis
Buteo lineatus
Buteo platypterus
Buteo swainsoni
Buteo jamaicensis
Buteo regalis
Buteo lagopus
Aquila chrysaetos
Caracara plancus

Falcons

American kestrel*
Merlin
Peregrine falcon†
Prairie falcon†

Falco sparverius
Falco columbarius
Falco peregrinus
Falco mexicanus

Pheasants and Quail

Ring-necked pheasant*
Wild turkey*
Northern bobwhite* †

Phasianus colchicus (Introduced)
Meleagris gallopavo
Colinus virginianus

Rails, Gallinules, and Coots

Black rail* †
King rail* †
Virginia rail*
Sora
Common moorhen*
American coot*

Laterallus jamaicensis
Rallus elegans
Rallus limicola
Porzana carolina
Gallinula chloropus
Fulica americana

Oystercatchers

American oystercatcher

Haematopus palliatus

Cranes

Sandhill crane†
Whooping crane†

Grus canadensis
Grus americana

Plovers

Black-bellied plover
American golden plover†
Snowy plover*
Semipalmated plover
Piping plover†
Killdeer*
Mountain plover

Pluvialis squatarola
Pluvialis dominica
Charadrius alexandrinus
Charadrius semipalmatus
Charadrius melodus
Charadrius vociferus
Charadrius montanus

Stilts and Avocets

Black-necked stilt*
American avocet*

Himantopus mexicanus
Recurvirostra americana

Sandpipers and Phalaropes

Greater yellowlegs
Lesser yellowlegs
Solitary sandpiper†
Willet
Spotted sandpiper
Upland sandpiper†
Whimbrel
Long-billed curlew†
Hudsonian godwit†
Marbled godwit
Ruddy turnstone
Red knot
Sanderling
Semipalmated sandpiper
Western sandpiper†
Least sandpiper
White-rumped sandpiper
Baird's sandpiper
Pectoral sandpiper
Dunlin
Stilt sandpiper
Buff-breasted sandpiper†
Long-billed dowitcher
Common snipe
American woodcock†
Wilson's phalarope†
Red-necked phalarope

Tringa melanoleuca
Tringa flavipes
Tringa solitaria
Catoptrophorus semipalmatus
Actitis macularia
Bartramia longicauda
Numenius phaeopus
Numenius americanus
Limosa haemastica
Limosa fedoa
Arenaria interpres
Calidris canutus
Calidris alba
Calidris pusilla
Calidris mauri
Calidris minutilla
Calidris fuscicollis
Calidris bairdii
Calidris melanotos
Alidris alpina
Calidris himantopus
Tryngites subruficollis
Limnodromus scolopaceus
Gallinago gallinago
Scolopax minor
Phalaropus tricolor
Phalaropus lobatus

Jaegers

Parasitic jaeger

Stercorarius parasiticus

Gulls and Terns

Laughing gull
Franklin's gull
Black-headed gull
Bonaparte's gull
Ring-billed gull
Herring gull
Glaucous gull
Caspian tern
Roseate tern
Common tern
Forster's tern
Least tern* †
Black tern

Larus atricilla
Larus pipixcan
Larus ridibundus
Larus philadelphia
Larus delawarensis
Larus argentatus
Larus hyperboreus
Sterna caspia
Sterna dougallii
Sterna hirundo
Sterna forsteri
Sterna antillarum
Chlidonias niger

Pigeons and Doves

Rock dove

Mourning dove*

Columba livia (Introduced)

Zenaidura macroura

Cuckoos and Roadrunners

Black-billed cuckoo

Yellow-billed cuckoo*

Greater roadrunner*

Coccyzus erythrophthalmus

Coccyzus americanus

Geococcyx californianus

Owls

Barn owl* †

Eastern screech-owl*

Great horned owl*

Snowy owl

Burrowing owl†

Barred owl*

Long-eared owl

Short-eared owl†

Tyto alba

Otus asio

Bubo virginianus

Nyctea scandiaca

Athene cunicularia

Strix varia

Asio otus

Asio flammeus

Goatsuckers

Common nighthawk*

Chuck-will's-widow*

Chordeiles minor

Caprimulgus carolinensis

Swifts

Chimney swift*

Chaetura pelagica

Hummingbirds

Ruby-throated hummingbird

Archilochus colubris

Kingfishers

Belted kingfisher*

Ceryle alcyon

Woodpeckers

Red-headed woodpecker* †

Red-bellied woodpecker*

Yellow-bellied sapsucker

Ladder-backed woodpecker

Downy woodpecker*

Hairy woodpecker*

Pileated woodpecker

Northern flicker*

Melanerpes erythrocephalus

Melanerpes carolinus

Sphyrapicus varius

Picoides scalaris

Picoides pubescens

Picoides villosus

Dryocopus pileatus

Colaptes auratus

Tyrant Flycatchers

Olive-sided flycatcher

Eastern wood-pewee

Yellow-bellied flycatcher

Least flycatcher

Eastern phoebe*

Say's phoebe

Vermilion flycatcher

Great Crested flycatcher*

Western kingbird*

Eastern kingbird*

Scissor-tailed flycatcher*

Contopus cooperi

Contopus virens

Empidonax flaviventris

Empidonax minimus

Sayornis phoebe

Sayornis saya

Pyrocephalus rubinus

Myiarchus crinitus

Tyrannus verticalis

Tyrannus tyrannus

Tyrannus forficatus

Larks

Horned lark*

Eremophila alpestris

Swallows

Purple martin
Tree swallow*
Northern rough-winged swallow*
Bank swallow*
Cliff swallow*
Barn swallow*

Progne subis
Tachycineta bicolor
Stelgidopteryx serripennis
Riparia riparia
Petrochelidon pyrrhonota
Hirundo rustica

Jays and Crows

Blue jay*
American crow*

Cyanocitta cristata
Corvus brachyrhynchos

Titmice

Carolina chickadee*
Tufted titmouse*

Poecile carolinensis
Baeolophus bicolor

Nuthatches

Red-breasted nuthatch
White-breasted nuthatch

Sitta canadensis
Sitta carolinensis

Creepers

Brown creeper

Certhia americana

Wrens

Rock wren
Carolina wren*
Bewick's wren*
House wren*
Winter wren
Sedge wren
Marsh wren

Salpinctes obsoletus
Thryothorus ludovicianus
Thryomanes bewickii
Troglodytes aedon
Troglodytes troglodytes
Cistothorus platensis
Cistothorus palustris

Kinglets and Gnatcatchers

Golden-crowned kinglet
Ruby-crowned kinglet
Blue-gray gnatcatcher*

Regulus satrapa
Regulus calendula
Poliophtila caerulea

Thrushes

Eastern bluebird*
Mountain bluebird
Townsend's solitaire
Swainson's thrush
Hermit thrush
Wood thrush
American robin*

Sialia sialis
Sialia currucoides
Myadestes townsendi
Catharus ustulatus
Catharus guttatus
Hylocichla mustelina
Turdus migratorius

Mockingbirds and Thrashers

Gray catbird*
Northern mockingbird*
Sage thrasher
Brown thrasher

Dumetella carolinensis
Mimus polyglottos
Oreoscoptes montanus
Toxostoma rufum

Pipits

American (Water) pipit
Sprague's pipit†

Anthus rubescens
Anthus spragueii

Waxwings

Bohemian waxwing
Cedar waxwing

Bombycilla garrulus
Bombycilla cedrorum

Shrikes

Loggerhead shrike* †
Northern shrike

Lanius ludovicianus
Lanius excubitor

Starlings

European starling*

Sturnus vulgaris

Vireos

White-eyed vireo
Bell's vireo* †
Blue-headed vireo
Warbling vireo*
Philadelphia vireo
Red-eyed vireo*

Vireo griseus
Vireo bellii
Vireo solitarius
Vireo gilvus
Vireo philadelphicus
Vireo olivaceus

Wood Warblers

Golden-winged warbler
Tennessee warbler
Orange-crowned warbler
Nashville warbler
Northern parula
Yellow warbler*
Chestnut-sided warbler
Magnolia warbler
Black-throated blue warbler
Yellow-rumped warbler
Black-throated green warbler
Blackburnian warbler
Yellow-throated warbler
Blackpoll warbler
Black-and-white warbler
American redstart
Prothonotary warbler* †
Swainson's warbler
Ovenbird
Northern waterthrush
Kentucky warbler
Mourning warbler
Common yellowthroat*
Hooded warbler
Wilson's warbler
Yellow-breasted chat

Vermivora chrysoptera
Vermivora peregrina
Vermivora celata
Vermivora ruficapilla
Parula americana
Dendroica petechia
Dendroica pensylvanica
Dendroica magnolia
Dendroica caerulescens
Dendroica coronata
Dendroica virens
Dendroica fusca
Dendroica dominica
Dendroica striata
Mniotilta varia
Setophaga ruticilla
Protonotaria citrea
Limnothlypis swainsonii
Seiurus aurocapillus
Seiurus noveboracensis
Oporornis formosus
Oporornis philadelphia
Geothlypis trichas
Wilsonia citrina
Wilsonia pusilla
Icteria virens

Tanagers

Summer tanager
Scarlet tanager

Piranga rubra
Piranga olivacea

Cardinals and Grosbeaks

Northern cardinal*
Rose-breasted grosbeak
Black-headed grosbeak
Blue grosbeak*
Lazuli bunting
Indigo bunting*
Painted bunting* †
Dickcissel*

Cardinalis cardinalis
Pheucticus ludovicianus
Pheucticus melanocephalus
Guiraca caerulea
Passerina amoena
Passerina cyanea
Passerina ciris
Spiza americana

Sparrows

Spotted towhee
Cassin's sparrow†
American tree sparrow
Chipping sparrow*
Clay-colored sparrow
Field sparrow*
Vesper sparrow
Lark sparrow*
Lark bunting
Savannah sparrow
Grasshopper sparrow*
Le Conte's sparrow†
Fox sparrow
Song sparrow
Lincoln's sparrow
Swamp sparrow
White-throated sparrow
Harris' sparrow†
White-crowned sparrow
Dark-eyed junco
Lapland longspur
Smith's longspur†
Chestnut-collared longspur†
Snow bunting

Pipilo maculatus
Aimophila cassinii
Spizella arborea
Spizella passerina
Spizella pallida
Spizella pusilla
Poocetes gramineus
Chondestes grammacus
Calamospiza melanocorys
Passerculus sandwichensis
Ammodramus savannarum
Ammodramus leconteii
Passerelia iliaca
Melospiza melodia
Melospiza lincolni
Melospiza georgiana
Zonotrichia albicollis
Zonotrichia querula
Zonotrichia leucophrys
Junco hyemalis
Calcarius lapponicus
Calcarius pictus
Calcarius ornatus
Plectrophenax nivalis

Blackbirds and Orioles

Bobolink
Red-winged blackbird*
Eastern meadowlark*
Western meadowlark*
Yellow-headed blackbird
Rusty blackbird
Brewer's blackbird
Common grackle*
Great-tailed grackle
Brown-headed cowbird*
Orchard oriole*
Baltimore oriole*
Bullock's oriole†

Dolichonyx oryzivorus
Agelaius phoeniceus
Sturnella magna
Sturnella neglecta
Xanthocephalus xanthocephalus
Euphagus carolinus
Euphagus cyanocephalus
Quiscalus quiscula
Quiscalus mexicanus
Molothrus ater
Icterus spurius
Icterus galbula
Icterus bullockii

Finches

Purple finch
House finch*
Red crossbill
Pine siskin
American goldfinch
Evening grosbeak

Carpodacus purpureus
Carpodacus mexicanus
Loxia curvirostra
Carduelis pinus
Carduelis tristis
Coccothraustes vespertinus

Old World Sparrows

House sparrow*

Passer domesticus (Introduced)

* – Nests on the Refuge

† – Identified in the Oklahoma Comprehensive Wildlife Conservation Strategy Plan (2005) as a “species of greatest conservation need”

ARTIODACTYLA

White-tailed deer

CARNIVORA

Coyote

Gray fox

American badger

Bobcat

Mountain lion†

Raccoon

Mink

Striped skunk

Eastern spotted skunk†

CHIROPTERA

Red bat

Mexican freetail bat†

INSECTIVORA

Eastern mole

Least shrew

LAGOMORPHA

Eastern cottontail

Black-tailed jackrabbit

MARSUPIALIA

Virginia opossum

RODENTIA

Ord's kangaroo rat

Eastern fox squirrel

Thirteen-lined ground squirrel

Plains pocket gopher

Porcupine

Beaver

Muskrat

Pine vole

Prairie vole

Deer mouse

White-footed mouse

Northern grasshopper mouse

Plains harvest mouse

Hispid cotton rat

Ord kangaroo rat

Eastern woodrat

Norway rat

House mouse

XENARTHRA

Nine-banded armadillo

MAMMALS*Odocoileus virginianus**Canis latrans**Urocyon cinereoargenteus**Taxidea taxus**Lynx rufus**Felis concolor**Procyon lotor**Mustela vison**Mephitis mephitis**Spilogale putorius**Lasiurus borealis**Tadarida mexicana**Scalopus aquaticus**Cryptotis parva**Sylvilagus floridanus**Lepus californicus**Didelphis virginiana**Dipodomys ordii**Sciurus niger**Citellus tridecemlineatus**Geomys bursarius**Erethizon dorsatum**Castor canadensis**Ondatra zibethicus**Pitymys pinetorum**Microtus ochrogaster**Peromyscus maniculatus**Peromyscus leucopus**Onychomys leucogaster**Reithrodontomys montanus**Sigmodon hispidus**Dipodomys ordii**Neotoma floridana**Rattus norvegicus**Mus musculus**Dasypus novemcinctus*

† – Identified in the Oklahoma Comprehensive Wildlife Conservation Strategy Plan (2005) as a “species of greatest conservation need”

PLANTS

ACERACEAE

Silver maple

Acer saccharinum

AIZOACEAE

Green carpet weed

Sea purslane

Mollugo verticillata

Sesuvium verrucosum

ALISMATACEAE

Water plantain

Upright burrhead

Alisma plantago-aquatica var. *parviflorum*

Echinodorus berteroi var. *Berteroi*

AMARANTHACEAE

Plains field snakecotton

Rough pigweed

Waterhemp

Froelichia floridana

Amaranthus retroflexus

Amaranthus tamarazoinus

ANACARDIACEAE

Aromatic sumac

Smooth sumac

Eastern poison ivy

Rhus aromatics var. *serotina*

Rhus glabra

Toxicodendron radicans ssp. *negundo*

APOCYNACEAE

Gray hemp dogbane (Indian hemp)

Apocynum cannabinum var. *hypericifolium*

ASCLEPIADACEAE

Sand milkweed

Fourleaf milkweed

Showy milkweed

Butterfly milkweed

Whorled milkweed

Asclepias arenaria

Asclepias quadrifolia

Asclepias speciosa

Asclepias tuberosa

Asclepias verticillata

BIGNONIACEAE

Common trumpet creeper

Northern catalpa

Campsis radicans

Catalpa speciosa

BORAGINACEAE

Little cryptantha

Salt heliotrope

Carolina Gromwell

Cryptantha minima

Heliotropium curassavicum

Lithospermum carolinense

CACTACEAE

Bigroot prickly pear

Opuntia macrorhiza

CAMPAMULACEAE

Venus lookingglass

Specularia holzingeri

CAPPARIDACEAE

Cleomella (stinkweed)

Cleomella angustifolia

CAPRIFOLIACEAE

Common elderberry

Moench buckbrush (coralberry)

Sambucus canadensis var. *canadensis*

Symphoricarpos orbiculatus

CARYOPHYLLACEAE

Sleepy silene

Silene antirrhina forma *antirrhina*

CELASTRACEAE

American bittersweet

*Celastrus scandens***CHARACEAE**

Robinson chara

*Chara keukensis***CHENOPODIACEAE**

SILVERSALT BUSH

Atriplex argentea

WORMSEED GOOSEFOOT

Chenopodium ambrosioides var. *ambrosioides*

MAPLEAF GOOSEFOOT

Chenopodium hybridum var. *gigantospermum*

SLIMLEAF GOOSEFOOT

Chenopodium leptophyllum

TUMBLE RINGWEED

Cycloloma atriplicifolium

Kochia (Mexican-fireweed)

Kochia scoparia

Nuttall monolepus

Monolepis nuttalliana

Russian thistle

Monolepis salsola kali var. *tenuifolia*

Pursh seepweed

*Suaeda caseoliformis***COMMELINACEAE**

Erect dayflower

Commelina erecta var. *erecta*

Prairie spiderwort

*Tradescantia occidentalis***ASTERACEAE (COMPOSITEAE)**

Western yarrow

Achillea lanulosa forma *lanulcea*

Western ragweed

Ambrosia psilostachya var. *coronopifolia*

Ragweed

Ambrosia trifida var. *texana*

Arkansas dosedaisy

Aphanostephus skirrhobasis

Louisiana sagewart

Artemisia ludoviciana

Aster

Aster subulatus var. *ligulatus*

Willow baccharis

Baccharis salicina

Spanish needles

Bidens bipinnata

Goldaster

Chrysopsis villosa var. *canescens*

Tall thistle

Cirsium altissimum

Wavyleaf thistle

Cirsium undulatum

Musk thistle

Carduus nutans

Horseweed (mare's tail)

Conyza canadensis var. *glabrata*

Plains coreopsis

Coreopsis tinctoria

Western daisy fleabane

Erigeron bellidiastrum

Slender leaf fleabane

Erigeron tenuis

Rosewing gaillardia (firewheel)

Gaillardia pulchella

Blake broomweed

Gutierrezia dracunculoides

Broom snakeweed

Gutierrezia sarothrae

Goldenweed

Haplopappus ciliatus

Slender goldenweed

Haplopappus divaricatus var. *Hookerianus*

Iron plant

Haplopappus spinulosus

Common sunflower

Helianthus annuus

Maximilian sunflower

Helianthus maximiliani

Prairie sunflower

Helianthus petiolaris

Camphorweed

Heterotheca latifolia

Dotted gayfeather

Liatrus punctata var. *nebraskensis*

Marsh fleabane

Pluchea purpurascens

False dandelion

Pyrrhopappus spp.

Upright prairie-coneflower

Ratibida columnifera forma *columnifera*

Black-eyed Susan

Rudbeckia hirta var. *pulcherrima*

Riddell groundsel

Senecio riddellii

Canada goldenrod

Solidago canadensis var. *gilvocanescens*

Canada goldenrod

Solidago canadensis var. *scabra*

Missouri goldenrod

Solidago missouriensis var. *fasciculata*

Kuntze greenthread

Thelesperma megapotamicum

Golden crown-beard (cowpen daisy)

Verbesina encelioides

Inland ironweed (baldwin)
Rough cocklebur

Vernonia baldwinii var. *interior*
Xanthium strumarium

CONVOLVULACEAE

Field bindweed
Grey bindweed
Nuttall evolvulus
Bush morning-glory

Convolvulus arvensis
Convolvulus incanus
Evolvulus nuttallianus
Ipomoea leptophylla

CORNACEAE

Roughleaf dogwood

Cornus drummondii

BRASSICACEAE (CRUCIFERAE)

Pinnate tansy mustard
Common pepperweed
Pepperweed
Earleaf bladderpod
Watercress

Descurainia pinnata
Lepidium densiflorum
Lepidium oblongum
Lesquerella auriculata
Rorippa islandica var. *Fernaldiana*

CUCURBITACEAE

Buffalo gourd
Cut-leaf cyclanthera
Guadeloupe cucumber

Cucurbita foetidissima
Cyclanthera dissecta
Melothria pendula

CYPERACEAE

Shortbeak sedge
Sedge
Flatsedge
Sedge
Fern flatsedge
Fragrant flatsedge
Flatsedge
Flatsedge
Engelmann's spikerush
Vahl's fimbry
American bulrush
Alkali bulrush
Softstem bulrush

Carex brevior
Carex lasiocarpa var. *latifolia*
Carex normalis
Cyperus aristatus
Cyperus filiculmis
Cyperus odoratus
Cyperus ovularis var. *sphaericus*
Cyperus uniflorus
Eleocharis engelmannii
Fimbristylis vahlii
Schoenoplectus americanus
Schoenoplectus paludosus
Schoenoplectus validus var. *creber*

ELAEAGNACEAE

Russian olive

Elaeagnus angustifolia

EQUISETACEAE

Smooth horsetail

Equisetum laevigatum

EUPHORBIACEAE

Croton vente conmigo
Texas croton
Toothed spurge
Sixangle spurge
Snow-on-the-mountain
Missouri spurge
Queen's delight

Croton glandulosus var. *septentrionalis*
Croton texensis
Euphorbia dentata forma *dentata*
Euphorbia hexagona
Euphorbia marginata
Euphorbia missurica
Stillingia sylvatica

FUMARIACEAE

Curvepod fumewort

Corydalis curvisiliqua Engelm., var. *grandibracteata*

GENTIANACEAE

Prairie gentain

Eustoma grandiflorum

GERANIACEAE

Carolina geranium

*Geranium carolinianum***POACEAE**

Jointed goat grass

Aegilops cylindrica var. *rubiginosa*

Big bluestem

Andropogon gerardi var. *gerardi*

Sand bluestem

Andropogon hallii

Little bluestem

Andropogon scoparius

Prairie threeawn

Aristida oligantha

Purple threeawn

Aristida purpurea

Silver bluestem

Bothriochloa saccharoides

Sideoats grama

Bouteloua curtipendula

Blue grama

Bouteloua gracilis

Hairy grama

Bouteloua hirsuta var. *pectinate*

Rescue grama

Bromus catharticus

Japanese brome

Bromus japonicus

Cheat (chess, rye brome)

Bromus secalinus

Cheatgrass

Bromus tectorum

Buffalograss

Buchloe dactyloides

Big sandreed

Calamovilfa gigantea

Sandbur

Cenchrus pauciflorus

Windmillgrass

Chloris verticillata

Bermudagrass

Cynodon dactylon

Crabgrass

Digitaria sanguinalis

Bearded sprangletop

Diplachne fascicularis

Inland saltgrass

Distichlis stricta

Barnyard grass (wild millet)

Echinochloa crusgalli

Canada wildrye

Elymus canadensis

Gummy lovegrass

Eragrostis curtipeedicillata

Weeping lovegrass

Eragrostis curvula

Red lovegrass

Eragrostis oxylepis var. *Beyrichii*

Little lovegrass

Eragrostis poaeoides

Purple lovegrass

Eragrostis spectabilis

Sand lovegrass

Eragrostis trichodes var. *pilifera*

Sand lovegrass

Eragrostis trichodes var. *trichodes*

Prairie cupgrass

Eriochloa contracta

Sixweeks fescue

Vulpia octoflora

Fowl mannagrass

Glyceria striata

Foxtail barley

Hordeum jubatum

Little barley

Hordeum posillum

Rice cutgrass

Leersia oryzoides

Fall witchgrass

Leptoloma cognatum

Beaked panicum

Panicum anceps

Common witchgrass

Panicum capillare var. *capillare*

Cushion witchgrass

Panicum capillare var. *occidentale*

Panicum

Panicum lanuginosum var. *fasiculatum*

Vine mesquite

Panicum obtusum

Scribner panicum

Dichanthelium oligosanthes Schultes, var. *Scribnerianum*

Switchgrass

Panicum virgatum

Western wheatgrass

Pascopyrum smithii var. *Smithii*

Fringeleaf paspalum

Paspalum ciliatifolium

Knotgrass

Paspalum distichum

Carolina canarygrass

Phalaris caroliniana

Texas bluegrass

Poa arachnifera

Canada bluegrass

Poa compressa

Tumblegrass

Schedonnardus paniculatus

Knotroot bristlegrass

Setaria geniculata

Setaria

Setaria glauca

Foxtail millet

Setaria italica

Green bristlegrass
Yellow indiagrass
Johnsongrass
Prairie cordgrass
Prairie wedgescale
Alkali sacaton
Tall dropseed
Sand dropseed
Texas dropseed
Purpletop
Eastern gammagrass

ILIXCEBRACEAN

James' nailwort

JUGLANDACEAE

Black walnut

JUNCACEAE

Inland rush
Grassleaf rush
Torrey rush

LABIATEAE

Rough mock pennyroyal
Lemon beebalm
Basil beebalm
Spotted beebalm
Pitcher sage (azure blue s.)
American germander

LEGUMINOSEAE

Indigobush
Loco (slender milkvetch)
Lotus milkvetch
Blue wild indigo
Showy partridge pea
Silktop dalea (golden dalea)
White prairie clover
Prairie clover
Silky prairie clover
Illinois bundleflower
Sessile tickflower
Honey locust
American licorice
Western indigo
White sweet clover
Scurfpea
Slimflower scurfpea
Black locust
Catclaw sensitivebriar
Smoothseed wildbean
Hairy vetch (winter v.)

LIMNACEAE

Common duckweed

LENTIBULARIACEAE

Common bladderwort

Setaria viridia
Sorghastrum nutans
Sorghum halepense
Spartina pectinate var. *Suttiei*
Sphenopholis obtusata var. *obtusata*
Sporobolus airoides
Sporobolus asper var. *asper*
Sporobolus cryptandrus
Sporobolus texanus
Tridens flavus
Tripsacum dactyloides

Paronychia jamesii

Juglans nigra

Juncus interior
Juncus marginatus
Juncus torreyi

Hedeoma hispida
Monarda citriodora
Monarda clinopodioides
Monarda punctata var. *occidentalis*
Salvia azurea var. *grandiflora*
Teucrium canadense var. *canadense*

Amorpha fruticosa
Amorpha astragalus gracilis
Astragalus lotiflorus var. *lotiflorus*
Baptisia australis var. *minor*
Cassia fasciculata
Dalea aurea
Dalea candida var. *oligophylla*
Dalea laxiflora
Dalea villosa
Desmanthus illinoensis
Desmodium sessilifolium
Gleditsia triacanthos
Clycyrrhiza lepidota
Indigofera miniata var. *leptosepala*
Melilotus alba
Psoralidium digitata
Psoralidium tenuiflora
Robinia pseudoacacia
Schrankia uncinata
Strophostyles leiosperma
Vicia villosa

Lemna minor

Utricularia vulgaris (*macrorhiza*)

LILIACEAE

Wild (plains) onion
Roundleaf greenbriar
Small soapweed yucca

Allium perdulce
Smilax rotundifolia
Yucca glauca var. *glauca*

LINACEAE

Stiff-stem flax

Linum rigidum var. *Berlandieri*

MALVACEAE

Purple pollymallow
Hibiscus (rosemallow)

Callirhoe involucrata var. *involucrata*
Hibiscus lasiocarpus

MENISPERMACEAE

Carolina snailweed
Common moonseed

Cocculus carolinus
Menispermum canadense

MORACEAE

White mulberry
Red mulberry
Osage orange

Morus alba
Morus rubra
Maclura pomifera

NAJADACEAE

Southern naiad (water nymph)

Najas guadalupensis

NYCTAGINACEAE

Four o'clock
Narrow four o'clock

Mirabilis exaltata
Mirabilis linearis var. *linearis*

NYMPHACEAE

American lotus

Nelumbo lutea

OLEACEAE

Green ash

Fraxinus pennsylvanica var. *subintegerrima*

ONAGRACEAE

Hairy gaura (beeblossom)
Marsh seedbox
Fourpoint evening primrose
Cutleaf evening primrose
Serrate evening primrose
False gaura

Gaura villosa var. *arenicola*
Ludwigia palustris var. *americans*
Oenothera heterophylla var. *rhombipetala*
Oenothera laciniata var. *laciniata*
Oenothera serrulata
Stenosiphon linifolius

ORBOBANCHACEAE

Louisiana broomrape

Orobanche ludoviciana

PAPAVERACEAE

Crested pricklypoppy

Argemone polyanthemus

PASSIFLORACEAE

Sand mentzelia (blazingstar)

Mentzelia stricta

PHYTOLACCACEAE

American pokeberry

Phytolacca americana

PINACEAE

Eastern red cedar

Juniperus virginiana

PLANTAGINACEAE

Woolly plantain
Pale-seed (Virginia) plantain

Plantago purshii var. *Purshii*
Plantago virginica

POLYGONACEAE

Annual buckwheat
Smartweed
Marsh smartweed
Curltop smartweed
Wood pale dock
Curly dock
Bitter dock
Whorled dock

Eriogonum annuum
Polygonum bicorne
Polygonum coccineum
Polygonum lapathifolium
Rumex altissimus
Rumex crispus
Rumex obtusifolius
Rumex verticillatus

PORTULACACEAE

Common purslane

Portulaca oleracea

PRIMULACEAE

Western rock jasmine
Seaside brookweed

Androsace occidentalis
Samolus valerandi ssp. *parviflorus*

RANUNCULACEAE

Carolina anemone
Carolina anemone
Slains larkspur
Littleleaf buttercup

Anemone caroliniana forma *caroliniana*
Anemone caroliniana forma *violaceae*
Delphinium virescens
Ranunculus abortivus

ROSACEAE

Chickasaw plum
Multiflora rose

Prunus angustifolia
Rosa multiflora

RUBIACEAE

Common buttonbush
Catchweed bedstraw (sticky willy)
Licorice bedstraw
Narrowleaf bluets

Cephalanthus occidentalis var. *occidentalis*
Galium aparine
Galium circaezans
Hedyotis nigricans

SALICACEAE

Eastern cottonwood
Sandbar willow
Black willow

Populus deltoides
Salix interior forma *interior* (*exiguis*)
Salix nigra

SAPINDACEAE

Heartseed (love-in-a-puff)
Western soapberry

Cardiospermum halicacabum
Sapindus drummondii

SAPOTACEAE

Woollybucket bumelia

Bumelia lanuginosa

SAXIFRAGACEAE

Ditch stonecrop

Penthorum sedoides

SCROPHULARIACEAE

American bluehearts
Toad flax

Buchnera americana
Linaria carolinianus var. *texana*

SOLANACEAE

Cutleaf groundcherry
Clamsy groundcherry
Virginia groundcherry
Viscid groundcherry
Black nightshade
Silver nightshade
Buffalobur nightshade
Torrey nightshade

Physalis angulata var. *pendula*
Physalis heterophylla var. *heterophylla*
Physalis virginiana var. *virginiana*
Physalis viscosa var. *cinerascens*
Solanum americanum
Solanum elaeagnifolium forma *elaeagnifolium*
Solanum rostratum
Solanum torreyi

SPRAGANIACEAE

Giant bur-reed

Spraganium eurycarpum

TAMARICACEAE

Tamarisk (saltcedar)

Tamarix gallica

TYPHACEAE

Southern cattail
Common (broadleaf) cattail

Typha domingensis
Typha latifolia forma *latifolia*

ULMACEAE

Common hackberry
Netleaf hackberry
American elm
Siberian elm
Slippery elm

Celtis occidentalis
Celtis laevigata var. *reticulata*
Ulmus americana
Ulmus pumila
Ulmus rubra

UNBELLIFERAE

Plains sandparsley
Water hemlock
Canadian black snakeroot
Bristly scaleseed (buzz-fuzz)

Ammoselinum popei
Cicuta maculata
Sanicula canadensis
Spermolepis echinata

APPENDIX B - THREATENED AND ENDANGERED SPECIES - SALT PLAINS NWR

ALFALFA COUNTY, OK

Whooping crane	<i>Grus americana</i>	E- w/CH
Least tern (Interior)	<i>Sterna antillarum</i>	E
Bald eagle	<i>Haliaeetus leucocephalus</i>	T-PD
Piping plover	<i>Charadrius melodus</i>	T

Snowy plover	<i>Charadrius alexandrinus</i>	**
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Index

- E (Endangered) = Any species which is in danger of extinction throughout all or a significant portion of its range.
- T (Threatened) = Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
- CH (Critical Habitat) = The specific areas occupied by the species on which are found those physical or biological features that are essential to the conservation of the species and which may require special management considerations or protections.
- PD (proposed for de-listing) = Any species of fish, wildlife or plant that is proposed in the Federal Register to be de-listed under Section 4 of the Endangered Species Act.

**-----Although the snowy plovers that nest at Salt Plains are not part of the federally threatened western population (*C.a. nivosus*), they will be considered as such for the purposes of Section 7 consultation (See Appendix G).

APPENDIX C - REFUGE OPERATING NEEDS SYSTEM (RONS)

RONS 2001

PROJNUM	STATION	CostYrIOM	FTE	PROJDESC	People
00001	Salt Plains NWR	140	0	Construct a 2.7-mile, accessible hiking trail through the sandhill grassland and timbered river floodplain to provide visitors views of the different refuge habitats and associated wildlife species. Work will include hand cleaning a 6-foot wide path, covering the trail with filter fabric and fine gravel, constructing parking area trailhead, installing identification, regulation, and interpretive signs. Based on the latest data available, the additional visitors Sand Creek Nature Trail are expected to contribute \$13,941 annually to the local economy.	
	states OK				
	regrant			STARANK	
	<input type="text" value="R 2 - 999"/>			014	
	mark4 <input type="checkbox"/>				

PROJNUM	STATION	CostYrIOM	FTE	PROJDESC	People
00004	Salt Plains NWR	31	0	Construct a fishing pier accessible to persons with disabilities on Sand Creek. Currently, there is not accessible fishing on a stream anywhere in northwest Oklahoma. This facility will provide an outstanding area for anglers with disabilities. Work will include enhancing existing parking area, and constructing an accessible fishing pier on Sand Creek near State Highway 11. The refuge has some enhanced accessible fishing opportunities, and providing better fishing access will create a positive image of the refuge and the refuge system in the local communities. The refuge has already demonstrated a strong record in providing greater access for every aspect of the local communities and visitors.	
	states OK				
	regrant			STARANK	
	<input type="text" value="R 2 - 999"/>			019	
	mark4 <input type="checkbox"/>				

PROJNUM	STATION	CostYrIOM	FTE	PROJDESC	People
97011	Salt Plains NWR	49	.5	Expand and improve the environmental education program by constructing an environmental education shelter and working through NW Oklahoma State University, Oklahoma State University, and Phillips University. The shelter will provide students programs in nearly all kinds of weather, and will increase students' appreciation for wildlife and further their understanding of wildlife conservation. This program will allow the refuge to reach a broader population base in northwest Oklahoma, and will increase educational opportunities by using the refuge as a living laboratory for the schools in the area.	
	states OK				
	regrant			STARANK	
	<input type="text" value="R 2 - 999"/>			015	
	mark4 <input type="checkbox"/>				

21630 Salt Plains NWR OK

HQ: Salt Plains NWR

CD: OK06

Proj #: 00002

Type: NWR

District: Oklahoma

Main ecosystem: Arkansas/Red Rivers

ACTIVITY: PUBLIC EDUCATION & RECREATION

People

7.a. Provide Visitor Services

MEASURES

- 5,000 new visitors will be served
- 10,000 existing visitors will be served
- 100 % will support the top 6 priority public uses
- % will support non-priority public uses

TITLE: Enhance Public Recreation - R-6 Nature Trail

DESCRIPTION:

Construct a 1.6 mile hiking trail along the abandoned railroad track right-of-way and across portions of R-6 grassland to an observation area overlooking the southwest corner of the salt flats. This will provide visitor access to observe the very large flocks of geese, sandhill cranes, gull, and pelicans and an occasional whooping crane that utilize the confluence of the lake, salt flats, and Spring Creek as a roosting area. The trail would include an 6' high observation tower w/spotting scope at the end point approximately 1/2 mile from the roost site. The trail would require some fill material, short board walks over intermittent streams, and filter fabric and gravel over 6' wide trail. If feasible the trail will be handicap accessible. A parking area would be constructed and signage placed at trailhead, observation tower, etc.

FUNDS NEEDED (\$1000s):

	One-Time	Recurring Base	First Year Need
Construction Appropriation Costs.....			
Operations: Personnel Cost.....	\$15		
Equipment Cost.....			
Facility Cost.....	\$50		
Services/Supplies.....	\$40	\$10	
Miscellaneous Costs.....	\$5	\$5	
TOTAL Operations Cost..	\$110	\$15	\$125

Permanent Staff Needed (FTEs)

	Number (1/10s)	Grade	FTE Cost	Critical Staffing Need
FTEs: Managers.....	0.0		\$0	<input type="radio"/> Yes <input type="radio"/> No
Biologists/Biotechnicians.....	0.0		\$0	<input type="radio"/> Yes <input type="radio"/> No
Resource Specialists.....	0.0		\$0	<input type="radio"/> Yes <input type="radio"/> No
Education/Recreation Staff.....	0.0		\$0	<input type="radio"/> Yes <input type="radio"/> No

21630 Salt Plains NWR OK
 HQ: Salt Plains NWR CD: OK06
 Proj #: 00003 Type: NWR District: Oklahoma
 Main ecosystem: Arkansas/Red Rivers

ACTIVITY: PUBLIC EDUCATION & RECREATION *People*

7.a. Provide Visitor Services

- MEASURES**
- 20 new visitors will be served
 - 5 existing visitors will be served
 - % will support the top 6 priority public uses
 - % will support non-priority public uses

TITLE: Enhance Public Recreation - Handicap Accessible Hunting

DESCRIPTION:

Construct a handicap accessible trail for waterfowl hunting. The existing waterfowl hunting area can be enhanced with a cement or fine gravel 1/4 mile trail to a good waterfowl hunting site and a blind constructed which will give wheel chair or other handicapped individuals an opportunity to hunt waterfowl. Work will include enhancing parking area, constructing trail and blind area.

FUNDS NEEDED (\$1000s):	One-Time	Recurring Base	First Year Need
Construction Appropriation Costs.....			
Operations: Personnel Cost.....	\$5		
Equipment Cost.....			
Facility Cost.....			
Services/Supplies.....	\$20	\$2	
Miscellaneous Costs.....	\$2	\$1	
TOTAL Operations Cost..	\$27	\$3	\$30

Permanent Staff Needed (FTEs)	Number (1/10s)	Grade	FTE Cost	Critical Staffing Need	
FTEs: Managers.....	0.0		\$0	<input type="radio"/> Yes	<input type="radio"/> No
				<input type="radio"/> Yes	<input type="radio"/> No
Biologists/Biotechnicians.....	0.0		\$0	<input type="radio"/> Yes	<input type="radio"/> No
				<input type="radio"/> Yes	<input type="radio"/> No
Resource Specialists.....	0.0		\$0	<input type="radio"/> Yes	<input type="radio"/> No
				<input type="radio"/> Yes	<input type="radio"/> No
Education/Management Staff.....	0.0		\$0	<input type="radio"/> Yes	<input type="radio"/> No

Education/Recreation Staff.....	.....MM	.....RM	<input type="radio"/> Yes	<input type="radio"/> No
			<input type="radio"/> Yes	<input type="radio"/> No
Law Enforcement.....	.....0.0	.....\$0	<input type="radio"/> Yes	<input type="radio"/> No
			<input type="radio"/> Yes	<input type="radio"/> No
Clerical/Administrative.....	.....0.0	.....\$0	<input type="radio"/> Yes	<input type="radio"/> No
			<input type="radio"/> Yes	<input type="radio"/> No
Maintenance/Equipment Operation.....	.....0.0	.....\$0	<input type="radio"/> Yes	<input type="radio"/> No
			<input type="radio"/> Yes	<input type="radio"/> No
TOTAL FTEs Needed.....	.....0.0	.....\$0		

PROJECT NOTES:

EMPHASIS: CHS CRP CM OI TOT TYPE: CI DM TOT DOI RANK: 400..

0	0	100	0	100	0	0	0
---	---	-----	---	-----	---	---	---

OUTCOMES: ES WF OMB HEC IAF SDA RW FAR PED PRC TOT

25	45	20	0	0	0	10	0	0	0	100
----	----	----	---	---	---	----	---	---	---	-----

PLANNING LINK:

- | | |
|---|---|
| <input type="checkbox"/> Station CCP approved 10/97+ | <input checked="" type="checkbox"/> FWS Recovery Plan |
| <input type="checkbox"/> Station CCP/equivalent pre-10/97 | <input checked="" type="checkbox"/> FWS Ecosystem Goal/Plan |
| <input type="checkbox"/> Station Goal/Objective | <input type="checkbox"/> Other Major Plan |
| <input type="checkbox"/> Station Step-down Mgmt Plan | <input type="checkbox"/> Legal Mandate |

This project will help meet the ARK-RED Ecosystem goal #B.3.1.C. for providing feeding areas for endangered interior least terns and waterfowl. This will help the refuge provide feeding areas for endangered interior least terns as indicated in the recovery plan.

RANK - STATION: ...006... DISTRICT: ...999... REGIONAL: ...999...
 ECOSYSTEM: 999..... NATIONAL: ...999..

□: 21630 Proj #: 00005 No station found--enter name of new station in section b OK

New Station:

HQ: Salt Plains NWR **Type:** NWR **CD:** OK06

Main ecosystem: Arkansas/Red Rivers

GeoArea: Oklahoma

Additional Stations covered:

--

ACTIVITY: Water Level Management *Habitat*

MEASURES: 15

TITLE: Enhance Water Level Management

DESCRIPTION:

Provide a maintenance worker to construct a 1/2 mile, 4-foot high dike and install erosion and water control structures to prevent high water table and salinity problems. This will create a 15-acre pond up to 2 feet deep for feeding, resting, and wintering waterfowl and other migratory birds. Substantial waterfowl food resources will result from this managed area. This maintenance worker will also provide maintenance on other existing dikes and structures. Maintenance of the moist soil units will also include periodic draw-downs for brush and tree control with tractors and heavy equipment.

LINKS:	RONs		MMS	
	Project #	Orgcode	Project #	Orgcode

Recurring Staff Needs (FTEs)	Number (1/10s)	Grade	FTE Cost
FTEs: Managers.....	...0.0...	.....	.....\$0
Biologists/Biotechnicians.....	...0.0...		.....\$0
Resource Specialists			

21630	Project # 00005	No station found--enter nan...	0.0	New station	on b	\$0	OK
	Education/Recreation Staff.....		0.0			\$0	
	Law Enforcement (Premium Pay).....		0.0			\$0	
	Clerical/Administrative.....		0.0			\$0	
	Maintenance/Equipment Operation.....		1.0	WG-07		\$46	
	TOTAL FTEs Needed.....		1.0			\$46	

Funds Needed (\$1000s):	One-Time	Recurring Base	First Year Need
Operations: Personnel Cost.....		\$46	
Equipment Cost.....	\$30		
Facility Cost.....	\$5		
Services/Supplies.....		\$5	
Miscellaneous Costs.....	\$30	\$5	
TOTAL Operations Cost..	\$65	\$56	\$121

PROJECT NOTES:

STATION 21630
 Project NO. 00005
 RANK STATION : 5
 NATIONAL : 111
 REGIONAL : 111
 GEOGRAPHIC AREA : 43
 Printed 3/28/2005

CLARIFY STAFF: Minimum staffing category identification required for new /expanded stations.

CLARIFY COST: Justify deviations to standardized costs per FTE associated with minimum staff.

OUTCOMES: Select up to 3 Outcomes:
 (Click box for list)

Waterfowl
Endangered & Threatened Species

PLANNING LINK:

- Station CCP approved 10/97+ FWS Ecosystem Goal/Plan
- Station CCP/equivalent pre-10/97 Other Major Plan
- Station Goal/Objective Legal Mandate
- Station Step-down Mgmt Plan
- FWS Recovery Plan

This project will help meet the ARK-RED Ecosystem goal #B.3.1.C. for providing feeding areas for endangered interior least terns and waterfowl. This will help the refuge provide feeding areas for endangered interior least terns as indicated in the recovery plan.

□: 21630 Proj #: 03001 No station found--enter name of new station in section b OK

New Station:

HQ: Salt Plains NWR Type: NWR CD: OK06

Main ecosystem: Arkansas/Red Rivers

GeoArea: Oklahoma

Additional Stations covered:

ACTIVITY: *People*

Provide Visitor Services

MEASURES:
 5,000
 7,000
 100

TITLE: Construct Interpretive Exhibits

DESCRIPTION:

Construct interpretive exhibits to improve and expand visitor services. The exhibits will be placed in the addition to the visitor center which was constructed in 2002. The exhibits will emphasize the importance of wetlands, provide information on migratory birds, migration patterns, current research, and the role of fire management. University researchers who utilize the Refuge will contribute to the research exhibit. The Great Salt Plains Association will assist with design.

LINKS:	RONS		MMS	
	Project #	Orgcode	Project #	Orgcode

Recurring Staff Needs (FTEs)	Number (1/10s)	Grade	FTE Cost
FTEs: Managers.....	..0.0..	.....	.....\$0
Biologists/Biotechnicians.....	..0.0..	.....	.....\$0
Resource Specialists			

21630	Proj # 03001	No station found--enter nan.	0.0	New station	on b	\$0	OK
	Education/Recreation Staff.....		0.0			\$0	
	Law Enforcement (Premium Pay).....		0.0			\$0	
	Clerical/Administrative.....		0.0			\$0	
	Maintenance/Equipment Operation.....		0.0			\$0	
	TOTAL FTEs Needed.....		0.0			\$0	

Funds Needed (\$1000s):	One-Time	Recurring Base	First Year Need
Operations: Personnel Cost.....	.....	.....
Equipment Cost.....	.....	
Facility Cost.....	\$80		
Services/Supplies.....		\$10	
Miscellaneous Costs.....			
TOTAL Operations Cost..	\$80	\$10	\$90

PROJECT NOTES:

STATION 21630
 Project NO. 03001
 RANK STATION: 999
 NATIONAL : 999
 REGIONAL : 999
 GEOGRAPHIC AREA: 999
 Printed 3/28/2005

CLARIFY STAFF: Minimum staffing category identification required for new /expanded stations.

CLARIFY COST: Justify deviations to standardized costs per FTE associated with minimum staff.

OUTCOMES: Select up to 3 Outcomes:
 (Click box for list)

Public Education

PLANNING LINK:

- Station CCP approved 10/97+
- Station CCP/equivalent pre-10/97
- Station Goal/Objective
- Station Step-down Mgmt Plan
- FWS Recovery Plan
- FWS Ecosystem Goal/Plan
- Other Major Plan
- Legal Mandate

□	21630	Proj #: 97001	No station found--enter name of new station in section b	OK	
New Station:					
HQ: Salt Plains NWR		Type: NWR		CD: OK06	
Main ecosystem: Arkansas/Red Rivers					
GeoArea: Oklahoma					
Additional Stations covered:					
ACTIVITY: Provide Visitor Services <i>People</i>					
MEASURES:					
	2,000				
	7,000				
	100				
TITLE: Increase Refuge Volunteer Programs					
DESCRIPTION:					
Develop a Student Conservation Association (SCA) Volunteer Program to provide public programs and conduct biological work on weekdays and staff visitor center on weekends from April 1-September 30. Work will include operating visitor center, school programs, Saturday night programs at the adjacent State Park, wildlife censuses, and vegetation studies. This position will also meet objectives of outreach efforts to educate the public on importance of wildlife, conservation of species, and the work of the Service to perpetuate wildlife and their habitat. Two SCA positions will be filled.					
LINKS:					
		RONS		MMS	
	Project #	Orgcode		Project #	Orgcode
Recurring Staff Needs (FTEs)		Number (1/10s)	Grade	FTE Cost	
FTEs: Managers.....		...0.0...\$0	
Biologists/Biotechnicians.....		...0.0...	\$0	
Resource Specialists					

21630	Proj # 97001	No station found--enter nan	0.0	new station	on b	\$0	OK
	Education/Recreation Staff.....		0.0			\$0	
	Law Enforcement (Premium Pay).....		0.0			\$0	
	Clerical/Administrative.....		0.0			\$0	
	Maintenance/Equipment Operation.....		0.0			\$0	
	TOTAL FTEs Needed.....		0.0			\$0	

Funds Needed (\$1000s):	One-Time	Recurring Base	First Year Need
Operations: Personnel Cost.....	\$15		
Equipment Cost.....			
Facility Cost.....			
Services/Supplies.....	\$10	\$10	
Miscellaneous Costs.....			\$3
TOTAL Operations Cost..	\$25	\$13	\$38

PROJECT NOTES:

STATION 21630
 Project NO. 97001
 RANK STATION : 2
 NATIONAL : 999
 REGIONAL : 22
 GEOGRAPHIC AREA : 56
 Printed 3/28/2005

CLARIFY STAFF: Minimum staffing category identification required for new /expanded stations.

CLARIFY COST: Justify deviations to standardized costs per FTE associated with minimum staff.

OUTCOMES: Select up to 3 Outcomes: (Click box for list)

Resident Wildlife
Public Education

- PLANNING LINK:**
- Station CCP approved 10/97+
 - Station CCP/equivalent pre-10/97
 - Station Goal/Objective
 - Station Step-down Mgmt Plan
 - FWS Recovery Plan
 - FWS Ecosystem Goal/Plan
 - Other Major Plan
 - Legal Mandate

It is the intent of the Service Directorate that field stations having visitor centers and exhibits be open to the public on weekends to provide enhanced services to weekend users. This fulfills requirements for Ark-Red action item #C.1.1.C.

21630 Salt Plains NWR

OK

HQ: Salt Plains NWR

CD: OK06

Proj #: 97003

Type: NWR

District: Oklahoma

Main ecosystem: Arkansas/Red Rivers

[Empty dotted box]

ACTIVITY: PUBLIC EDUCATION & RECREATION

People

7.a. Provide Visitor Services

MEASURES: 10,000 new visitors will be served
125,000 existing visitors will be served
100 % will support the top 6 priority public uses
% will support non-priority public uses

TITLE: Develop urban habitat demonstration

DESCRIPTION:

Develop a backyard demonstration site for visitors to view different plants in a backyard setting. It will educate visitors on what plants attract different birds and/or animals. It will also show how beautiful a yard can be and be beneficial to birds at the same time. If this is not done the Service will have lost a significant opportunity to educate the public and promote bird watching. This will include changing headquarters parking area and installing an irrigation system. It will have several partners including Alfalfa Electric, ODWC, ODOC, and garden clubs.

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Table with 4 columns: FUNDS NEEDED (\$1000s), One-Time, Recurring Base, First Year Need. Rows include Construction Costs, Personnel Cost, Equipment Cost, Facility Cost, Services/Supplies, Miscellaneous Costs, and TOTAL Operations Cost.

Table with 2 columns: PERMANENT STAFF NEEDED (FTEs), Number (1/10s), FTE Cost. Rows include Managers, Biologists, Resource Specialists, Education/Recreation Staff, Law Enforcement, Clerical/Administrative, Maintenance/Equipment Operation, and TOTAL FTEs Needed.

Comm

PROJECT NOTES:

EMPHASIS: CHS CRP CM OI TOT **TYPE:** CI DM TOT **DOI RANK:** ...0...

0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---

OUTCOMES: ES WF OMB HEC IAF SDA RW FAR PED PRC TOT

0	0	20	10	0	0	30	0	25	15	100
---	---	----	----	---	---	----	---	----	----	-----

PLANNING LINK:

- | | |
|--|---|
| <input type="checkbox"/> Station CCP approved 10/97+ | <input type="checkbox"/> FWS Recovery Plan |
| <input type="checkbox"/> Station CCP/equivalent pre-10/97 | <input checked="" type="checkbox"/> FWS Ecosystem Goal/Plan |
| <input checked="" type="checkbox"/> Station Goal/Objective | <input type="checkbox"/> Other Major Plan |
| <input type="checkbox"/> Station Step-down Mgmt Plan | <input type="checkbox"/> Legal Mandate |

This project meets station objective of increasing public interest in birds and Ark-Red Ecosystem plan action item # C.1.1.U. This item also will solve employee security and safety problems with office parking next to the building.

RANK - STATION: ..006.. **DISTRICT:** ..999.. **REGIONAL:** ..268.. **NATIONAL:** ..999..

Updated August 11, 1998

Problems Good to go

Problems Comment

Reviewed by Needleman

□: 21630 Proj #: 97005 No station found--enter name of new station in section b OK

New Station:

HQ: Salt Plains NWR Type: NWR CD: OK06
 Main ecosystem: Arkansas/Red Rivers
 GeoArea: Oklahoma

Additional Stations covered:

ACTIVITY:	Native Pest Plant Control	<i>Habitat</i>
MEASURES:	5,000	
	5,000	
	2,500	
	2,500	
	0	

TITLE: Remove and Control Invasive Exotic Plants

DESCRIPTION:
 Remove red cedar and salt cedar by hand, mechanical, or chemical means to improve grassland quality and nesting habitat. Fire control over the past 75+ years has resulted in invasion of grasslands by red cedar and salt cedar. Invasion by these plant species has deteriorated grassland nesting habitat used by a number of bird species whose populations have been on a steady decline due to loss of habitat. This will be a labor-intensive project requiring four temporary employees over a 6-month period. If this project is not completed, red cedar and salt cedar will continue to spread and additional habitat for ground nesting grassland birds will be lost.

LINKS:	RONs		MMS	
	Project #	Orgcode	Project #	Orgcode

Recurring Staff Needs (FTEs)	Number (1/10s)	Grade	FTE Cost
FTEs: Managers.....	...0.0...	.....	.....\$0
Biologists/Biotechnicians.....	...0.0...		.....\$0
Resource Specialists			

21630	Project # 97005	No station found--enter nan	0.0	New station	on b	\$0	OK
	Education/Recreation Staff.....		0.0			\$0	
	Law Enforcement (Premium Pay).....		0.0			\$0	
	Clerical/Administrative.....		0.0			\$0	
	Maintenance/Equipment Operation.....		0.0			\$0	
	TOTAL FTEs Needed.....		0.0			\$0	

Funds Needed (\$1000s):	One-Time	Recurring Base	First Year Need
Operations: Personnel Cost.....	\$75		
Equipment Cost.....			
Facility Cost.....			
Services/Supplies.....	\$15	\$25	
Miscellaneous Costs.....	\$25	\$17	
TOTAL Operations Cost..	\$115	\$42	\$157

PROJECT NOTES:

Station 21630
 Project NO. 97005
 Rank STATION: 4
 NATIONAL: _____
 REGIONAL: 12
 GEOGRAPHIC AREA: 36
 Printed 3/28/2005

CLARIFY STAFF: Minimum staffing category identification required for new /expanded stations.

CLARIFY COST: Justify deviations to standardized costs per FTE associated with minimum staff.

OUTCOMES: Select up to 3 Outcomes:
 (Click box for list)

<input type="checkbox"/> Other Migratory Birds
<input type="checkbox"/> Waterfowl
<input type="checkbox"/>

PLANNING LINK:

- Station CCP approved 10/97+
- Station CCP/equivalent pre-10/97
- Station Goal/Objective
- Station Step-down Mgmt Plan
- FWS Recovery Plan
- FWS Ecosystem Goal/Plan
- Other Major Plan
- Legal Mandate

Meets stations goal of restoring refuge grasslands. About 5,000 acres will be involved over the years.
 Meets Ark-Red Ecosystem plan action item #B.2.5.D.

□: 21630 Proj #: 97006 No station found--enter name of new station in section b OK

New Station:

HQ: Salt Plains NWR Type: NWR CD: OK06

Main ecosystem: Arkansas/Red Rivers

GeoArea: Oklahoma

Additional Stations covered:

--

ACTIVITY: Wildlife

Surveys & Censuses

MEASURES: 5
0

TITLE: Improve Wildlife Surveys and Monitoring

DESCRIPTION:

Provide a temporary full-time GS-5 Biological Technician to conduct weekly shorebird censuses, least tern censuses, and waterbird surveys on Ralston Island, which serves as a rookery for thousands of wading bird nests. Conduct studies to determine percentage of tern and shorebird survival of young to flight stage; project will include placing transmitters on young birds. Monitor new Sandpiper Trail and disturbance to shorebirds. Monitor shorebird food supply by conducting invertebrate surveys. Conduct shorebird banding program. The data gathered from these studies will be essential to managing the refuge in a responsible manner.

LINKS:

RONS		MMS	
Project #	Orgcode	Project #	Orgcode

Recurring Staff Needs (FTEs)	Number (1/10s)	Grade	FTE Cost
FTEs: Managers.....	...0.0...	.....	.....\$0
Biologists/Biotechnicians.....	...0.5...	GS-05	.....\$20
Resource Specialists			

21630	Proj #: 97006	No station found--enter nan...	0.0	new station	on b	\$0	OK
	Education/Recreation Staff.....		0.0			\$0	
	Law Enforcement (Premium Pay).....		0.0			\$0	
	Clerical/Administrative.....		0.0			\$0	
	Maintenance/Equipment Operation.....		0.0			\$0	
	TOTAL FTEs Needed.....		0.5			\$20	

Funds Needed (\$1000s):	One-Time	Recurring Base	First Year Need
Operations: Personnel Cost.....		\$20	
Equipment Cost.....	\$15		
Facility Cost.....	\$3		
Services/Supplies.....		\$3	
Miscellaneous Costs.....	\$15	\$3	
TOTAL Operations Cost..	\$33	\$25	\$58

PROJECT NOTES:

STATION 21630
 Project NO. 97006
 RANK STATION : 8
 NATIONAL : 152
 REGIONAL : 64
 GEOGRAPHIC AREA : 64
 Printed 3/28/2005

CLARIFY STAFF: Minimum staffing category identification required for new /expanded stations.

CLARIFY COST: Justify deviations to standardized costs per FTE associated with minimum staff.

OUTCOMES: Select up to 3 Outcomes:
 (Click box for list)

- Endangered & Threatened Species
- Waterfowl
-

PLANNING LINK:

- Station CCP approved 10/97+
- FWS Ecosystem Goal/Plan
- Station CCP/equivalent pre-10/97
- Other Major Plan
- Station Goal/Objective
- Legal Mandate
- Station Step-down Mgmt Plan
- FWS Recovery Plan

This project meet station objective of monitoring refuge wildlife populations and effects of public use on wildlife. This plans meets Ark-Red ecosystem plan action item #B.1.3.H.

□:	21630	Proj #: 97008	No station found--enter name of new station in section b		OK
New Station:					
HQ: Salt Plains NWR		Type: NWR		CD: OK06	
Main ecosystem: Arkansas/Red Rivers					
GeoArea: Oklahoma					
Additional Stations covered:					
ACTIVITY: Upland Restoration <i>Habitat</i>					
MEASURES:		500			
		0			
TITLE: Restore habitat by improving volunteer program					
DESCRIPTION:					
<p>This project will protect and restore grasslands on the refuge. A volunteer coordinator to coordinate work projects of volunteer inmate work crew and other volunteers on refuge will guide and assist inmate work crews on boundary fencing and ongoing upland habitat restoration. Coordinating the work crew and providing necessary materials and supplies daily for crew of ten allows for greater output of work to be accomplished efficiently. Negative impacts of not filling the position continues the backlog of work to be accomplished and loss of grassland habitat. Volunteer coordinator will also coordinate activities of other volunteers on wildlife surveys, visitor information, and school groups.</p>					
LINKS:					
		RONS		MMS	
		Project #	Orgcode	Project #	Orgcode
Recurring Staff Needs (FTEs)		Number	Grade	FTE	
		(1/10s)		Cost	
FTEs: Managers.....		...0.0...	-----	.....\$0	
Biologists/Biotechnicians.....		...0.0...		.....\$0	
Resource Specialists					

21630	Proj # 97008	No station found--enter nan.	new station	on b	\$0	OK
	Education/Recreation Staff.....	1.0		GS-09	\$59	
	Law Enforcement (Premium Pay).....	0.0			\$0	
	Clerical/Administrative.....	0.0			\$0	
	Maintenance/Equipment Operation.....	0.0			\$0	
	TOTAL FTEs Needed.....	1.0			\$59	

Funds Needed (\$1000s):	One-Time	Recurring Base	First Year Need
Operations: Personnel Cost.....		\$59	
Equipment Cost.....	\$30		
Facility Cost.....	\$5		
Services/Supplies.....		\$5	
Miscellaneous Costs.....	\$30	\$15	
TOTAL Operations Cost..	\$65	\$79	\$144

PROJECT NOTES:

STATION 21630	Project NO. 97008 RANK STATION: 12 NATIONAL: _____ REGIONAL: 333 GEOGRAPHIC AREA: _____	Printed 3/28/2005
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CLARIFY STAFF: Minimum staffing category identification required for new /expanded stations.

CLARIFY COST: Justify deviations to standardized costs per FTE associated with minimum staff.

OUTCOMES: Select up to 3 Outcomes: (Click box for list)	<input type="checkbox"/> Healthy Ecosystems
	<input type="checkbox"/> Endangered & Threatened Species
	<input type="checkbox"/> Waterfowl

- PLANNING LINK:**
- Station CCP approved 10/97+
 - Station CCP/equivalent pre-10/97
 - Station Goal/Objective
 - Station Step-down Mgmt Plan
 - FWS Recovery Plan
 - FWS Ecosystem Goal/Plan
 - Other Major Plan
 - Legal Mandate

Coordinating volunteer activities will allow work to be accomplished more effectively and station needs will be met sooner, allow objectives to be met earlier and help meet our responsibilities under the Refuge Administration Act.

□: 21630 Proj #: 97009 No station found--enter name of new station in section b OK

New Station:

HQ: Salt Plains NWR Type: NWR CD: OK06

Main ecosystem: Arkansas/Red Rivers

GeoArea: Oklahoma

Additional Stations covered:

ACTIVITY: *People*

Provide Visitor Services

MEASURES: 8,000
5,000
100

TITLE: Expand interpretive exhibits

DESCRIPTION:

Improve and expand visitor services by constructing three exhibits in the visitor information area, completing a project started in fiscal year 1992. Exhibits include an interactive computer, a diorama of the salt flats and shorebirds (emphasizing the importance of the salt flats and explaining the Western Hemisphere Shorebird Reserve designation), and a display of the unique habitats of the refuge. Crystal digging is permitted on the salt flats, and the displays will also educate visitors on the importance of not disturbing nesting areas during digging. Based on the latest Fish and Wildlife Service data available, the additional visitors to Salt Plains are expected to contribute \$22,306 annually to the local economy.

LINKS:	RONS		MMS	
	Project #	Orgcode	Project #	Orgcode

Recurring Staff Needs (FTEs)	Number (1/10s)	Grade	FTE Cost
FTEs: Managers.....	...0.0...	.....	.....\$0.
Biologists/Biotechnicians.....	...0.0...		.....\$0.
Resource Specialists			

21630	Project # 97009	Station Found--enter nan	0.0	New station	on b	\$0	OK
	Education/Recreation Staff.....		0.0			\$0	
	Law Enforcement (Premium Pay).....		0.0			\$0	
	Clerical/Administrative.....		0.0			\$0	
	Maintenance/Equipment Operation.....		0.0			\$0	
	TOTAL FTEs Needed.....		0.0			\$0	

Funds Needed (\$1000s):	One-Time	Recurring Base	First Year Need
Operations: Personnel Cost.....	\$5		
Equipment Cost.....	\$20		
Facility Cost.....			
Services/Supplies.....	\$20	\$2	
Miscellaneous Costs.....		\$3	
TOTAL Operations Cost..	\$45	\$5	\$50

PROJECT NOTES:

STATION 21630
 Project No. 97009
 RANK STATION: 006
 NATIONAL :
 REGIONAL : 15
 GEOGRAPHIC AREA: 91
 Printed
 3/28/2005

CLARIFY STAFF: Minimum staffing category identification required for new /expanded stations.

CLARIFY COST: Justify deviations to standardized costs per FTE associated with minimum staff.

OUTCOMES: Select up to 3 Outcomes:
 (Click box for list)

Public Education

PLANNING LINK:

- Station CCP approved 10/97+
- Station CCP/equivalent pre-10/97
- Station Goal/Objective
- Station Step-down Mgmt Plan
- FWS Recovery Plan
- FWS Ecosystem Goal/Plan
- Other Major Plan
- Legal Mandate

Station goal is to complete Visitor Center exhibits started in FY 92, and these exhibits will complete the planned exhibitry.

21630 Salt Plains NWR

OK

HQ: Salt Plains NWR

CD: OK06

Proj #: 97014

Type: NWR

District: Oklahoma

Main ecosystem: Arkansas/Red Rivers

ACTIVITY: PUBLIC EDUCATION & RECREATION

People

7.b. Outreach

MEASURES: 8,500 participants will be at group presentations
12,000 people will view off-site exhibits
news releases will be issued
TV or radio spots will be developed
other special events will be hosted

TITLE: Construct environmental center

DESCRIPTION:

Construct an environmental center/Research Center that will include basic laboratory facilities suitable for use by primary, secondary, or college classes, and a rustic housing facilities for 20-30 students. It would have some TV production capabilities for professors and State/Service personnel to transmit programs all over OK. ODWC would help with permanent staff, ODOC would assist with janitorial and landscape services, local funding would help construction with cash, free labor, optic cable, etc. SCAs would help staff the facility.

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FUNDS NEEDED (\$1000s):

	One-Time	Recurring Base	First Year Need
Construction Costs.....	\$3,500		
Operations: Personnel Cost.....			
Equipment Cost.....			
Facility Cost.....			
Services/Supplies.....		\$35	
Miscellaneous Costs.....		\$5	
TOTAL Operations Cost..		\$40	\$40

PERMANENT STAFF NEEDED (FTEs):

	Number (1/10s)	FTE Cost
Managers.....		
Biologists.....		
Resource Specialists.....		
Education/Recreation Staff.....		
Law Enforcement.....		
Clerical/Administrative.....		
Maintenance/Equipment Operation.....		
TOTAL FTEs Needed.....		

Comm

PROJECT NOTES:

EMPHASIS: CHS CRP CM OI TOT **TYPE:** CI DM TOT **DOI RANK:** 0
0 0 0 0 0 0 0 0 0

OUTCOMES: ES WF OMB HEC IAF SDA RW FAR PED PRC TOT
0 0 0 0 0 10 0 0 75 15 100

PLANNING LINK:

- | | |
|--|---|
| <input type="checkbox"/> Station CCP approved 10/97+ | <input type="checkbox"/> FWS Recovery Plan |
| <input type="checkbox"/> Station CCP/equivalent pre-10/97 | <input checked="" type="checkbox"/> FWS Ecosystem Goal/Plan |
| <input checked="" type="checkbox"/> Station Goal/Objective | <input type="checkbox"/> Other Major Plan |
| <input type="checkbox"/> Station Step-down Mgmt Plan | <input type="checkbox"/> Legal Mandate |

This project would meet station objective of increasing environmental education and public awareness and Ark-Red action item #C.1.1.P. The Service no longer has to bring the students to the refuge, we can take the refuge to the students daily, weekly, whatever and have the experts teach tens of thousands of students at one time with video technology. Salt Plains NWR with it's diversity of habitats is perfect for this idea.

RANK - STATION: 016 **DISTRICT:** 999 **REGIONAL:** 1030 **NATIONAL:** 999

Updated August 31, 1998

Problems Good to go

Problems Comment

Reviewed by Needleman

21630 Salt Plains NWR OK
 HQ: Salt Plains NWR CD: OK06
 Proj #: 97015 Type: NWR District: Oklahoma
 Main ecosystem: Arkansas/Red Rivers

ACTIVITY: FISH & WILDLIFE MANAGEMENT Wildlife
 4.d.Nest Structures
MEASURES: 30 bird nest structures will be erected
 50 bird nest structures will be maintained

TITLE: Improve least tern nesting habitat

DESCRIPTION:

Construct least tern nesting area with nesting pads, chick shelters, electric fencing, pond for feeding area on abandoned railroad right-of-way through refuge. Also provide additional nesting and chick shelters for existing fenced nesting exclosures. Least terns are an endangered species, threatened by predation and loss of habitat. The refuge provides essential habitat for this species. Accomplish with temporary biological technician.

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FUNDS NEEDED (\$1000s):	One-Time	Recurring Base	First Year Need
Construction Costs.....			
Operations: Personnel Cost.....	\$7		
Equipment Cost.....			
Facility Cost.....			
Services/Supplies.....	\$3	\$3	
Miscellaneous Costs.....			
TOTAL Operations Cost..	\$10	\$3	\$13

PERMANENT STAFF NEEDED (FTEs):	Number (1/10s)	FTE Cost
Managers.....		
Biologists.....		
Resource Specialists.....		
Education/Recreation Staff.....		
Law Enforcement.....		
Clerical/Administrative.....		
Maintenance/Equipment Operation.....		
TOTAL FTEs Needed.....		

Comm

PROJECT NOTES:

EMPHASIS: CHS CRP CM OI TOT **TYPE:** CI DM TOT **DOI RANK:** ...0...

0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---

OUTCOMES: ES WF OMB HEC IAF SDA RW FAR PED PRC TOT

70	10	10	10	0	0	0	0	0	0	100
----	----	----	----	---	---	---	---	---	---	-----

PLANNING LINK:

- | | |
|--|---|
| <input type="checkbox"/> Station CCP approved 10/97+ | <input checked="" type="checkbox"/> FWS Recovery Plan |
| <input type="checkbox"/> Station CCP/equivalent pre-10/97 | <input checked="" type="checkbox"/> FWS Ecosystem Goal/Plan |
| <input checked="" type="checkbox"/> Station Goal/Objective | <input type="checkbox"/> Other Major Plan |
| <input type="checkbox"/> Station Step-down Mgmt Plan | <input type="checkbox"/> Legal Mandate |

This project meets station objective of increasing interior least tern nesting habitat. This also meets interior least tern recovery plan items for increasing tern nesting and feeding areas on Salt Plains NWR. Meets Ark-Red Ecosystem action item #B.1.2.D.

RANK - STATION: ...05... **DISTRICT:** ...999... **REGIONAL:** ...245... **NATIONAL:** ...999...

Updated August 11, 1998

Problems Good to go

Problems Comment

Reviewed by Granillo

□: 21630 Proj #: 97020 No station found--enter name of new station in section b OK

New Station:

HQ: Salt Plains NWR **Type:** NWR **CD:** OK06

Main ecosystem: Arkansas/Red Rivers

GeoArea: Oklahoma

Additional Stations covered:

--

ACTIVITY: Upland Restoration *Habitat*

MEASURES: 75
0

TITLE: Improve Habitat for Birds of Prey

DESCRIPTION:

Salt Plains is an important wintering area for bald and golden eagles. Refuge personnel will remove underbrush with specialized equipment and by hand from bald and golden eagle roost sites and turkey vulture roost sites. Eagle use has declined due to the heavy undergrowth under the roost trees which harbors bobcat and other predators.

LINKS:	RONS		MMS	
	Project #	Orgcode	Project #	Orgcode

Recurring Staff Needs (FTEs)	Number (1/10s)	Grade	FTE Cost
FTEs: Managers.....	0.0		\$0
Biologists/Biotechnicians.....	0.0		\$0
Resource Specialists			

21630	Proj # 97020	No station found--enter nan	0.0	new station	on b	\$0	OK
	Education/Recreation Staff.....		0.0			\$0	
	Law Enforcement (Premium Pay).....		0.0			\$0	
	Clerical/Administrative.....		0.0			\$0	
	Maintenance/Equipment Operation.....		0.0			\$0	
	TOTAL FTEs Needed.....		0.0			\$0	

Funds Needed (\$1000s):	One-Time	Recurring Base	First Year Need
Operations: Personnel Cost.....	\$40		
Equipment Cost.....	\$15		
Facility Cost.....			
Services/Supplies.....	\$5	\$5	
Miscellaneous Costs.....	\$8	\$8	
TOTAL Operations Cost..	\$68	\$13	\$81

PROJECT NOTES:

Station 21630 Project NO. 97020
 Rank STATION 3
 NATIONAL
 REGIONAL 119
 Geographic Area 11
 Printed 3/28/2005

CLARIFY STAFF: Minimum staffing category identification required for new /expanded stations.

CLARIFY COST: Justify deviations to standardized costs per FTE associated with minimum staff.

OUTCOMES: Select up to 3 Outcomes:
 (Click box for list)

Endangered & Threatened Species

PLANNING LINK:

- Station CCP approved 10/97+ FWS Ecosystem Goal/Plan
- Station CCP/equivalent pre-10/97 Other Major Plan
- Station Goal/Objective Legal Mandate
- Station Step-down Mgmt Plan
- FWS Recovery Plan

The refuge is legally mandated to manage for threatened and endangered species. Station goals include improve/restore habitat for endangered species. This project will meet Ark-Red Ecosystem plan action item # B.1.3.C.

□: 21630 Proj #: 98101 No station found--enter name of new station in section b OK

New Station:

HQ: Salt Plains NWR Type: NWR CD: OK06
 Main ecosystem: Arkansas/Red Rivers
 GeoArea: Oklahoma

Additional Stations covered:

ACTIVITY: *Habitat*

Moist Soil Management

MEASURES: 180
 1
 0

TITLE: Develop of floodplain area into a moist soil unit

DESCRIPTION:

This refuge winters impressive numbers of migratory birds. However, high quality wetlands with optimum food values and nutrients are missing due to a lack of moist soil management areas. Development of the old Sand Creek channel floodplain area through placement of water control structures into a moist soil unit will benefit waterfowl on the refuge. The channels would be able to hold water all year, which would provide very good additional feeding habitat for interior least terns close to their nesting area. This is in the public hunting area north of state highway 11 and would significantly improve public waterfowl hunting, which is basically nonexistent in northwestern Oklahoma.

LINKS:	RONS		MMS	
	Project #	Orgcode	Project #	Orgcode

Recurring Staff Needs (FTEs)	Number (1/10s)	Grade	FTE Cost
FTEs: Managers.....	...0.0...	.....	.....\$0
Biologists/Biotechnicians.....	...0.0...		.....\$0
Resource Specialists			

21630	Proj # 98101	No station found--enter nan...	New station	on b	\$0	OK
	Education/Recreation Staff.....	0.0			\$0	
	Law Enforcement (Premium Pay).....	0.0			\$0	
	Clerical/Administrative.....	0.0			\$0	
	Maintenance/Equipment Operation.....	0.0			\$0	
	TOTAL FTEs Needed.....	0.0			\$0	

Funds Needed (\$1000s):	One-Time	Recurring Base	First Year Need
Operations: Personnel Cost.....	\$45		
Equipment Cost.....			
Facility Cost.....	\$35		
Services/Supplies.....	\$35	\$5	
Miscellaneous Costs.....	\$10	\$10	
TOTAL Operations Cost..	\$125	\$15	\$140

PROJECT NOTES:

STATION 21630
 Project NO. 98101
 RANK STATION: 15
 NATIONAL :
 REGIONAL : 394
 GEOGRAPHIC AREA : 185
 Printed 3/28/2005

CLARIFY STAFF: Minimum staffing category identification required for new /expanded stations.

CLARIFY COST: Justify deviations to standardized costs per FTE associated with minimum staff.

OUTCOMES: Select up to 3 Outcomes:
 (Click box for list)

<input type="checkbox"/> Endangered & Threatened Species
<input type="checkbox"/> Resident Wildlife
<input type="checkbox"/>

PLANNING LINK:

- | | |
|--|--|
| <input type="checkbox"/> Station CCP approved 10/97+ | <input type="checkbox"/> FWS Ecosystem Goal/Plan |
| <input type="checkbox"/> Station CCP/equivalent pre-10/97 | <input type="checkbox"/> Other Major Plan |
| <input checked="" type="checkbox"/> Station Goal/Objective | <input type="checkbox"/> Legal Mandate |
| <input type="checkbox"/> Station Step-down Mgmt Plan | |
| <input type="checkbox"/> FWS Recovery Plan | |

This meets station objective of providing waterfowl and least tern feeding areas. It also provides additional hunting opportunities. Meets Ark-Red Ecosystem goal B.3.1.C.

APPENDIX D - COMPATIBILITY DETERMINATIONS

These compatibility determinations describe the wildlife-dependent and other uses that may be included in the public use program under the preferred alternative and determines the conditions under which each use is considered compatible with the purposes of the refuge and with the mission of the National Wildlife Refuge System. Under the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 and the Refuge Recreation Act of 1962, the Service may not permit recreational uses on a national wildlife refuge unless these uses are first determined to be compatible wildlife-dependent uses. The Improvement Act now requires that the needs of fish, wildlife, and plant resources on national wildlife refuges come first. All public uses must be compatible with these resources. A use is compatible if it is determined that the activity does not materially interfere with, or detract from, the fulfillment of the national Wildlife Refuge System mission or the purposes of the refuge. Furthermore, compatible activities which depend on healthy fish and wildlife populations will be recognized as priority public uses. The 1997 law established the priority public uses to be hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation. The following uses were evaluated to determine their compatibility with the purposes of the refuge and the System mission:

1. Water Skiing and Operation of Personal Watercraft Denied Without a Compatibility Determination at Salt Plains National Wildlife Refuge
2. Big Game Hunting
3. Upland Game Hunting
4. Migratory Bird Hunting
5. Recreational Fishing
6. Wildlife Observation
7. Wildlife-dependent Photography
8. Environmental Education and Interpretation
9. Non-Wildlife Dependent Photography
10. Non-Wildlife Dependent Outdoor Recreation
11. Grazing Program
12. Cooperative Farming
13. Auto Touring
14. Selenite Crystal Digging (Natural Resource Collection – “Rockhounding”)
15. Re-evaluation of acid rain monitoring station operated by U.S. Geological Survey

Water Skiing and Operation of Personal Watercraft Denied Without a Compatibility Determination at Salt Plains National Wildlife Refuge

Generally, it is a current or proposed activity which triggers the renewal or development of a compatibility determination. By following the flow chart in the compatibility policy, even an existing use can be determined no longer compatible. Policy states (603 FW 2.15) that "... a refuge manager will make this decision prior to making a compatibility determination and completing one will not be necessary." By following criteria outlined in (603 FW 2.10 D) water skiing and operation of personal watercraft at Salt Plains National Wildlife Refuge has been deemed incompatible.

The use was found incompatible since the use is inconsistent with public safety. The use is inconsistent with public safety due to the shallow depth of the lake and presence of trot lines. The entire lake has slowly become shallow through the 70 plus years of its existence due to siltation. The dam and resulting reservoir were constructed in the late 1930's and completed in 1940. Due to the shallow depth, individuals whom engage in the use would likely be severely injured as a result of hitting the bottom of the lake if they were to fall. The presence of trot lines on the lake also adds an obstacle to individuals engaging in the use. With trot lines present, the user might become entangled in the trot lines and as a result become severely injured.

Additional Compatibility Determinations (completed between 1994-1998)

The following compatibility determinations were determined compatible with the refuge purposes:

- Firewood cutting, Christmas tree harvesting (1994)
- Chemical weed management (1994)
- Develop Shorebird Observation Area (1996)
- Ralstin Island Restoration (1998)
- Vegetation Removal for Flood Control on Sand Creek (1998)
- K & E Railroad Right-of Way Acquisition (1998)
- Restore C-1 Farm Field Habitat (1998)
- Restore Salt Flats and Cottonwood Creek (1998)

FINAL COMPATIBILITY DETERMINATION

USE: Big Game Hunting

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

Big game hunting currently exists on the refuge in the form of deer hunting. Deer hunting on the refuge serves as both a public use and management activity. To accomplish refuge management goals for the deer population present on the refuge, a deer hunt has been in existence since 1965. The hunt allows for the resident deer population to be regulated as to not exceed the carrying capacity of the habitat on the refuge. In fulfilling these management objectives, the public is afforded the opportunity to hunt deer on the refuge. Deer hunting is accomplished in a highly controlled hunt situation held in cooperation with the Oklahoma Department of Wildlife. Hunters are selected by random drawing conducted by the Oklahoma Department of Wildlife. Hunts are held on weekends from October through December of each year. Archery, black powder, and rifle hunting are all allowed during different hunts or on different areas of the refuge. Hunts typically begin on Friday afternoon after a brief orientation, and conclude at 2:00 p.m. on Sunday afternoon, with exception of the wilderness hunts which end on Monday. Each year the number of hunters and number of hunts are decided upon by the previous years harvest and census numbers. The status of the deer population in relation to size and overall health is analyzed yearly and hunts are changed accordingly. Typically the number of hunters is between 100 and 150 individuals spread out over 7 to 8 weekends. The deer hunts held on the refuge are of a very high quality with the harvest rate being one of the highest in the state. Due to the high quality and high success rate, refuge hunts are quite popular with the public and highly coveted. The proposed use would be conducted on various areas throughout the refuge with the exception of the Salt Plains Lake and salt flats. The proposed use would be conducted on weekends beginning in October and ending in December. The proposed

use would be conducted by conventional hunting techniques with the use of either archery or black powder equipment, or rifle hunting. The proposed use would be conducted on the refuge to provide for a quality wildlife dependent recreation experience and as a management tool. Much of the surrounding area is privately owned and resulting in little availability for public hunting in this part of the state. The refuge has an adequate deer resource that can sustain controlled hunting pressure.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: Additional administrative and management costs associated with the proposed use would be significant. The administrative burden imposed by the hunt would increase the need for additional funding. In the management of the hunt, law enforcement associated with the hunt would be the greatest cost. Special equipment, facilities, or improvements necessary to support the use: The only special facilities that would be needed for the proposed use would be to have at least two handicapped accessible hunting blinds available for disabled hunters. Maintenance costs: The only maintenance cost associated with the proposed use would be in the general up keep of the handicapped hunt blinds. Monitoring costs: Monitoring costs associated with the proposed use would be for the deer census that is conducted each year and processing the harvest data. Offsetting revenues: A user fee of \$20 would be collected from each deer hunter participating in the refuge hunts.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The anticipated direct and indirect short-term impacts of the proposed use would be in the disturbance to wildlife. Having individuals in the field firing weapons throughout the refuge will disturb wildlife. However, the use is being done to accomplish refuge management goals, and thus the benefits outweigh the negative impacts. Long-term impacts: The anticipated direct and indirect long-term impacts of the proposed use are those associated with disturbance to wildlife. With the disturbance associated with hunting wildlife would likely change their habits and move to areas of less disturbance. Cumulative impacts: The only anticipated direct and indirect cumulative impacts of the proposed use when added to existing/projected refuge uses would be quite minimal. The areas where the proposed use would occur has been strategically planned out in order to allow for the least amount of disturbance to wildlife.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination were received as part of the Comprehensive Conservation Plan for Salt Plains NWR.

Two comments were received opposing all hunting on the Refuge.

The Oklahoma Department of Wildlife Conservation commented that additional opportunities should be provided including opening an area to archery hunting without limits on the number of hunters. They preferred a CCP strategy which would increase the public hunting area by a thousand acres.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Deer hunting would be restricted to the specific times, areas, and regulations of the controlled hunts.

All deer hunters must attend a pre-hunt orientation.

JUSTIFICATION:

The proposed use does not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge. The very small impact associated with the proposed use does not materially interfere or detract from the refuge goals, objectives, or management activities. The proposed use does not adversely impact the biological resources of the refuge. The hunt benefits the refuges deer population by keeping the population within a certain range not exceeded the carrying capacity of the habitat, and maintains the health and structure of the herd. According to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 there are six public uses that are deemed acceptable wildlife dependent public uses on refuges if they are found to be compatible with refuge purposes. They are: wildlife observation, wildlife photography, hunting, fishing, and environmental education and interpretation. These uses are commonly referred to as the "Big Six" public uses on refuges. With the addition of the proposed use, the mission of the National Wildlife Refuge System and purposes for the refuge would be supported. The proposed use would add to the public uses available on the refuge, and support the "Big Six" public uses of the National Wildlife Refuge System.

The hunting program is carefully managed to provide for public safety, to avoid adverse impacts to endangered whooping cranes and/or their designated critical habitat as well as to minimize disturbance of feeding and resting areas for migratory and wintering birds. Currently, the refuge is maximizing the number of hunts and hunters that can be accommodated, while maintaining a safe, quality hunt and protecting sensitive wildlife areas. Archery, primitive, and rifle hunting are currently held as controlled deer hunts. The refuge will continue to work with the Oklahoma Department of Wildlife Conservation to gather wildlife and habitat data in order to plan, develop, and maintain or improve compatible hunting opportunities that do not conflict with visitor and hunter safety or negatively impact endangered species or other important fish and wildlife resources.

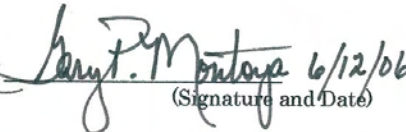
SIGNATURE:

Refuge Manager

 5-19-06
(Signature and Date)

CONCURRENCE:

Regional Chief

 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date:

2021

FINAL COMPATIBILITY DETERMINATION

USE: Upland Game Hunting

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

Bobwhite quail hunting and ring-necked pheasant hunting has been permitted on Salt Plains NWR in the public hunting area north of Highway 11. The area contains about 1,200 acres. Hunting is permitted during the State season until noon. Hunters are required to check in and out at self check stations. Records of harvest are maintained. The area is closed to upland game hunting while deer hunts are held in the area. Weapons are restricted to shotguns with non-toxic shot. The area is an alluvial plain with occasional sandhills. The East Fork of the Salt Fork River, the West Fork of the Salt Fork River, Sand Creek, and Krey Creek flow through the area. Native prairie dominates the sandhills with patches of plum thickets. Timber is found along the streams and rivers. A portion of the area is farmed for browse for geese and 120 acres of wetlands are managed as a moist soil unit.

AVAILABILITY OF RESOURCES:

Adequate resources are available to conduct the hunting program. Assistance is received from the Oklahoma Department of Wildlife Conservation.

ANTICIPATED IMPACTS OF THE USE:

The hunting results in the removal of individual birds and some disturbance to other wildlife occurs. It is also one of the six priority uses for the National Wildlife Refuge System which is hunting.

PUBLIC REVIEW AND COMMENT:

Public review was received during the review of the Comprehensive Conservation Plan for Salt Plains NWR.

Two comments were received opposing all hunting on the Refuge.

Oklahoma Department of Wildlife Conservation preferred the CCP alternative which emphasized hunting on the Refuge and increased the public hunting area by 1000 acres.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

All hunting in the hunt area will be stopped if whooping cranes fly over the area or land in the area. Salt Plains NWR is designated as critical habitat for whooping cranes. Hunting closes at noon daily to allow wildlife to rest and feed. Non-toxic shot will be used to prevent lead poisoning due to the presence of wetlands.

JUSTIFICATION:

Hunting is one of the six priority uses of National Wildlife Refuges. Upland game hunting at Salt Plains has been reviewed under the Endangered Species Act and the activities are not likely to adversely affect listed species (*See also: Appendix I*). Individual birds will be removed, but winter kill on bobwhite quail can reach 80 percent in Oklahoma without hunting. Other recreational uses on the Refuge are conducted in other areas. There is no conflict between consumptive and non-consumptive users. Whooping cranes will be closely monitored and the area will be closed to hunting if they fly towards the hunt area or land there. There are no records of whooping cranes using the hunt area during the Fall when hunting occurs.

The hunting program is carefully managed to provide for public safety, to avoid adverse impacts to endangered whooping cranes and/or their designated critical habitat as well as to minimize disturbance of feeding and resting areas for migratory and wintering birds. Currently, the refuge is maximizing the number of hunts and hunters that can be accommodated, while maintaining a safe, quality hunt and protecting sensitive wildlife areas. However, the refuge has evaluated the hunting program and proposes to conduct controlled turkey hunts on the refuge when turkey populations are at huntable levels, as determined by census. The refuge will continue to work with the Oklahoma Department of Wildlife Conservation to gather wildlife and habitat data in order to plan, develop, and maintain or improve compatible hunting opportunities that do not conflict with visitor and hunter safety or negatively impact endangered species or other important fish and wildlife resources.

SIGNATURE:

Refuge Manager:

Jean Bouchard 5-19-06
(Signature and Date)

CONCURRENCE:

Regional Chief:

Mary P. Montoya 6/12/06

(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2021

FINAL COMPATIBILITY DETERMINATION

USE: Migratory Bird Hunting

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(S):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

Dove, waterfowl, and sandhill crane hunting are currently permitted on approximately 1,200 acres north of Highway 11. Hunting is permitted during the State season until noon. Hunters are required to check in and out at self check stations. The hunting is closed during the special deer hunts held on the Refuge. Hunters must use shotguns with non-toxic shot. The area is an alluvial plain with occasional sandhills. The East Fork of the Salt Fork River, the West Fork of the Salt Fork River, Sand Creek, and Krey Creek flow through the area. Native prairie dominates the sandhills with patches of plum thickets. Timber is found along the streams and rivers. A portion of the area is farmed for browse for geese and 120 acres of wetlands are managed as a moist soil unit. The majority of the duck hunting occurs on the moist soil unit. The majority of the goose and sandhill crane hunting occur on the wheat field.

AVAILABILITY OF RESOURCES:

Adequate resources are available to operate the hunt program. Assistance is received from the Oklahoma Department of Wildlife Conservation.

ANTICIPATED IMPACTS OF THE USE:

The hunting results in the removal of individual birds and disturbance to others. The activity does not significantly impact the populations on the Refuge.

PUBLIC REVIEW AND COMMENT:

Review was conducted during the public review of the Comprehensive Conservation Plan for Salt Plains NWR. Two comments were received which opposed all hunting.

Oklahoma Department of Wildlife Conservation recommended that the CCP alternative be chosen which maximizes hunting opportunities and increases the public hunting area by 1000 acres. They also requested the construction of permanent blinds for goose hunting.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Whooping crane posters will be posted at the entrances to the hunt area in the Fall when they are migrating. The Refuge is designated as critical habitat for whooping cranes. Hunting will be stopped if whooping cranes fly towards the hunt area or land in it. Non-toxic shot will be required due to the presence of wetlands in the area. Hunting ends at noon daily to allow wildlife to feed and rest in the area. Hunting is closed during the special deer hunts for safety.

JUSTIFICATION:

Hunting is one of the six priority uses for National Wildlife Refuges. Migratory bird hunting at Salt Plains has been reviewed under the Endangered Species Act and the activities are not likely to adversely affect listed species (*See Appendix D*). Adequate precautions will be taken to prevent disturbance to whooping cranes. There are no records of them using the hunt area during the Fall when hunting occurs. Other recreational uses are conducted on other portions of the Refuge to avoid conflicts between consumptive and non-consumptive users.

The hunting program is carefully managed to provide for public safety, to avoid adverse impacts to endangered whooping cranes and/or their designated critical habitat as well as to minimize disturbance of feeding and resting areas for migratory and wintering birds. Currently, the refuge is maximizing the number of hunts and hunters that can be accommodated, while maintaining a safe, quality hunt and protecting sensitive wildlife areas. However, the refuge has evaluated the hunting program and proposes improving 180 acres for waterfowl hunting. The refuge will continue to work with the Oklahoma Department of Wildlife Conservation to gather wildlife and habitat data in order to plan, develop, and maintain or improve compatible hunting opportunities that do not conflict with visitor and hunter safety or negatively impact endangered species or other important fish and wildlife resources.

SIGNATURE:

Refuge Manager:

Jon Brink 5-19-06
(Signature and Date)

CONCURRENCE:

Regional Chief:

Gary P. Montag 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2021

FINAL COMPATIBILITY DETERMINATION

USE: Recreational Fishing

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

Recreational fishing is currently allowed on approximately 5,500 acres of the Salt Plains Lake, Sand Creek north of state highway 11, the east and west forks of the Salt Fork River north of state highway 11, the east fork of the Salt Fork River for one mile south of state highway 11, and on Bonham Pond. Fishing is allowed in these areas from April 1 through October 15 of each year. All fishing is closed on the refuge during the winter months when whooping cranes, bald eagles, and large numbers of waterfowl are present on the refuge. Most of the fishing activity on the refuge is for channel catfish, but bass and saugeye are also caught. General fishing that occurs on the refuge is in both the form of rod and reel fishing as well as the use of trot lines. Rod and reel fishing is allowed on all of the areas open to fishing. While trot lines are restricted to the area open on the Salt Plains Lake. Trot lines have been used on the lake for many years and are a favorite pastime of local fisherman. However, there have been instances in which American white pelicans have become entangled in the trot lines and severely injured or killed. The refuge brought the concern of the pelican injuries and fatalities to the attention of the local fishing community. The refuge staff and local fisherman decided that the area of the lake in which the pelicans and other wildlife frequent would be closed to all fishing. This closure resulted in the elimination of approximately 2,000 acres of fishing area along the west shoreline of the lake and around Ralstin Island. The closure of these areas has resulted in a significant decrease in the number of pelicans or waterbirds becoming entangled in the trot lines. Refuge staff will continue to monitor the trot line activity to ensure that wildlife is not adversely affected by the use. Many fishermen utilize the various rivers that traverse the refuge. Most of the fishing that occurs on the rivers is immediately following a heavy rain when

the rivers become swollen with flood waters. There are designated parking areas for most of the fishermen to use along the rivers next to state highway 11. Most of the fishermen seldom travel 100 to 200 yards from their vehicles. There is an unimproved road that parallels Sand Creek which is frequented by fishermen for access to Sand Creek. Bonham Pond is a 1.5 acre pond that was rehabilitated and opened in 1993. Fishing in Bonham Pond is restricted to individuals 14 years of age or younger and individuals in possession of a disabled fishing license. Fishing at Bonham Pond would be changed to a catch and release program. The fishing derby is currently catch and release. This will decrease stocking costs and assure that there are plenty of fish available throughout the season. The refuge staff and volunteers conduct a kids fishing derby each year in conjunction with National Fishing Week. This derby draws between 100 and 150 children under the age of 15 each year and is held at Bonham Pond. Additional fishing clinics are conducted on the refuge throughout the year by refuge staff, volunteers, or Oklahoma Department of Wildlife personnel. Fishermen may utilize the Salt Plains Lake during catfish, bass, or saugeye tournaments sponsored by local organizations. All fishermen participating in these tournaments are restricted to established open areas. The proposed use would be conducted on approximately 5,500 acres of the Salt Plains Lake, Sand Creek north of state highway 11, the east and west forks of the Salt Fork River north of state highway 11, the east fork of the Salt Fork River for one mile south of state highway 11, and on Bonham Pond. The proposed use would be conducted from April 1 through October 15 of each year. The proposed use would be conducted using conventional rod and reel fishing techniques, and on Salt Plains Lake trot lines may be used. Boating is allowed on Salt Plains Lake to facilitate fishing activity. No boating is allowed on any of the rivers within the refuge boundary. The proposed use would be conducted on the refuge to provide a recreational use of the refuge to the general public. Much of the surrounding area is privately owned and resulting in little availability for public fishing in this part of the state. The refuge has an adequate fishery resource that can sustain fishing pressure.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: None. Special equipment, facilities, or improvements necessary to support the use: None. Maintenance costs: Maintenance costs associated with the proposed use are for maintaining parking areas, road repair and grading, maintaining boat ramps, and garbage clean-up. Monitoring costs: Monitoring costs associated with the proposed use would be very small to insignificant. Refuge staff will monitor the effects of trot lines on wildlife while accomplishing other tasks, i.e. law enforcement patrols, biological surveys, etc. Offsetting revenues: None.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The anticipated direct and indirect short-term impacts associated with the proposed use would be the threat of trot lines present on the lake and the disturbance due to human presence. The disturbance to wildlife by the presence of humans would be very minimal since the areas open to fishing are generally high disturbance areas of the refuge, being next to state highway 11. The addition of a few people in these areas would not increase that amount of disturbance already present. The presence of trot lines poses the most direct threat to wildlife. However, since the areas in which wildlife frequent has been closed to all fishing, the incidents of birds becoming entangled in trot lines has been insignificant. Long-term impacts: The anticipated direct and indirect long-term impacts of the proposed use on wildlife and habitat would be minimal. Over time wildlife would become accustomed to areas of the refuge that are open to general public. Thus, moving to areas of the refuge where there would be less human contact. Cumulative impacts: There are no anticipated direct or indirect cumulative impacts of the proposed use when added to existing/projected uses.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination were received as part of the Comprehensive Conservation Plan for Salt Plains NWR. No comments were received.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

1. Fishing is permitted April 1 through October 15.
2. Designated areas open to fishing include the Salt Plains Lake, Sand Creek north of state highway 11, the east and west forks of the Salt Fork River north of state highway 11, the east fork of the Salt Fork River for one mile south of state highway 11, and on Bonham Pond.
3. Salt Plains Lake is open to fishing with closed areas marked by buoys and/or signs. Closed area on the lake includes Ralstin Island and the west shoreline.
4. Fishing in Bonham Pond is restricted to individuals age 14 or younger or individuals in possession of a disabled fishing license.
5. Trot lines are to be removed when fishing is completed.
6. Trot lines are not permitted within 500 feet of the shoreline of the Jet Recreation Area.
7. Posts used to secure or anchor trot lines must reach a minimum of two feet above the water surface and must be marked so that they are clearly visible to boaters.
8. Taking any type of bait from refuge lands or waters is not permitted.
9. No boats are allowed in any of the river channels.

JUSTIFICATION:

The proposed use does not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge. The very small impact associated with the proposed use does not materially interfere or detract from the refuge goals, objectives, or management activities. The proposed use does neither benefit nor adversely impact the biological resources of the refuge. According to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 there are six public uses that are deemed acceptable wildlife dependent public uses on refuges if they are found to be compatible with refuge purposes. They are: wildlife observation, wildlife photography, hunting, fishing, and environmental education and interpretation. These uses are commonly referred to as the "Big Six" public uses on refuges. With the addition of the proposed use, the mission of the National Wildlife Refuge System and purposes for the refuge would be supported. The proposed use would afford individuals not otherwise physically capable to walk the nature trails the opportunity to view wildlife in its natural habitat. The proposed use would add to the public uses available on the refuge, and support the "Big Six" public uses of the National Wildlife Refuge System.

Signature: Refuge Manager Joubert 5-19-06
(Signature and Date)

Concurrence: Regional Chief Gary P. Montoya 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date: 2021

FINAL COMPATIBILITY DETERMINATION

USE: Wildlife Observation

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(S):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

Wildlife observation is the viewing of fish, wildlife, plants, or their habitats by refuge visitors. This is an existing use which primarily takes place on the Eagle Roost Nature Trail, Shorebird Nature Trail, Harold F. Miller Auto Tour Route, and observation towers located at Big Marsh, West Casey Marsh, the salt flats, Sand Creek Bay, and Shorebird Trail. This use is one of the "Big Six" legislated public uses of the National Wildlife Refuge System. An estimated 150,000 visits per year are made to the refuge for wildlife observation. Eagle Roost Nature Trail-The trail was established in 1967 and is 1.25 miles long. It traverses a wide variety of refuge habitats including a dike between Sand Creek Bay and Eagle Roost Pond, a dike between Eagle Roost Pond and Puterbaugh Pond, and along a trail through upland and heavily wooded areas. The name Eagle Roost was given to the trail because historically this area was an eagle roost in the early years of the refuge. Since then the eagles have moved their roosting activities to Cottonwood Point, Jet Recreation Area, and around C-9 farm field long before the trail was established. The trail does not pose a threat to any endangered species, as found in the Section 7 consultation of the Endangered Species Act, and only minimal disturbance to waterfowl, waterbirds, and shorebirds using Sand Creek Bay since the bay is large in size (640 acres). There is minor disturbance to wildlife using the 5 acre Eagle Roost Pond. The little disturbance is due to the fact that the pond is fairly sterile with little vegetative growth and therefore we would expect little use by waterfowl or waterbirds if the trail were not there. There is little effect on wildlife utilizing Puterbaugh Pond due to its relatively large size (27 acres). The upland and wooded areas along the trail have very dense and tall vegetation along the trail which restricts visitors from wandering off the trail and provides plenty of cover for wildlife. The mid-point of the trail has an observation tower over looking Sand Creek Bay. This tower provides wonderful opportunities to view a wide variety of wildlife from a distance, with the occasional glimpse of the

endangered whooping cranes. Use of the trail is heavy in the spring and fall months, but very limited during the hot summer and cold winter months. Harold F. Miller Auto tour Route: This auto tour route was opened in December, 1992 and traverses a variety of refuge habitats. The habitats included in the auto tour route are wooded and upland areas, wetlands, agricultural fields, and moist soil units. Along the route there are various designated viewing areas located at Little Marsh, School Marsh, and West Casey Marsh. These viewing areas are spots where a vehicle can pull to the side and either view from their vehicle or exit their vehicle and view wildlife. The tour route was designed in an area to avoid high waterfowl and endangered species use areas. A minimal amount of disturbance may be expected throughout the entire route due to the vehicle and human presence. Three wetlands in particular may be affected more than others due to their size and location along the route: Mink Run, Little Marsh, and Intermediate Marsh. Historically these impoundments have very little wildlife use in relation to the moist soil units and other major wetlands. The route is used steadily throughout the year by visitors. Shorebird Trail: This trail is approximately 0.25 miles in length and meanders through grassland on its way to the northern edge of the salt flats. At the end of the trail there is an observation tower which allows visitors to view across the salt flats and provides for excellent shorebird viewing. This trail is most heavily used in the spring when the north bound shorebird migration is occurring. Observation towers: There are three observation towers that are located on the refuge in different areas that are not associated with nature trails or the auto tour route. The first is the salt flats tower. This tower is located on the west edge of the salt flats at the entrance to the selenite crystal digging area. The tower is raised above the ground approximately 10 feet and provides a wonderful view of the salt flats and adjacent Salt Plains Lake. This tower is heavily used in spring and fall months when there is a chance to see migrating whooping cranes roosting on Salt Plains Lake. Big Marsh and West Casey observation towers are located on edge of each marsh. The towers allow visitors to view wildlife that might not otherwise be seen. Much of the vegetation in the two marshes is very dense and tall, not allowing wildlife to be viewed from ground level. With the use of the towers visitors can see over the dense and tall vegetation. These two towers are heavily used throughout the year since they are very easily accessible to the public and always provide for quality wildlife observation. The proposed use would primarily take place on the Eagle Roost Nature Trail, Shorebird Nature Trail, Harold F. Miller Auto Tour Route, and observation towers located at Big Marsh, West Casey Marsh, the salt flats, Sand Creek Bay, and Shorebird Trail. The proposed use would occur throughout the year, with higher frequency in the spring and fall months. The proposed use would be conducted by the general public in various areas of the refuge. The majority of the use will be on facilities constructed by the refuge, i.e. nature trail, auto tour route, and observation towers. The proposed use would be conducted on the refuge since the refuge has many habitat types that are not located anywhere else in the area. The refuge accounts for nearly all of the public land in the area.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: None. Special equipment, facilities, or improvements necessary to support the use: Much of the associated initial cost of constructing the facilities for the proposed use has already been accomplished. The only new costs would be for any improvements made to existing facilities, or new construction. Maintenance costs: The maintenance costs associated with the proposed use would be in trail maintenance, mowing, road grading, parking area maintenance, and structure maintenance for the observation towers. Monitoring costs: Monitoring costs for the proposed use would include counting the number of visitors to the refuge for the proposed use, purchasing equipment that can count vehicle access to certain areas, and monitoring the effects of the use on wildlife over time. Offsetting revenues: None.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The most notable direct and indirect short-term impacts of the proposed use would be the disturbance to wildlife. There would be a disturbance to wildlife from the vehicle and

human presence. However, the disturbance would be relatively small since much of the use would occur in areas that are at a distance from wildlife. There would be very little direct human contact with wildlife. Long-term impacts: The anticipated direct and indirect long-term impacts of the proposed use on wildlife and habitat would be minimal. Over time wildlife would become accustomed to areas of the refuge that are open to general public. Thus, moving to areas of the refuge where there would be less human contact. Cumulative impacts: The only anticipated direct and indirect cumulative impacts of the proposed use when added to existing/projected refuge uses would be quite minimal. The areas where the proposed use would occur has been strategically planned out in order to allow for the least amount of disturbance to wildlife.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination were received as part of the Comprehensive Conservation Plan for Salt Plains NWR. Two comments were received requesting more "loop" style trails, observation blinds, and observation towers.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

None.

JUSTIFICATION:

The proposed use does not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge. The very small impact associated with the proposed use does not materially interfere or detract from the refuge goals, objectives, or management activities. The proposed use does neither benefit nor adversely impact the biological resources of the refuge. According to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 there are six public uses that are deemed acceptable wildlife dependent public uses on refuges if they are found to be compatible with refuge purposes. They are: wildlife observation, wildlife photography, hunting, fishing, and environmental education and interpretation. These uses are commonly referred to as the "Big Six" public uses on refuges. With the addition of the proposed use, the mission of the National Wildlife Refuge System and purposes for the refuge would be supported. The proposed use would add to the public uses available on the refuge, and increase the enjoyment of refuge visitors whom enjoy wildlife observation.

SIGNATURE:

Refuge Manager

John B. ... 5-19-06
(Signature and Date)

CONCURRENCE:

Regional Chief

Gary P. Montoya 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date: 2021

FINAL COMPATIBILITY DETERMINATION

USE: Wildlife-dependent Photography

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(S):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

Wildlife-dependent photography: There are three areas of wildlife-dependent photography that are being proposed. The first is recreational photography. Recreational photography is refuge visitation for the purpose of photographing refuge natural or cultural resources (including fish, wildlife, plants, and their habitats), or public uses of those resources; and not for commercial, news, or educational purposes. The final product is solely for the benefit of the individual. The second area of wildlife-dependent photography is commercial photography. Commercial photography occurs in the same manner as recreational photography with the exception that it is a commercial activity conducted by an individual or organization. Commercial photography is conducted to make a profit from the final product. Finally, the third area of wildlife-dependent photography is photography for news, public information, or educational purposes. This type of wildlife-dependent photography occurs in the same manner as the previous two types with the exception of the final outcome of the product. Recreational wildlife-dependent photography currently occurs on various areas of the refuge. Two main areas of the refuge that are available to the general public for photography are the Eagle Roost nature trail and the auto tour route. Both of these areas are open to the public during daylight hours. There is an observation blind that is located near Casey marsh that can also be used as a photo blind. On occasion a visitor will request permission to enter one of the refuges' closed areas to take pictures of various refuge resources. Instances in which a visitor requests entrance into a closed area would be handled on a case by case basis. The first consideration will be to make sure that the resource(s) in which the visitor wants to photograph can not be photographed from the two areas already open to the public. Second consideration will be on the disturbance to wildlife.

Finally, the third consideration will be on the availability of refuge staff or funds to support such a request. If permission is to be granted for entrance into a closed area of the refuge it would be granted by the issuance of a special use permit. Wildlife-dependent commercial photography currently occurs on the refuge at various times of the year. The only difference between recreational and commercial photography on the refuge is that all commercial photographers are required to request a special use permit no matter where they want to photograph. The number of commercial photographers that utilize the refuge is extremely low, with only one to two requests made each year. Commercial photographers will also on occasion request entrance into a refuge closed area in which to photograph. Each request would be considered like that of the recreational photographer with the exception of additional stipulations. The various stipulations that may be required of commercial photographers vary from the assessment of a fee to the rights to reproduce any of the photos taken by the photographer for refuge use in signs, pamphlets, etc. Wildlife-dependent photography for news, public information, or educational purposes occasionally occurs on the refuge. This type of photography is treated like commercial photography with the exception of the type of stipulations required. Requests for this type of photography would also require a special use permit to be issued if the request warrants one. Most of the requests for news, public information, or educational purpose photography come from the local media. Many instances there is something unique going on at the refuge like the fall pelican migration and the local newspaper or television station want to do a story about the birds. This type of request is generally granted as time and availability of staff allows. Most generally when this type of request is made an interview with one or more staff members is usually included as well as accompanying the photographer on the refuge. This type of photography benefits the refuge by the positive exposure it receives from the different wildlife stories or photographs taken. Due to the small number of wildlife photographers on the refuge there is generally little disturbance to wildlife. The majority of the photography takes place on the Eagle Roost nature trail and the auto tour route which are already open to the public. Wildlife present in these two areas has for the most part become accustomed to the presence of people. With the addition of wildlife photography in these two areas the increase of disturbance to wildlife would be minimal. The proposed use would occur on any area of the refuge in which wildlife is present. However, there are two areas of the refuge in which most of the use would occur. The first would be the Eagle Roost nature trail. The Eagle Roost nature trail is a short 1.25 mile hiking trail through various habitats characteristic of the refuge. The trail meanders through refuge wetlands, moist soil units, and wooded riparian areas and finally peaks at the Sand Creek bay observation tower. The second area on the refuge where the majority of the wildlife-dependent photography would occur is the refuge auto tour route. The auto tour route is 2.5 miles long and makes its way through various habitats on the refuge. Refuge wetlands, moist soil units, ponds, wooded areas, and farm fields can all be seen from the auto tour route. The proposed use would occur at various times throughout the year and at different times of the day. The specifics for when the use would be conducted could vary incredibly. However, the majority of the use would be conducted during daylight hours with early morning and evening hours as optimal times of day. The proposed use would be conducted by a wide variety of individuals. Most of the recreational photography would be conducted by the general public. Commercial photography would be conducted by photography professionals either free lance or in association with some type of publication. Photography for news, public information, or educational purposes would also be conducted by a wide variety of individuals; although, the majority of the use would be conducted by members of the media. No new facilities would be required for the use to occur. On occasion a photographer would utilize a portable blind, but none would be provided by the refuge. The proposed use would be conducted in order to provide a high quality wildlife-dependent recreational experience to the general public. As far as for commercial and news or educational uses, the proposed use would allow the various individuals the opportunity to capture the available resources of the refuge in photographs. Due to the large amount of private

land located in the county, and nearby counties, there is little opportunity for the public to photograph wildlife. Much of the available areas for wildlife photography are very small in comparison to the refuge.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: In few instances there may be some minimal costs associated with the proposed use. Additional costs could possibly be associated with the maintenance and development of different facilities associated with the proposed use. The current observation blind at Casey marsh could in the future be made to act as more of a photo blind. Photo blinds might also be developed in areas where there are no blinds currently present. However, much of the additional costs would be mitigated with the cooperation of various entities. Individuals and/or organizations would likely contribute to the development and maintenance of the facilities associated with the proposed use. Also, in the case of commercial photographers, the fees assessed with the special use permit would help to relieve the cost burden received by the refuge for the proposed use. Special equipment, facilities, or improvements necessary to support the use: None. Maintenance costs: The maintenance costs that would be associated with the proposed use would be in the form of trail and blind maintenance and road grading. However, all of the cost for the various maintenance projects would not solely be due to the proposed use. The areas where the proposed use would occur is already open to the public and requires maintenance whether or not the proposed use is implemented. Monitoring costs: None. Offsetting revenues: The offsetting revenues that would be associated with the proposed use would be the fees assessed by the special use permits issued to commercial photographers.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The most notable direct short-term impacts of the proposed use would be the disturbance to wildlife. Due to the small number of requests for the use, the associated impacts of the use would be negligible. The majority of the use would occur in areas where there would not be an increase in wildlife disturbance since it is an area that is already open to the public. There would be very little to no indirect short-term impacts associated with the proposed use. Long-term impacts: There would be no direct or indirect impacts of the proposed use that would divert or take away resources from fulfilling the System mission or refuge purposes. Cumulative impacts: Since the proposed use is a very small portion of the public use on the refuge there would be no anticipated direct or indirect cumulative impacts.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination was received as part of the Comprehensive Conservation Plan for Salt Plains NWR. One comment was received requesting additional observation blinds.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

1. All requests for entrance into a refuge closed area will be considered on a case by case basis with the following taken into consideration. The first consideration will be to make sure that the resource(s) in which the photographer wants to photograph cannot be photographed from any areas already open to the public. Secondly, the potential disturbance to wildlife will be evaluated. Finally, the third consideration will be the availability of refuge staff or funds to support such a request.

2. A special use permit will be issued for all entrance into refuge closed areas.
3. A refuge staff member or volunteer will accompany permittees into closed portions of the refuge.
4. All commercial photographers are required to request a special use permit whether in closed areas or not.
5. Commercial photographers may be assessed a user fee upon receipt of the special use permit.
6. In some instances, the user fee for commercial photographers may be waived in exchange for the permission to reproduce any photos taken by the photographer for use by the refuge.
7. Requests by news, public information, or educational purpose photographers will be addressed on a case by case basis, and if a special use permit is deemed necessary, one will be issued.

JUSTIFICATION:

The proposed use does not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge. The very small impact associated with the proposed use does not materially interfere or detract from the refuge goals, objectives, or management activities. The proposed use does neither benefit nor adversely impact the biological resources of the refuge. According to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 there are six public uses that are deemed acceptable wildlife-dependent public uses on refuges if they are found to be compatible with refuge purposes. They are: wildlife observation, wildlife photography, hunting, fishing, and environmental education and interpretation. These uses are commonly referred to as the "Big Six" public uses on refuges. With the addition of the proposed use, the mission of the National Wildlife Refuge System and purposes for the refuge would be supported. The proposed use would add to the public uses available on the refuge, and increase the enjoyment of refuge visitors whom enjoy photography.

SIGNATURE:

Refuge Manager

J. Howard 5-19-06
(Signature and Date)

CONCURRENCE:

Regional Chief

Gary P. Montoya 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date:

2021

FINAL COMPATIBILITY DETERMINATION

USE: Environmental Education and Interpretation

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

The following proposed uses are currently existing uses on the refuge: environmental education teaching students, teachers, and group leaders, non-staff conducted environmental education, interpretation, and non-staff conducted interpretation. Environmental education teaching students, teachers, and group leaders is an on-refuge activity, conducted by refuge staff or authorized agents that use a planned process to foster awareness, knowledge, understanding, and appreciation in students, teachers, or group leaders about fish, wildlife, plants, ecology, and refuge management. Environmental education not conducted by refuge staff or authorized agents is the same as staff conducted environmental education with the only difference being in whom conducts the activity. Interpretation is an on-refuge activity for refuge visitors, conducted by refuge staff or authorized agents, that are designed to foster an understanding and appreciation for natural and cultural resources, and associated management. Interpretation that is not conducted by refuge staff or authorized agents is the same as interpretation with the only difference being in whom conducts the activity. Non-staff conducted activities: On occasion some of the local schools or universities will utilize the refuge headquarters and nature trail for environmental education and interpretation activities. This use is not very common and accounts for approximately 75 visits per year. The Oklahoma Department of Wildlife also uses the refuge in conjunction with their watchable wildlife area for environmental education. Most of the activities conducted by the Oklahoma Department of Wildlife are conducted at Bonham fishing pond or the nature trail. Staff-conducted activities: The refuge staff provides a minimum of 25 environmental education and interpretative programs to students each year on the refuge. The majority of the on-refuge programs are conducted at the

refuge headquarters or nature trail. On occasion, a university group will request a program in the field located somewhere on the refuge, or a school group will request that the program be conducted at the selenite crystal digging area of the refuge. With the construction of an outdoor classroom on the refuge, refuge staff will be conducting more programs of teaching teachers or group leaders. Many of these activities will be taught as train-the-trainer sessions. Refuge staff will instruct teachers or group leaders in environmental education and interpretation. Then these teachers and group leaders will be able to teach their students. Thus, increasing the number of non-staff conducted activities. With the increase in non-staff conducted activities, the number of students being exposed to environmental education and interpretation will increase also. Interpretative panels are located in the refuge visitor center, trail heads, auto tour route, nature trail, Jet Recreation Area, Selenite Crystal digging area, and the various observation towers. The panels describe various refuge activities, history, management, and wildlife identification. Environmental education and interpretation account for a large portion of refuge visitation. These two activities are both part of the "Big 6" legislated wildlife-dependent public uses of the National Wildlife Refuge System. The proposed use would be conducted on any area within the refuge, but the majority would be conducted at the refuge headquarters and nature trail. The proposed use would be conducted throughout the year with a concentration in the spring months. The proposed use would be conducted by refuge staff or authorized agents, and area teachers or Oklahoma Department of Wildlife employees. The proposed use would be conducted in a variety of manners in order to custom fit the program to a specific audience. In cases where small children are involved, perhaps more games would be played to promote environmental education. Whereas, if the audience is high school or college age students the program would be altered to better adjust to their learning abilities. The proposed use would be conducted on the refuge for a very important reason. The refuge is an area in which wildlife and their habitats can be observed in all of its glory and a natural setting. Much of the surrounding area has been converted to agricultural lands, and thus large quantities of wildlife habitat have been lost in the process. The refuge manages the habitats within its borders for the sole benefit of wildlife. The educational programs and interpretation would allow students or visitors the opportunity to appreciate wildlife and their habitats in their natural state.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: The resources involved in the administration and management of the proposed uses would be quite significant. Refuge operations funding would account for a majority of the costs with supplements from partners including non-governmental organizations, state agencies, local businesses, and grants. Special equipment, facilities, or improvements necessary to support the use: None. Maintenance costs: The maintenance costs that would be associated with the proposed use would be in the form of trail and observation tower maintenance and road grading. However, all of the cost for the various maintenance projects would not solely be due to the proposed use. The areas where the proposed use would occur is already open to the public and requires maintenance whether or not the proposed use is implemented. Monitoring costs: None. Offsetting revenues: None.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The most notable direct and indirect short-term impacts of the proposed use would be the disturbance to wildlife. There would be a disturbance to wildlife from the vehicle and human presence. However, the disturbance would be relatively small since much of the use would occur in areas that are at a distance from wildlife. There would be very little direct human contact with wildlife. Long-term impacts: The anticipated direct and indirect long-term impacts of the proposed use on wildlife and habitat would be minimal. Over time wildlife would become accustomed to areas of the refuge that are open to general public. Thus, moving to areas of the

refuge where there would be less human contact. Cumulative impacts: The only anticipated direct and indirect cumulative impacts of the proposed use when added to existing/projected refuge uses would be quite minimal. The areas where the proposed use would occur has been strategically planned out in order to allow for the least amount of disturbance to wildlife.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination were received as part of the Comprehensive Conservation Plan for Salt Plains NWR. No comments were received.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

In instances where the proposed use would occur in an area of the refuge generally closed to the public, a refuge staff member or authorized agent will accompany the group.

JUSTIFICATION:

The proposed use does not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge. The very small impact associated with the proposed use does not materially interfere or detract from the refuge goals, objectives, or management activities. The proposed use does neither benefit nor adversely impact the biological resources of the refuge. According to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 there are six public uses that are deemed acceptable wildlife dependent public uses on refuges if they are found to be compatible with refuge purposes. They are: wildlife observation, wildlife photography, hunting, fishing, and environmental education and interpretation. These uses are commonly referred to as the "Big Six" public uses on refuges. With the addition of the proposed use, the mission of the National Wildlife Refuge System and purposes for the refuge would be supported. The proposed use would afford individuals not otherwise physically capable to walk the nature trails the opportunity to view wildlife in its natural habitat. The proposed use would add to the public uses available on the refuge, and support two of the "Big Six" public uses already existing on the refuge, environmental education and interpretation.

SIGNATURE:

Refuge Manager

Jacob Brock 5-19-06
(Signature and Date)

CONCURRENCE:

Regional Chief

Harry P. Montoya 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date:

2021

FINAL COMPATIBILITY DETERMINATION

USE: Non-Wildlife Dependent Photography

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(S):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

There are two types of non-wildlife dependent photography being proposed. The first is commercial non-wildlife dependent photography. Second is news or educational non-wildlife dependent photography. Commercial photography is an activity conducted by an individual or organization involving photography, videography, filming, or other recording of sight or sound as a commercial activity to generate a profit. News or educational photography is an activity involving photography, videography, filming, or other recording of sight or sound for news, public information, or educational purposes. Both types of non-wildlife dependent photography currently occur on the refuge on rare occasion, (less than 1 request per year). From time to time a film crew will be interested in filming a television commercial or documentary on the refuge with emphasis on the salt flats. Requests have ranged widely, from requests to film a commercial for car sales, to filming a music video for a rock band, to filming a documentary for National Geographic television show. A request for a special use permit would be required of all commercial non-wildlife dependent photographers. Each request would be reviewed in a timely manner, and if the request is granted a special use permit would be issued. Before issuance of a special use permit certain circumstances would be taken into consideration by the reviewing official. First, would be on the potential adverse impacts to wildlife and refuge resources. The final consideration would be on the availability of refuge staff or funds to support such a request. After all factors are taken into consideration and the refuge, or refuge resources, are found to not sustain any adverse impacts by the use, a special use permit would be granted. With the issuance of the special use permit stipulations would follow to ensure compliance with the permit. The stipulations will clarify the permitted use, time frame for

the use, area for the use, and if necessary a user fee would be assessed. In cases where the refuge would benefit from the exposure by news, public information, or educational use the user fee would be waived. The proposed use would be conducted on various areas of the refuge with most requests for use of the salt flats. The proposed use would be conducted any time throughout the year. The proposed use would be conducted by the individual or organization that requested the use. The techniques involved with the use could vary greatly depending on the specifics of the requested use. The equipment and personnel involved in the production of the use would be kept to a minimum. The proposed use would be conducted on the refuge since almost all of the salt flats and other resources are located entirely on the refuge. Thus, allowing for little opportunity for the use to be conducted on adjacent lands.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: Any additional administrative costs would be mitigated by the user fee assessed to the permittee. Special equipment, facilities, or improvements necessary to support the use: None. Maintenance costs: None. Monitoring costs: None. Offsetting revenues: The offsetting revenues returned to the refuge would be in the form of the user fee assessed to the permittee.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The most notable direct short-term impacts of the proposed use would be the disturbance to wildlife. Due to the small number of requests for the use, the associated impacts of the use would be negligible. There would be very little to no indirect short-term impacts associated with the proposed use. Long-term impacts: There would be no anticipated direct or indirect impacts of the proposed use that would divert or take away resources from fulfilling the System mission or refuge purpose. Cumulative impacts: Since the proposed use is very minimal in comparison to other refuge uses, there are no anticipated direct or indirect cumulative impacts.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination was received as part of the Comprehensive Conservation Plan for Salt Plains NWR. No comments were received.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

1. All requests for the proposed use will be considered on a case by case basis with the following taken into consideration: The potential adverse impacts to the refuge, refuge resources, and availability of refuge staff and funds to provide for the proposed use.
2. A special use permit will be issued for all commercial uses.
3. Requests by news, public information, or educational purpose users will be addressed on a case by case basis, and if a special use permit is deemed necessary, one will be issued.
4. A user fee will be assessed to all commercial users.
5. A refuge staff member or volunteer will accompany permittees into closed portions of the

5. A refuge staff member or volunteer will accompany permittees into closed portions of the refuge.

JUSTIFICATION:

The proposed use does not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge. The very small impact associated with the proposed use does not materially interfere or detract from refuge goals, objectives, or management activities. The proposed use does neither benefit nor adversely impact the biological resources of the refuge. No existing, proposed, or potential wildlife-dependent public uses will be conflicted by the proposed use.

SIGNATURE: Refuge Manager *Jon Brock* 5-19-06
(Signature and Date)

CONCURRENCE: Regional Chief *Mary P. Montoya* 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date: 2016

FINAL COMPATIBILITY DETERMINATION

USE: Non-Wildlife Dependent Outdoor Recreation

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

The following proposed uses are currently existing recreational uses on the refuge: picnicking, non-motorized and motorized boating, swimming and beach use. Picnicking is the eating of a meal outdoors, including picnic tables, fire pits, rest rooms, garbage cans, parking lots, trails, and other associated facilities. Non-motorized boating is the travel by canoe, kayak, raft, rowboat, or similar boat propelled through the water by oars, paddles, poles, or other human-powered devices. Motorized boating is the travel by boat powered by fossil fuels. Swimming and beach use is the use of beaches, springs, and other water bodies for swimming, bathing, beach combing, sunbathing, and other water related sports. Picnicking currently occurs in two primary locations on the refuge, Jet Recreation Area and the refuge headquarters lawn. At the refuge headquarters there is one picnic table that is located on the lawn and is used for picnicking by refuge visitors. The Jet Recreation Area is located on the south end of the Salt Plains Lake and is open to the public from April 1 to October 15 of each year. The area encompasses approximately 15 acres in a narrow, 100-150 foot, mile long section along the lake shore. The area was established in 1946 as a camping and picnicking area for refuge visitors. The area contains two pit toilets, two drinking water spigots, approximately 20 picnic tables with grills, and a boat launch ramp. This area gets a considerable amount of use, approximately 15,000 people, during the spring and summer months with people ranging from fishermen to campers and picnickers. Non-motorized boating currently occurs on the Salt Plains Lake portion of the refuge. All rivers and creeks that pass through the refuge are closed to all boating access. The large size of the lake and moderate to strong winds that are quite common make non-motorized boating difficult. With the difficulties associated with non-motorized boating,

mainly small rafts and canoes are occasionally used around the Jet Recreation Area. Rafting and canoeing are not major recreational pastimes in this area of Oklahoma. Motorized boating on the refuge is generally associated with fishing. Due to the shallow depth of the lake large boats are incapable of traveling on the lake. If the lake was deeper more people would be able to launch motorized boats on the lake. Due to the conditions of the lake this use is rarely requested by refuge visitors. Swimming and beach use currently occur at the Jet Recreation Area. This is a moderately popular activity especially with the youth. The lake is very shallow, in comparison to its size, and typically an individual may wade a hundred yards into the lake before the water is three feet deep. The water in the lake is always very muddy and it discourages swimmers. The proposed uses would be conducted at different areas of the refuge. Picnicking would occur at the Jet Recreation Area and the refuge headquarters. Non-motorized and motorized boating, swimming, and beach use would occur at the Jet Recreation Area and the refuge portion of Salt Plains Lake. The proposed uses would be conducted primarily from April 1 through October 15 of each year. Since the proposed uses would be conducted primarily at the Jet Recreation Area the associated facilities would be used to support the proposed uses. Picnic tables, fire pit rings, and pit toilets would be used by the participants of the proposed use. The uses are being proposed on the refuge due to the fact that there is very little public land located in this area of the state. The proposed uses would complement the uses that are currently allowed at the Salt Plains State Park.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: None. Special equipment, facilities, or improvements necessary to support the use: The only improvements that would be needed for the proposed use would be associated with the replacement of the existing facilities when they become irreparable. Maintenance costs: The maintenance costs associated with the proposed use would be mowing the Jet Recreation Area, maintenance of picnic tables, road grading, maintenance of the pit toilets and drinking water, maintenance of the fire ring pits, and trash collection. Monitoring costs: None. Offsetting revenues: None.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The most notable direct and indirect short-term impacts of the proposed use would be the disturbance to wildlife. There would be a disturbance to wildlife from the vehicle and human presence. However, the disturbance would be relatively small since much of the use would occur in areas that are at a distance from wildlife. There would be very little direct human contact with wildlife. Long-term impacts: The anticipated direct and indirect long-term impacts of the proposed use on wildlife and habitat would be minimal. Over time wildlife would become accustomed to areas of the refuge that are open to general public. Thus, moving to areas of the refuge where there would be less human contact. Cumulative impacts: The only anticipated direct and indirect cumulative impacts of the proposed use when added to existing/projected refuge uses would be quite minimal. The areas where the proposed use would occur has been strategically planned out in order to allow for the least amount of disturbance to wildlife.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination was received as part of the Comprehensive Conservation Plan for Salt Plains NWR. The only comment received pertained to the siltation of the lake and the resulting shallower water.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Uses that would occur at the Jet Recreation Area and on the refuge portion of Salt Plains Lake would be limited to April 1 through October 15 of each year.

JUSTIFICATION:

The proposed use does not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge. The very small impact associated with the proposed use does not materially interfere or detract from the refuge goals, objectives, or management activities. The proposed use does neither benefit nor adversely impact the biological resources of the refuge. According to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 there are six public uses that are deemed acceptable wildlife dependent public uses on refuges if they are found to be compatible with refuge purposes. They are: wildlife observation, wildlife photography, hunting, fishing, and environmental education and interpretation. These uses are commonly referred to as the "Big Six" public uses on refuges. With the addition of the proposed use, the mission of the National Wildlife Refuge System and purposes for the refuge would be supported. The proposed use would add to the public uses available on the refuge.

Boating, fishing, and swimming will decrease as the lake continues to receive silt and gets shallower. The Refuge will work with the Corps of Engineers, NRCS, and others to reduce siltation but dredging the lake does not appear to be a viable option.

SIGNATURE:

Refuge Manager

J. Brown 5-19-06
(Signature and Date)

CONCURRENCE:

Regional Chief

Saryt. Montoya 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date:

2016

FINAL COMPATIBILITY DETERMINATION

USE: Grazing Program

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

Grazing currently occurs on Salt Plains National Wildlife Refuge by special use permit. A total of 301 acres are currently being grazed in two different refuge units. Grazing takes place from May 1 through September 30 of each year. The grazing program is used as a management activity to reduce rank monotypic stands of grasses, and to combat the infestation of woody species into native grasslands. The grazing program is conducted in a rest rotation manner as to mimic the historical use of refuge grasslands by large herds of buffalo. The number of cattle allowed to graze in each unit is decided upon by the amount of animal unit months (AUMs) present in each unit. AUMs are adjusted annually depending upon the condition of the grasslands. R-8 consists of 231 acres and generally produces 125 AUMs, and is generally grazed by 25 head of cattle. R-9 consists of 70 acres and generally produces 55 AUMs, and is generally grazed by 55 head of cattle. The proposed use would be conducted in refuge units R-8 and R-9. The proposed use would be conducted from May 1 through September 30 of each year. The proposed use would be conducted by the permittee utilizing accepted conventional grazing techniques. The proposed use would be conducted on the refuge since both the refuge and the permittee would benefit from the use. The refuge will utilize the use as a management practice to reduce dense monotypic stands of grasses and combat woody species infestations. The permittee would benefit by grazing his animals on the refuge.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: The additional administration costs associated with the proposed use would be in the processing of the special use

permit. This cost would be very minimal. Special equipment, facilities, or improvements necessary to support the use: None. Maintenance costs: None. Monitoring costs: Monitoring costs associated with the proposed use would be in monitoring the number of animal unit months present in each unit. This cost would be very minimal due to the small acreage being grazed. Offsetting revenues: Offsetting revenues as a result of the proposed use would be minimal, but more than account for administrative or monitoring costs of associated with the use. Permittees are charged a fee based on local grazing fee surveys. The current fee is \$6.00 per animal unit month for a total of approximately \$1080.00 dollars each year. The total revenue will vary each year with adjustments of AUMs and changes in local grazing fees.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The anticipated direct and indirect short-term impacts of the proposed use are positive. The grazing would reduce the dense monotypic grass vegetation while combating the infestation of woody species. Long-term impacts: The anticipated direct and indirect long-term impacts of the proposed use are positive. The use would reduce the amount of woody vegetation present in the grasslands and promote the health of the grasslands as a whole. Cumulative impacts: There are no anticipated direct or indirect cumulative impacts of the proposed use when added to existing/projected refuge uses.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination were received as part of the Comprehensive Conservation Plan for Salt Plains NWR. No comments were received.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Permittees will renew their special use permit each year.

JUSTIFICATION:

The proposed use does not materially interfere with, or detract from refuge goals, objectives, or refuge management activities. In fact the proposed use promotes refuge goals, objectives, and management activities by maintaining the refuge grasslands in a natural state. The use is a traditional use of this habitat and helps to maintain the natural plant composition. The proposed use contributes to the achievement of the national wildlife refuge purposes and the National Wildlife Refuge System Mission by maintaining the biological integrity of the habitat.

Signature: Refuge Manager Jen Brock 5-19-06
(Signature and Date)

Concurrence: Regional Chief Amy F. Montoya 6/12/06

(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date: 2016

FINAL COMPATIBILITY DETERMINATION

USE: Cooperative Farming

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

Cooperative farming currently occurs on the Salt Plains National Wildlife Refuge by special use permit. The cooperative farming takes place in part of refuge unit C-8 and consists of approximately 42.60 acres. Cooperative farming is limited to this small portion of the refuge since, cooperative farmers can not make enough profit to make the practice feasible for them. Crop yields are generally low due to the poor soil quality and intense consumption by wildlife. The land is planted each year in the fall to either winter wheat or rye. In the spring or early summer the farmer either cuts the crop for hay or harvests the seed produced by the plant. The permittee provides all of the seed and fertilizer necessary to produce the crop. The refuge portion of the crop is consumed by waterfowl, upland game birds, deer, and song birds while the crop is growing. After wildlife feed on the crop during the winter and spring months the farmer retains whatever is left for their own use either in hay or harvesting the seed. The proposed use would be conducted in the eastern portion of refuge unit C-8, along state highway 38. The proposed use would begin in the fall of each year with the planting of the crop, and end in late spring or summer with the crops harvest. The proposed use would be conducted utilizing accepted conventional farming practices. The proposed use would be conducted on the refuge since both the refuge and permittee would benefit from the use.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: None. Special equipment, facilities, or improvements necessary to support the use: None. Maintenance costs: None. Monitoring costs: None. Offsetting revenues: None.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The anticipated direct and indirect impacts of the proposed use are positive with the exception of the small disturbance to wildlife during the planting and harvesting of the crop. However, the small impact caused by the disturbance associated with the farming would be by far out weighed by the benefits on wildlife. Wildlife would benefit greatly by the proposed use. The crop produced by the use would provide a green browse throughout the winter in which wildlife can feed. The proposed use would also reduce the burden on the refuge to produce a crop through force account farming. Long-term impacts: The anticipated direct and indirect long-term impacts of the proposed use on wildlife would be positive. The use would provide a food resource that would be widely used by wildlife during the winter when food resources are generally scarce. Cumulative impacts: There are no anticipated direct or indirect cumulative impacts of the proposed use when added to existing/projected refuge uses.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination were received as part of the Comprehensive Conservation Plan for Salt Plains NWR. One comment was received opposing farming.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Permittee will be required to renew the special use permit annually.

JUSTIFICATION:

The proposed use does not materially interfere with, or detract from refuge goals, objectives, or refuge management activities. In fact the proposed use promotes refuge goals, objectives, and management activities by providing a food resource for wildlife. The refuges establishing purposes state that it is to be used "as a refuge and breeding grounds for birds." With the production of a food crop to be utilized by birds, the proposed use is promoting the fulfillment of the refuge's establishing purposes. The production of farm crops helps replace the food source that has been lost throughout the nation with the loss of wetlands which were the historical source of food for migratory birds. The proposed use contributes to the achievement of the national wildlife refuge purpose and the National Wildlife Refuge System Mission by providing a food resource to be utilized by wildlife.

SIGNATURE:

Refuge Manager

Jacob 5-19-06
(Signature and Date)

CONCURRENCE:

Regional Chief

Mary P. Montoya 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date:

2016

FINAL COMPATIBILITY DETERMINATION

USE: Auto Touring

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

The proposed use is for the continuation of the existing auto touring on the refuge. Auto touring is the operating of a motor vehicle on refuge roads for wildlife observation, wildlife photography, or other recreational purposes. This use does not include use of snowmobiles, all-terrain vehicles, etc. In December of 1992, the Harold F. Miller auto tour route was established. The auto tour route is a 3.5 mile road through a variety of refuge habitats, including wooded and upland areas, wetlands, agricultural fields, and moist soil units. Along the route there are various designated viewing areas located at Little Marsh, School Marsh, and West Casey Marsh. These viewing areas are spots where a vehicle can pull to the side and either view from or exit their vehicle and view wildlife. The tour route was designed in an area to avoid high waterfowl and endangered species use areas. A minimal amount of disturbance may be expected throughout the entire route due to the vehicle and human presence. Three wetlands in particular may be affected more than others due to their size and location along the route: Mink Run, Little Marsh, and Intermediate Marsh. Historically these impoundments have moderate wildlife use in relation to the moist soil units and other major wetlands. The route is used steadily throughout the year by visitors, with approximately 100,000 visitors traveling on the route throughout the year. The proposed use would be conducted on the Harold F. Miller auto tour route. The auto tour route begins near the refuge headquarters and meanders through the refuge heading north until it finally intersects state highway 11, just west of Big Marsh. The auto tour route traverses wooded and upland areas, wetlands, agricultural fields, and moist soil units. Many different species of wildlife may be seen from the auto tour route, including waterfowl, mammals, reptiles, song birds, amphibians, and birds of prey. The proposed use would be conducted throughout the year, and be open from dawn to dusk each day. The proposed use would be conducted by the general public in the own vehicles. Visitors may drive the

auto tour route at their own pace and at their own leisure. The refuge is proposing the use to allow visitors the opportunity to view wildlife on the refuge from the comfort of their own vehicles. The proposed use would allow for wildlife viewing opportunities for individuals with disabilities.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: None. Special equipment, facilities, or improvements necessary to support the use: None. Maintenance costs: The maintenance costs associated with the proposed use would be for road grading, road repair, garbage pickup along the route, mowing, debris removal, repairing/replacing signs, and replenishing brochures. Monitoring costs: Monitoring costs associated with the proposed use would be for monitoring the number of visitors utilizing the auto tour route and the effects on wildlife. Offsetting revenues: None

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The most notable direct and indirect short-term impacts of the proposed use would be the disturbance to wildlife. There would be a disturbance to wildlife from the vehicle and human presence. However, the disturbance would be relatively small since much of the use would occur in areas that are at a distance from wildlife. There would be very little direct human contact with wildlife. Long-term impacts: The anticipated direct and indirect long-term impacts of the proposed use on wildlife and habitat would be minimal. Over time wildlife would become accustomed to areas of the refuge that are open to general public. Thus, moving to areas of the refuge where there would be less human contact. Cumulative impacts: The only anticipated direct and indirect cumulative impacts of the proposed use when added to existing/projected refuge uses would be quite minimal. The areas where the proposed use would occur has been strategically planned out in order to allow for the least amount of disturbance to wildlife.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination were received as part of the Comprehensive Conservation Plan for Salt Plains NWR. No comments were received.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Signs and gates will be used to control areas where the public will be allowed to enter.

JUSTIFICATION:

The proposed use does not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge. The very small impact associated with the proposed use does not materially interfere or detract from the refuge goals, objectives, or management activities. The proposed use does neither benefit nor adversely impact the biological resources of the refuge. According to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 there are six public uses that are deemed acceptable wildlife dependent public uses on refuges if they are found to be compatible with refuge purposes. They are: wildlife observation, wildlife photography, hunting, fishing, and environmental education and interpretation. These uses are commonly referred to as the "Big Six" public uses on refuges. With the addition of the proposed use, the mission of the National Wildlife Refuge System and purposes for the refuge would be supported. The proposed use would afford individuals not otherwise physically capable to walk the nature trails the opportunity

to view wildlife in its natural habitat. The proposed use would add to the public uses available on the refuge, and support two of the "Big Six" public uses already existing on the refuge, wildlife observation and photography.

SIGNATURE: Refuge Manager Jacobson 5-19-06
(Signature and Date)

CONCURRENCE: Regional Chief Gary P. Montoya 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date: 2021

FINAL COMPATIBILITY DETERMINATION

USE: Selenite Crystal Digging (Natural Resource Collection – "Rockhounding")

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

Selenite, a form of gypsum, develops into crystals with a unique hour-glass sand inclusion in most crystals. This is the only known place in the world that this hour-glass inclusion is found although selenite crystals are fairly common. The crystals form only in a small area of about 120ha of the salt flats in Sections 15 and 22 of R10W, T26N of about 4,050ha of salt flats on the Refuge. The presence of the unique crystals on the salt flats has been known for years and digging has occurred since the late 1930's. In 1959, a fence and gate were installed and digging was limited to individuals with permits only. Sometime in the early 1960's, the area was opened on weekends and holidays from April 15 through October 15. In the early 1970's the area was divided into five individual units and the digging was rotated annually between the five units. In 1987 the area was opened daily from April 1 through October 15. A sixth unit was also designated as an alternative unit for June and July when the designated dig unit was next to Clay Creek. In 1992 the individual dig units were reduced in size from 18 to 40ha to 9 to 18ha after it was determined that 90 percent of the digging occurred within 350 m of the parking area. A road or marked path across 1.7 km of the salt flats provides access to a parking area and the dig area. The area is located three miles south and five miles east of Cherokee is accessible by blacktop road and highway. Digging involves digging a hole about two feet deep and two feet across. Ground water seeps into the hole and is used to wash the crystals from the sides. The activity accounts for about 30,000 visits to the Refuge each year. The State of Oklahoma designated the "Selenite Crystal" as the State Crystal in 2005.

AVAILABILITY OF RESOURCES:

Resources are adequate to operate the activity. Assistance is received from the Great Salt Plains Association and other volunteers.

ANTICIPATED IMPACTS OF THE USE:

Oklahoma State University Cooperative Fish and Wildlife Research Unit completed a study on the impacts of crystal digging in 1995. The study investigated the compatibility of the digging with nesting behavior and success of interior least tern, snowy plover, and American avocet. The study found that the activity appeared to be compatible and digging did not appear to have an adverse effect on nesting and nest success. Sheet water flooding and predators is the major factor in nesting success. Least terns have been observed actually using the mounds left from previous digs as a nest site. These are less susceptible to flooding. Other wildlife use is primarily coyote and shorebirds. Shorebird use is concentrated on the shoreline.

PUBLIC REVIEW AND COMMENT:

Public comments on this draft determination were received as part of the Comprehensive Conservation Plan for Salt Plains NWR. No comments were received.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Conduct weekly checks of the digging area perimeter to determine if least terns have initiated nesting within 500m of the active digging area. Move the dig area if necessary. Mark the dig area to prevent accidental entry into areas where least terns are nesting. Provide interpretive materials and signage at the salt flats educates visitors about the life history of the least terns and their status as endangered birds.

JUSTIFICATION:

There may be minor disturbance to terns and plovers by the crystal digging activity. Allowing the activity provides an opportunity to educate the public about wildlife use of the area and the Endangered Species Act. The area where digging occurs has a history of sheet flooding and least terns should not be encouraged to nest in that area by excluding digging. Other areas adjacent to the area are less susceptible to flooding. The activity allows a public use which involves natural resources and provides educational benefits.

SIGNATURE: Refuge Manager: Jane Brank 5-19-06 (Signature and Date)

CONCURRENCE: Regional Chief Kary P. Montoya 6/12/06 (Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2016

FINAL COMPATIBILITY DETERMINATION

USE: Re-evaluation of acid rain monitoring station operated by U.S. Geological Survey

REFUGE NAME: Salt Plains National Wildlife Refuge

COUNTY: Alfalfa, Oklahoma

ESTABLISHING and ACQUISITION AUTHORITIES:

Executive Order 5314

Public Land Order 144 authorized by Executive Order 9337

Fish and Wildlife Coordination Act, 16USC 664

Migratory Bird Conservation Act, 16USC 715d

REFUGE PURPOSE(s):

"... as a refuge and breeding ground for birds..." Executive Order 5314, dated Mar. 26, 1930 "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. §715d (Migratory Bird Conservation Act) "... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. §664 (Fish and Wildlife Coordination Act) "...for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. §742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. §742f(b)(1) (Fish and Wildlife Act of 1956)

DESCRIPTION OF USE:

The U.S. Geological Survey would continue to maintain an acid rain monitoring station on the refuge approximately 0.5 miles south of State Highway 11. The daily operations would be conducted by refuge staff with occasional visits by U.S. Geological Survey personnel. The acid rain monitoring equipment is located on the dike that surrounds C-14 farm field. The equipment occupies an area approximately 15 by 20 feet. The operation of the equipment is monitored once per week on Tuesday mornings by a refuge staff member. The operation of the equipment is monitored once a week on Tuesday mornings which takes about 15 minutes to accomplish. The use is proposed by the U.S. Geological Survey. The use is proposed for the refuge since the refuge has an interest in the information resulting from the monitoring activities. The refuge also has the resources available, in staff, to conduct the weekly monitoring of the equipment. This use is part of a larger scale monitoring effort by the U.S. Geological Survey throughout the United States.

AVAILABILITY OF RESOURCES:

Resources involved in the administration and management of the use: None. Special equipment, facilities, or improvements necessary to support the use: None. Maintenance costs: With the weekly monitoring of the acid rain station the dike where the station is located would need additional road grading at different times of the year. Monitoring costs: The only monitoring costs that would be associated with the use would be the cost of fuel required for the vehicle for transportation to and from the site. Offsetting revenues: In cooperation with the U.S. Geological Survey, they will give the refuge a set amount of money to help offset any costs that the refuge might incur during monitoring activities.

ANTICIPATED IMPACTS OF THE USE:

Short-term impacts: The proposed use will not have any direct or indirect effects on the refuge purposes, the National Wildlife Refuge System mission, refuge goals, refuge objectives, and refuge

management activities. Since the monitoring efforts require such a short amount of time to complete, the disturbance to wildlife in the area would be very minor. The area in which the acid rain station is located is in close proximity to State Highway 11, thus the one additional weekly vehicle would have very little impact on wildlife disturbance. Long-term impacts: There are no foreseeable direct or indirect long-term impacts of the proposed use on wildlife and habitat. Cumulative impacts: There are no foreseeable direct and indirect cumulative impacts of the proposed use when adding to existing/projected refuge uses.

PUBLIC REVIEW and COMMENT:

Public comments on this draft determination were received as part of the Comprehensive Conservation Plan for Salt Plains NWR. No comments were received.

DETERMINATION (check one below)

USE IS NOT COMPATIBLE

USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

None.

JUSTIFICATION:

Utilization of the refuge for research purposes is a recognized use under the National Wildlife Refuge Administration Act of 1966, as amended by the Refuge Improvement Act of 1997.

SIGNATURE: Refuge Manager

Joe Brock 5-19-06
(Signature and Date)

CONCURRENCE:

Regional Chief

Ray P. Montoya 6/12/06
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date:

2016

***APPENDIX E - RELEVANT LEGAL MANDATES AND
ESTABLISHING DIRECTIVES***

EXECUTIVE ORDER

—o—
Salt Plains Wild Life Refuge
Oklahoma

It is hereby ordered that the public land of the United States, situate in Alfalfa County, Okla., as segregated by the broken line upon the diagram hereto attached and made part of this order be and the same is hereby reserved and set apart for the use of the Department of Agriculture as a refuge and breeding ground for birds, subject to existing valid rights.

It is unlawful, within this reservation, (a) to hunt, trap, capture, willfully disturb, or kill any wild animal or bird of any kind whatever, or take or destroy the eggs of any wild bird, to occupy or use any part of the reservation, or enter thereon for any purpose, except under such rules and regulations as may be prescribed by the Secretary of Agriculture; (b) to cut, burn, or destroy any timber, underbrush, grass, or other natural growth; (c) willfully to leave or suffer fire to burn unattended near any timber or other inflammable material; (d) after building a fire in or near any forest, timber, or other inflammable material, to leave it without totally extinguishing it; and (e) willfully to injure, molest, or destroy any property of the United States.

Warning is expressly given to all persons not to commit any of the acts herein enumerated, under the penalties prescribed by sections 106, 107, and 145 of title 18, chapter 4, United States Code, or by the act of February 18, 1929 (U. S. Code, Supp. III, title 16, ch. 7a, sec. 715i).

This refuge shall be known as the Salt Plains Wild Life Refuge.

The White House,
March 26, 1930.

HERBERT HOOVER

U. S. FISH AND WILDLIFE SERVICE
SALT PLAINS REFUGE

[NO. 5314]

MAR 1 1960

RECEIVED
JET. OKLAHOMA



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

EXECUTIVE ORDER

ENLARGING THE SALT PLAINS WILDLIFE
REFUGE

OKLAHOMA

By virtue of and pursuant to the authority vested in me as President of the United States and by the act of June 25, 1910, ch. 421, 36 Stat. 847, as amended by

the act of August 24, 1912, ch. 369, 37 Stat. 497, and in order to effectuate further the purposes of the Migratory Bird Conservation Act (45 Stat. 1222), it is ordered that the following-described public land, comprising 5.60 acres, more or less, in Alfalfa County, Oklahoma, be, and it is hereby, withdrawn from settlement, location, sale, or entry, and reserved and set apart for the use of the Department of Agriculture, subject to valid existing rights, as an addition to the Salt Plains Wildlife Refuge, established by Executive Order No. 5314 of March 25, 1930:

INDIAN MERIDIAN

T. 28 N., R. 9 W., sec. 11 lot 5.

Executive Order No. 6964 of February 5, 1935, withdrawing for classification and other purposes all vacant, unreserved, and unappropriated public lands in Oklahoma and certain other states, is hereby revoked as to the above-described land.

FRANKLIN D. ROOSEVELT

THE WHITE HOUSE,

July 5, 1938.

[No. 79251

(P. R. Doc. 38-1923; Filed, July 5, 1938;
11:01 a. m.)

APPENDIX F - KEY LEGISLATION AND SERVICE POLICIES

American Indian Religious Freedom Act (1978): Directs agencies to consult with native traditional religious leaders to determine appropriate policy changes necessary to protect and preserve native American religious cultural rights and practices.

Americans with Disabilities Act (1992): Prohibits discrimination in public accommodations and services.

Antiquities Act (1906): Authorizes the scientific investigation of antiquities on federal land and provides penalties for unauthorized removal of objects taken or collected without a permit.

Archaeological and Historic Preservation Act (1974): Directs the preservation of historic and archaeological data in federal construction projects.

Archaeological Resources Protection Act (1979) as amended: Protects materials of archaeological interest from unauthorized removal or destruction and requires federal managers to develop plans and schedules to locate archaeological resources.

Architectural Barriers Act (1968): Requires federally owned, leased, or funded buildings and facilities to be accessible to persons with disabilities.

Clean Water Act (1977): Requires consultation with the Corps of Engineers (404 permits) for major wetland modifications.

Emergency Wetlands Resources Act (1986): The purpose of the Act is “To promote the conservation of migratory waterfowl and to offset or prevent the serious loss of wetlands by the acquisition of wetlands and other essential habitat, and for other purposes.”

Endangered Species Act (1973): Requires all federal agencies to carry out programs for the conservation of endangered and threatened species.

Executive Order 11988 (1977): Each federal agency shall provide leadership and take action to reduce the risk of flood loss and minimize the impact of floods on human safety, and preserve the natural and beneficial values served by the floodplains.

Executive Order 12996; Management and General Public Use of the National Wildlife Refuge System (1996): Defines the mission, purpose, and priority public uses of the National Wildlife Refuge System. It was subsequently replaced by the Refuge System Improvement Act of 1997.

Executive Order 13007; Indian Sacred Sites (1996): Directs federal land management agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, avoid adversely affecting the physical integrity of such sacred sites, and where appropriate, maintain the confidentiality of sacred sites.

Executive Order 13112 (1999): Established to address the growing ecological and economic damage caused by invasive species. Executive Order 13112 requires federal agencies to: 1) identify actions that might impact the status of invasive species and prevent introductions of invasive species; 2) not authorize, fund, or carry out actions likely to cause the introduction or spread of invasive species; 3) detect and respond rapidly to control invasive species populations; 4) monitor and conduct research on invasive species; 5) restore native species and habitat conditions in ecosystems that have been invaded; and 6) promote public education on invasive species.

Executive Order 13186; Responsibilities of federal agencies to protect migratory birds (2001): This EO provides guidance for Service programs relative to the management and conservation of migratory birds. Its purpose is to minimize the potential adverse effects of migratory bird take, with the goal of striving to eliminate take, while implementing our mission. This guidance includes, but is not limited to: 1) integrating migratory bird conservation measures into our activities; 2) restoring and enhancing the habitat of migratory birds; 3) ensuring our actions/plans promote migratory bird conservation; 4) promoting inventory, monitoring, research, management studies, and information exchange related to migratory birds; 5) promoting education and outreach related to migratory birds; 6) identifying special migratory bird habitats; and 7) strengthening non-federal partnerships to further bird conservation.

Federal Noxious Weed Act (1990): Requires the use of integrated management systems to control or contain undesirable plant species; and an interdisciplinary approach with the cooperation of other federal and state agencies.

Fish and Wildlife Act (1956): Established a comprehensive national fish and wildlife policy and broadened the authority for acquisition and development of refuges.

Fish and Wildlife Coordination Act (1958): Allows the Fish and Wildlife Service to enter into agreements with private landowners for wildlife management purposes.

Land and Water Conservation Fund (1965): Uses the receipts from the sale of surplus federal land, outer continental shelf oil and gas sales, and other sources for land acquisition under several authorities.

Migratory Bird Treaty Act (1918): Designates the protection of migratory birds as a federal responsibility. This Act enables the setting of seasons, and other regulations including the closing of areas, federal or non-federal, to the hunting of migratory birds.

Migratory Bird Conservation Act (1929): Establishes procedures for acquisition by purchase, rental, or gift of areas approved by the Migratory Bird Conservation Commission.

Migratory Bird Hunting and Conservation Stamp Act (1934): Authorized the opening of part of a refuge to waterfowl hunting.

National Environmental Policy Act (1969): Requires the disclosure of the environmental impacts of any major federal action significantly affecting the quality of the human environment.

National Historic Preservation Act (1966) as amended: Establishes as policy that the federal government is to provide leadership in the preservation of the nation's prehistoric and historic resources.

National Wilderness Preservation System (1964): The National Wilderness Preservation System was created on September 3, 1964 and is also known as the “Wilderness Act of 1964.” The purpose of the Wilderness Act was to preserve and protect wild lands in their natural condition “...to secure for the American people of present and future generations the benefits of an enduring resource of wilderness.” The Act directed federal agencies such as the U.S. Fish and Wildlife Service to survey their roadless lands for possible wilderness designation. Wilderness areas are protected from development and the operation of motorized equipment. A Wilderness Area is defined as an area with at least 5,000 acres of undisturbed, undeveloped land affected by the forces of nature and may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

National Wildlife Refuge System Administration Act of 1966 as amended by the National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. 668dd-668ee. (Refuge Administration Act): Defines the National Wildlife Refuge System and authorizes the Secretary to permit any use of a refuge provided such use is compatible with the major purposes for which the refuge was established. The Refuge Improvement Act clearly defines a unifying mission for the Refuge System; establishes the legitimacy and appropriateness of the six priority public uses (hunting, fishing, wildlife observation and photography, or environmental education and interpretation); establishes a formal process for determining compatibility; established the responsibilities of the Secretary of Interior for managing and protecting the System; and requires a comprehensive conservation plan for each refuge by the year 2012. This Act amended portions of the Refuge Recreation Act and National Wildlife Refuge System Administration Act of 1966.

Native American Graves Protection and Repatriation Act (1990): Requires federal agencies and museums to inventory, determine ownership of, and repatriate cultural items under their control or possession.

Refuge Recreation Act (1962): Allows the use of refuges for recreation when such uses are compatible with the refuge’s primary purposes and when sufficient funds are available to manage the uses.

Rehabilitation Act (1973): Requires programmatic accessibility in addition to physical accessibility for all facilities and programs funded by the federal government to ensure that anybody can participate in any program.

APPENDIX G - INTRA-SERVICE SECTION 7 (ENDANGERED SPECIES)CONSULTATION

RS #2-14-05-I-0644

F
7/28

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

[Note: This form provides the outline of information needed for intra-Service consultation. If additional space is needed, attach additional sheets, or set up this form to accommodate your responses.]

Originating Person: Jon Brock, Refuge Manager

Telephone Number: 580-626-4794

Date: March 25, 2005

- I. **Region:** Southwest
- II. **Service Activity (Program):** Refuges: Implementation of a Comprehensive Conservation Plan (CCP) for Salt Plains NWR.
- III. **Pertinent Species and Habitat:**
- A. **Listed species and/or their critical habitat within the action area:**
Salt Plains NWR--Alfalfa County
Whooping Crane (*Grus americana*) - (E w/CH)
Least Tern (*Sterna antillarum*) - (E)
Bald Eagle (*Haliaeetus leucocephalus*) - (T)
Piping Plover (*Charadrius melodus*) - (T)
- B. **Proposed species and/or proposed critical habitat within the action area:**
None
- C. **Candidate species within the action area:**
None
- D. **Include species/habitat occurrence on a map:** Wetlands and sand flats at any location on Salt Plains, and near the Great Salt Plains Lake. See attached map.
- IV. **Geographic area or station name and action:** Salt Plains NWR, Jet, Oklahoma: Comprehensive Conservation Plan Implementation.
- V. **Location (attach map):** See attached draft CCP
- A. **Ecoregion Number and Name:** Arkansas/Red Rivers Ecosystem (Ecosystem)
- B. **County and state:** Alfalfa County, Oklahoma

- C. Section, township, and range (or latitude and longitude): 36.8 deg N. / 98.2 deg W.
- D. Distance (miles) and direction to nearest town: About 35 miles northwest of Enid, OK, and 100 miles southwest of Wichita, KS.
- E. Species/habitat occurrence:
Whooping Crane /entire refuge is critical habitat
Bald Eagle /Lake and wooded margins
Least Tern /salt flats near Great Salt Plains Lake
Piping Plover /spring migration on flats (rare, occasional)

VI. Description of proposed action:

The proposed action is to implement the Comprehensive Conservation Plan (CCP) for Salt Plains NWR over the next 15 years. The CCP will emphasize water management and the protection, management and re-establishment of grassland, wetland, and riparian habitats.

The CCP is divided into a series of goals, objectives, and strategies that will be implemented throughout the 15-year term of this plan. Specific goals associated with the CCP are to: 1) protect and enhance Federal trust resources and sensitive species and habitats of special concern to achieve refuge purposes; 2) protect and enhance the ecological integrity of the refuge and contribute to the objectives of the Ecosystem; 3) reestablish natural stream channel, floodplain characteristics, and provide optimal flow regimes to prevent or alleviate flooding potential on the refuge and adjacent private lands; 4) facilitate, maintain, and develop adequate quality water supply for wetland management; 5) establish a land protection program that fully supports accomplishment of species, habitat, and Ecosystem objectives; 6) identify, protect, and interpret the prehistoric and historic cultural resources on the refuge for the benefit of present and future generations; 7) maintain or strengthen existing interagency and jurisdictional relationships and establish new partnerships within the community for improving wildlife and habitat resources on/near the refuge and the Ecosystem; 8) further the public's involvement with the refuge and to develop a broader base of public support through wildlife interpretation, education and outreach programs, and quality wildlife-dependent recreational opportunities; and 9) provide the necessary staffing, facilities, equipment, and operational funds to accomplish the goals of the refuge and fulfill the mission of the Refuge System.

The overall management of the refuge will focus on restoring, maintaining, and enhancing refuge habitats. Management efforts will be directed toward sensitive species (including federally listed species), waterfowl, migratory birds, and resident wildlife that currently and historically occurred on the refuge. For detailed descriptions of proposed actions (objectives and strategies), please refer to Section 5 of the attached draft CCP.

VII. Determination of Effects:

A. Explanation of effects of the action on species and critical habitat in item III A (attach additional pages as needed):

Federally-listed species which breed or seasonally utilize the refuge's habitats are the whooping crane, bald eagle, least tern, and the occasional piping plover in migration. Although snowy plovers that nest at Salt Plains are not part of the listed population, they will be addressed as such here. Specific activities of the CCP which may affect listed species (whooping crane, bald eagle, and least tern) include: stream, riparian, and grassland habitat management, water management, invasive species management, prescribed burning, and wetland/moist soil unit enhancement. All habitat management activities are beneficial and aimed at protecting, increasing, and enhancing refuge habitats.

The proposed action includes improvement of access roads (2 miles), buildings, trails (3.5 additional miles), visitor parking areas and other improvements but these are not occurring in areas that would adversely affect listed species nor their habitats. There are approximately 32,000 acres within the refuge. It is divided equally between open water, salt flats, and upland. Almost all of the public use (except fishing) is limited to the upland areas. Other activities in the CCP include increasing wildlife-dependent recreational opportunities, such as providing additional waterfowl hunting. The refuge is proposing to improve 100 acres of the existing hunt area (north of Highway 11) by creating a moist soil unit, but this is not in areas that listed species are known to utilize during the hunt season.

The entire refuge is designated as critical habitat for whooping cranes. They begin arriving on Salt Plains in early October through early November as they migrate to their wintering grounds in South Texas. Usually, several to tens of whoopers are observed each fall and occasionally in spring. Although the whoopers predominantly roost on the south side of the refuge, some whoopers have roosted on Sand Creek Bay, south of Highway 11. The proposed hunting program in the CCP permits waterfowl, sandhill cranes, dove, quail, and pheasant hunting in the hunt area north of highway 11. Controlled deer hunts are held in cooperation with the state on the majority of upland areas of the refuge. Hunts are held on the south end of the refuge in October before the whooping cranes normally arrive. The refuge has a contingency plan in place to protect the whoopers in case they fly over or land in the hunting area north of Highway 11, but there is no proposed hunting in areas where whooping cranes are known to feed and roost. There are no records during the past 10 years of whooping cranes using the hunt area during the hunting season. If whooping cranes are observed flying towards the hunt area, all hunting will cease. Posters will be placed annually at the hunt area parking lots warning hunters that whoopers may be present and providing visual aides to identification.

On Salt Plains, bald eagles are winter residents which feed and roost on the refuge. Numbers of wintering bald eagles on Salt Plains normally range from about 20 to 80 individuals each year. Bald eagles are common on the refuge from October through March and traditionally roost in the larger trees such as the cottonwood trees near the lake. No CCP activities are proposed in areas when bald eagles are present nor would any CCP activities adversely modify their habitat. In fact, certain habitat enhancement and water management activities proposed in the CCP are aimed at improving their roosting and feeding habitats.

The proposed CCP identifies 140 acres three miles north of the refuge for acquisition from ODOT for wetland mitigation and replacement land for the replacement of Highway 11. It also calls for working with ODOT to identify future lands for a.

Least terns (as well as large numbers of snowy plovers) nest on Salt Plains within the salt flats on the north and west side of the Great Salt Plains Lake from about May through August. More than 100 least tern pairs nest on the salt flats before moving southward in the fall. Selenite crystal digging and human presence may potentially disturb least terns. As part of the CCP (Objective 1-1), the refuge is proposing improvements to least tern nesting habitat to meet recovery plan items. However, no proposed CCP activities would adversely modify tern (or snowy plover) nesting habitat nor would any activities that would adversely impact their nesting occur as a result of CCP implementation.

Piping plovers begin migrating from their breeding grounds around July to September. By March to mid-April, the birds make their way back north. Piping plovers are occasionally noted within the salt flats during the spring migration from the Gulf Coast. At Salt Plains, piping plovers are rare and in the Spring only. Because of the rarity of the piping plover at Salt Plains and its use of the salt flats, where no CCP-related activities are proposed, proposed implementation of the CCP is not likely to adversely affect this species.

B. Explanation of actions to be implemented to reduce adverse effects:

None of the activities in the CCP are proposed to be carried out within whooping crane, least tern or bald eagle habitat during the whooping crane migration stopovers, tern nesting season, or the bald eagle winter use season. To avoid impacts to these species, public use activities such as selenite crystal digging, fishing, and hunting are allowed in pre-designated areas, seasons, and times only.

A whooping crane contingency plan has been developed in cooperation with the State of Oklahoma and it addresses actions to reduce the risk of disturbance or accidental take during the migration through the area.

Before the arrival of least terns, the refuge begins monitoring the nesting areas. These sites are closed to crystal digging or other public access until the terns leave. Therefore, tern nesting sites (as well as snowy plovers) are protected from human disturbance each nesting season.

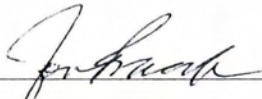
Under the CCP, the refuge proposes to develop a thorough updated database of the flora and fauna of wetland, grassland, riparian, and woodland communities including species diversity, distribution, and population levels through baseline surveys. These updates should redouble the Refuge's sensitive species mandates to provide future management and protection if additional listed species are documented on the Refuge.

As a working document, modifications to the objectives and strategies are anticipated. If modifications result in changes to the effects analysis, or include actions that are not considered in this document, the refuge will re-initiate consultation or consult over a particular action that may affect federally listed species and/or critical habitat.

VIII. Effect determination and response requested: [* = optional]

A. Listed species/designated critical habitat:

<u>Determination</u>		<u>Response Requested</u>
No effect on species/critical habitat (species: none)		_____ *Concurrence
May affect, is not likely to adversely affect species /critical habitat (species: <u>Whooping Crane w/CH, Least Tern, Bald Eagle, Piping Plover</u>		<u> X </u> Concurrence
May affect, is likely to adversely affect species /critical habitat (species: n/a)		_____ Formal Consultation
B.	<u>Proposed species/proposed critical habitat: Determination</u>	<u>Response Requested</u>
No effect on proposed species/critical habitat (species: <u>none</u>)		_____ *Concurrence
Is not likely to jeopardize proposed species/ adversely modify proposed critical habitat (species: n/a)		_____ Concurrence
Is likely to jeopardize proposed species/ adversely modify proposed critical habitat (species: n/a)		_____ Conference
C.	<u>Candidate species: Determination</u>	<u>Response Requested</u>
No effect on candidate species (species: <u>none</u>)		_____ *Concurrence
Is not likely to jeopardize candidate species (species: n/a)		_____ Concurrence
Is likely to jeopardize candidate species (species: n/a)		_____ Conference



7-19-05

Signature
[Title/office of supervisor at originating office]

Date

IX. **Reviewing ESFO Evaluations:**

A. Concurrence: X Nonconcurrence: _____

B. Formal consultation required: _____

C. Conference required _____

D. Informal conference required _____

E. Remarks (attach additional pages as needed):

Lenora D. Frayn

Signature
[Title/office of reviewing official]

8-23-05

Date

APPENDIX H - PUBLIC INVOLVEMENT / RESPONSE TO COMMENTS

Various methods were used to involve the public in this planning process. Notifications of the public comment periods (June 1998, December 2003, November 2005) and open houses (February 1999 and January 2006) were announced in the Federal Register, local newspapers, and sent out to various agencies, local libraries, elected officials, organizations, stakeholders, and individuals. Copies of the CCP/EA were made available at the Salt Plains NWR headquarters and at the Cherokee Public Library. The Service prepared and distributed a fact sheet in December 1998 and a scoping notice was mailed in December 2003 to interested parties and stakeholders mailed to interested parties in December 1998. Interested parties and stakeholders include federal, state, local agencies, groups, organizations, adjacent landowners, and the general public. The fact sheets, scoping notices, draft CCP, and other relevant information for public review have been available at the refuge headquarters over the course of the CCP planning process.

The following will generally list the types of comments received during the process, whether written or verbal, and provide the Service's response to each. Overall, respondents (particularly local landowners and groups) are glad the refuge is here for relaxation, education, hunting, fishing, wildlife observation, and crystal digging.

Public Use

Comments

- Completely oppose all hunting, trapping, farming, new roads, logging, herbicides, and prescribed burning.
- One non-governmental organization (NGO) is concerned that the Service has strayed from its policy which directs that "wildlife comes first" in the Refuge System. The NGO contends that hunting and trapping (consumptive use activities) have not been adequately analyzed, including potential "risks posed to threatened and endangered species." They cite "overwhelming public opposition to the allowance of consumptive use activities" (i.e., hunting) "on National Wildlife Refuges".

Response

Management activities that include farming, prescribed burning, use of herbicides, etc., become necessary in order to protect, enhance, and increase habitats available to important fish and wildlife resources and also are necessary to comply with various federal mandates such as Executive Order 13112, which requires the prevention and spread of invasive species. These management activities are central in helping the refuge meet its objectives for fire management, ecological integrity, waterfowl populations, threatened and endangered species recovery, and other important fish and wildlife resources. The refuge farming program provides important food resources widely used by wildlife, particularly migratory waterfowl, during the winter when food is generally scarce. Food plots, which include winter wheat, millet, sunflowers, and cowpeas also help to reduce wildlife depredation of private crops surrounding the refuge. Logging and trapping programs are not conducted on the refuge.

With respect to hunting, a compatibility determination made in 2006 has determined that hunting is a compatible, wildlife-dependent recreational activity, in compliance with the 1997 Refuge Improvement Act. In addition, to accomplish refuge management goals for the deer population on the refuge, a deer hunt has been in existence since 1965. Each year, the number of hunters and hunts is decided upon by the previous years harvest and census numbers. The status of the deer population and overall health is assessed annually and the hunts are changed accordingly.

With respect to potential risks posed to threatened and endangered species, all activities proposed in the CCP have been evaluated and are in compliance with Section 7(a)(2) of the Endangered Species Act (*See Appendix G*). Any additional activities or any portions which have not been previously evaluated will be submitted for compliance prior to undertaking the activity, as per Endangered Species Act requirements.

Comment

- Would like to see a horseback riding trail on the refuge.

Response

The refuge has determined that horseback riding on the refuge is not compatible with the purposes of the refuge (*See Appendix D*). The proposed use does not currently occur on the refuge and this non-wildlife-dependent activity will create impacts to wildlife through disturbance, habitat impacts, and the potential introduction of exotic plants through droppings. Horseback riding would impact other wildlife-dependent public uses such as wildlife observation, unless currently trail-less areas on the refuge are developed to keep this use separate from these other priority refuge activities.

Comments

- More “loop” style walking trails and observation blinds for additional wildlife viewing such as in areas south of the maintenance area and north of Highway 11.
- More observation towers along the highway and more observation and photography blinds, such as at School Marsh east of the current overlook, and Wilson’s Pond on the dyke behind the existing gate.

Response

An additional 3.5 miles of interpretive hiking/viewing trails, observation blind and an observation tower, and associated interpretive and directional signs are proposed in the CCP.

Comments

- An open area to be developed that would allow public access for deer archery hunting, expand the current public hunting area or provide additional opportunities for turkey hunting.
- Recommend that the CCP/EA reflects an implementation strategy as it relates to increasing the public hunting area by 1,000 acres, opening the public hunting areas portion to deer archery, spring turkey hunting, and goose hunting from permanent blinds.

Response

The hunting program is carefully managed to provide for public safety, and to avoid adverse impacts to endangered whooping cranes and/or their designated critical habitat as well as to minimize disturbance at feeding and resting areas for migratory and wintering birds. Currently, the refuge is maximizing the number of hunts and hunters that can be accommodated while maintaining a safe, quality hunt and protecting sensitive wildlife areas. However, the refuge has evaluated the hunting program and proposes improving 180 acres for waterfowl hunting. Archery, primitive, and rifle hunting are currently held as controlled deer hunts. In addition, controlled deer hunts are held for youth and persons with disabilities and the refuge plans to conduct controlled turkey hunts on the refuge when turkey populations are at huntable levels, as determined by census. The refuge will continue to work with the Oklahoma Department of Wildlife Conservation to gather wildlife and habitat data in order to plan, develop, and maintain or improve compatible hunting opportunities that do not conflict with visitor and hunter safety or negatively impact endangered species or other important fish and wildlife resources.

Habitat/Wildlife***Comments***

- Several individuals, particularly adjacent landowners, agreed with prescribed burning for invasive species control, such as the encroachment of red cedar and salt cedar.
- One landowner would like to see the refuge remove some of the underbrush and timber along Sand Creek to reduce flooding and improve access to the creek for fishing.

Response

The refuge is using prescribed burning and mechanical vegetation control to reduce fuel loads and manage for grassland habitats, improve and maintain ecological integrity, enhance habitat for endangered species, and reduce flooding potentials.

Comment

Concern for the increasingly silted-in nature of the Great Salt Plains Lake.

Response

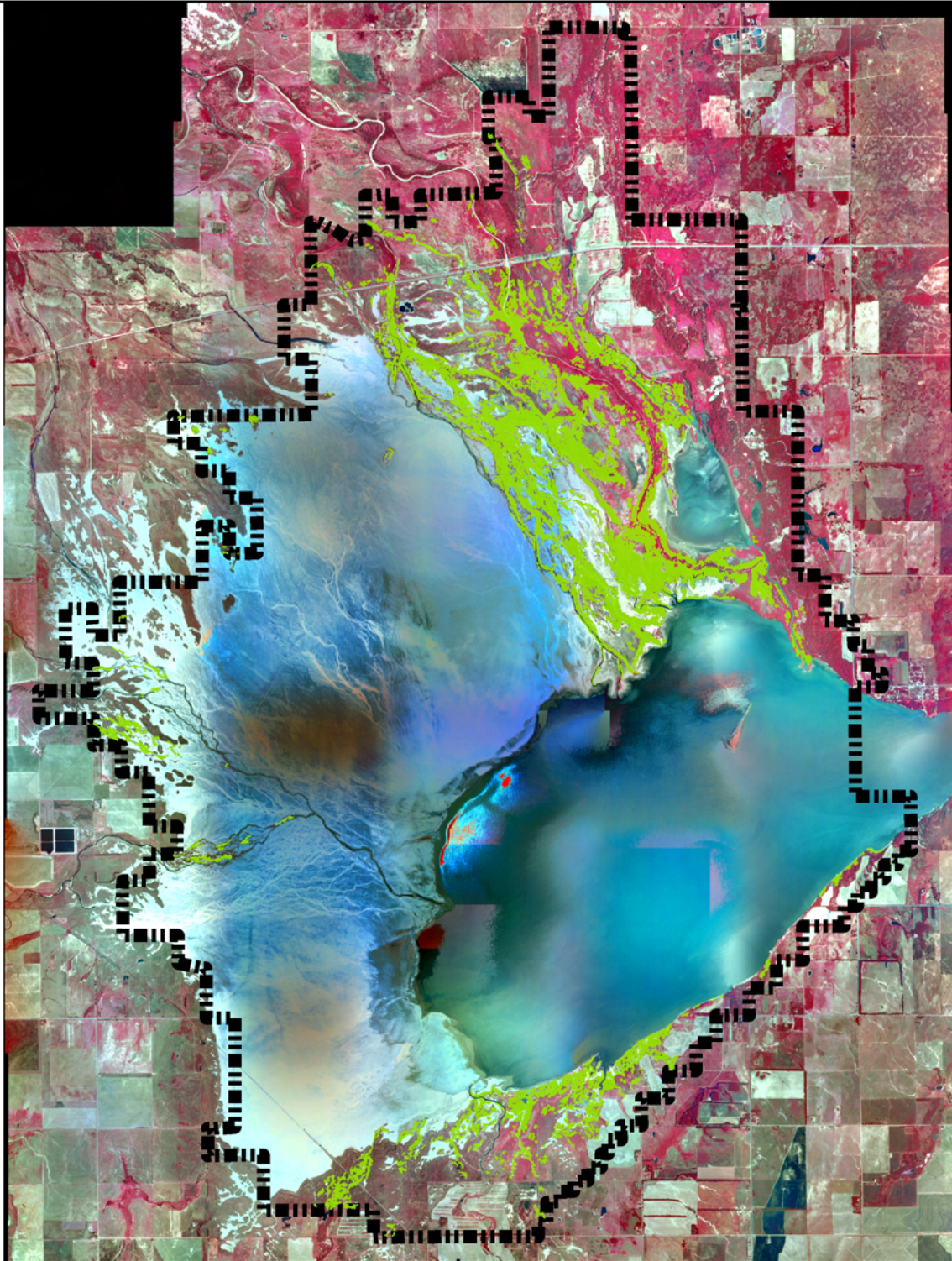
Salt Plains NWR will partner with the Natural Resources Conservation Service and the U.S. Army Corps of Engineers to help address the issue of siltation effects occurring in the salt flats and lake to identify and implement solutions. Strategies are included in the CCP to reduce siltation such as the removal of exotic salt cedar trees and the replanting of native vegetation along riparian banks.

APPENDIX I - Refuge GIS Vegetation Maps





U.S. Fish & Wildlife Service

Salt Plains National Wildlife Refuge



Tamarix chinensis distribution on Salt Plains NWR

-  Tamarix chinensis (Saltcedar) - 1311 acres
-  Salt Plains NWR boundary - 32,028 acres

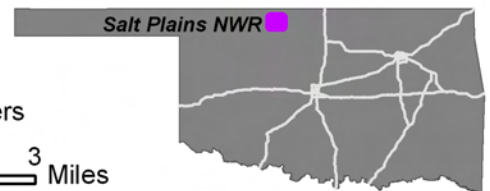
Tamarix chinensis distribution data collected via object-based photo interpretation of 2003 CIR imagery. Background image from an ortho rectified 2003 color infrared photo.
 Projection: Nad 1983 UTM Zone 14N

Prepared by: USFWS Division of Planning
 Southwest Region
 Albuquerque, New Mexico July 2006



0 1 2 3 Kilometers

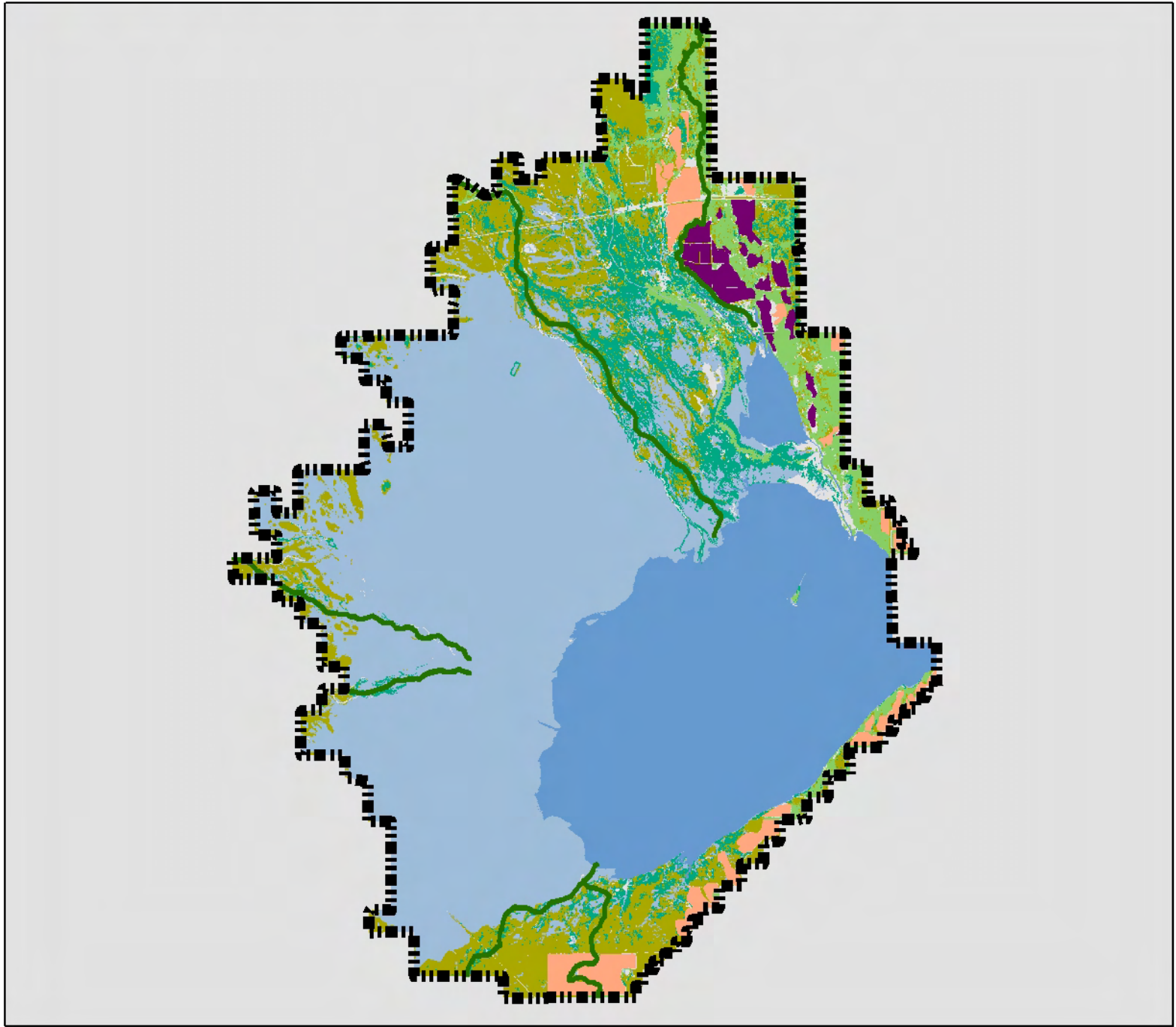
0 0.5 1 2 3 Miles














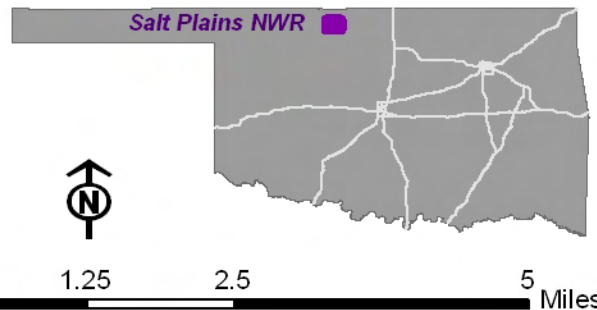
U.S. Fish & Wildlife Service

Salt Plains National Wildlife Refuge



Vegetation habitat distribution on Salt Plains NWR

- | | |
|--|---|
|  River habitat |  Croplands |
|  Woodland / Forestland |  Marshes / ponds / moist soils |
|  Shrubland |  Salt / Sand / Mud Flats |
|  Grasses and forbs |  Lake / Water |
|  Salt Plains NWR boundary | |



Projection: Nad 1983 UTM Zone 14N

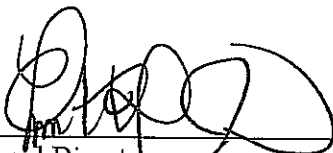
Vegetation habitat distribution data collected via object-based photo interpretation of 2003 CIR imagery.

Prepared by: USFWS Division of Planning / Southwest Region / Albuquerque, New Mexico / July 2006

Environmental Action Statement

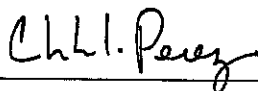
U.S. Fish and Wildlife Service
Region 2
Albuquerque, New Mexico

Within the spirit and intent of the council on Environmental Quality's regulations for implement the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of implementing the Salt Plains National Wildlife Refuge Comprehensive Conservation Plan (CCP) is found not to have significant environmental effects as determined by the attached Finding of No Significant Impact and the Environmental Assessment, as found in the CCP.



Regional Director
Region 2, U.S. Fish and Wildlife Service

9/5/04
Date



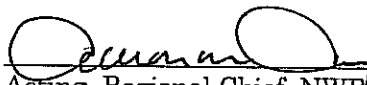
Initiator
Chris Perez, Biologist/Natural Resource Planner

6/21/06
Date



Refuge Manager
Salt Plains NWR

6/22/06
Date



Acting, Regional Chief, NWR System, R2

7/20/04
Date



NEPA Coordinator, R2

7/20/06
Date

Finding of No Significant Impact

Salt Plains National Wildlife Refuge Comprehensive Conservation Plan

The Comprehensive Conservation Plan (CCP) and Environmental Assessment (EA) have been prepared as required by the National Wildlife Refuge System Improvement Act of 1997 and the National Environmental Policy Act of 1969 (NEPA) and its implementation regulations (40 CFR 1500 *et seq.*). The CCP establishes nine goals for management of the refuge to: 1) protect and enhance migratory birds and federally-listed species and habitats of special concern to achieve refuge purposes; 2) protect and enhance the ecological integrity of the refuge and contribute to the objectives of the Ark/Red Ecosystem and other applicable plans; 3) reestablish natural stream channel, floodplain characteristics, and provide optimal flow regimes to prevent or alleviate flooding potential on the refuge and adjacent private lands; 4) facilitate, maintain, and develop an adequate quality water supply for wetlands management; 5) establish a land protection program that fully supports accomplishment of species, habitat, and refuge management objectives; 6) protect and interpret the prehistoric and historic cultural resources associated with the refuge; 7) maintain or strengthen existing interagency and jurisdictional relationships and establish new partnerships within the community for improving wildlife and habitat resources on the refuge and the Area of Ecological Concern; 8) further the public's involvement with the refuge and to develop a broader base of public support through wildlife interpretation, education and outreach programs, and quality wildlife-dependent recreational opportunities; and 9) provide the necessary staffing, facilities, equipment, and operational funds to achieve the refuge's vision.

Three management alternatives for Salt Plains NWR were assessed as to their effectiveness in achieving the purposes and goals of the refuge and their impact on the human environment. A brief summary of the alternatives follows:

Alternative A: No Action Alternative. Continue current management of the refuge with no changes to existing operations.

This alternative represents the status quo or no change from current management of the refuge and no adoption of a management plan. There would be no expansion of wildlife, habitat, or biological diversity activities. Current base funding and staffing levels would allow the refuge to focus on limited habitat management, species monitoring, and maintenance projects. The public use program would remain at current levels and no new facilities would be developed. Any improvements to the public use program would occur opportunistically. The Service would rely primarily on partnerships with local and state agencies, organizations, universities, and volunteers to accomplish many of its resource protection and monitoring goals.

Alternative B: Proposed Action. Implement the CCP.

Under this alternative, the refuge would adopt the actions making up the CCP. The objectives and strategies detailed in the CCP would provide for short and long-term conservation and enhancement of resources and values in the planning area. The management actions within this alternative reflect a need to continue and enhance the major strategies of resource management and protection, wildlife-dependent recreational opportunities, environmental education, interpretation, outreach, and to build and maintain excellent partnerships.

Alternative C: Public use emphasis such as maximizing hunting, hiking/wildlife observation, and associated facilities.

This alternative would focus refuge management and efforts towards expanding public uses to the maximum extent compatible, particularly hunting, and hiking/wildlife observation opportunities. The refuge would open most areas to all types of hunting including small game, deer archery, and turkey hunting, and add controlled access from several permanent hunting blinds. Under this alternative, an additional 2 miles of public roads and 7 more miles of trails with up to 20 directional and 40 interpretive signs would be constructed in currently trail-less areas of the refuge to optimal public access.

Public Involvement:

Comprehensive planning efforts for Salt Plains NWR, began as the Service published a "Notice of Intent to Prepare Comprehensive Conservation Plans for 8 National Wildlife Refuges in the Southwest Region" in June 1998 (63 FR 33693-33694) to solicit public input. The Service prepared and distributed a fact sheet which included the history of the refuge, proposed goals, objectives, and long-range plans which were distributed at the refuge headquarters and mailed to interested parties in December 1998. Interested parties and stakeholders include federal, state, local agencies, groups, organizations, adjacent landowners, and the general public. The fact sheets, drafts, and other relevant information for public review have been available at the refuge headquarters. An open house was held at the refuge on February 11, 1999.

On December 4, 2003, a scoping notice was mailed out to seek additional comments to interested parties and stakeholders on a revised/updated Draft CCP. Several comments were received by the January 15, 2004, deadline. On November 21, 2005 (70 FR 70089-70090), the Service published a Notice of Availability of the Draft CCP and Environmental Assessment (EA) to solicit public review and comment. The Draft CCP/EA was also made available on the Internet at: <http://www.fws.gov/southwest/refuges/Plan/index.html> Prior to the January 20, 2006 deadline, an open house was held at the refuge headquarters on January 12, 2006, to seek additional public comment and answer questions. Notifications of the public comment periods and open houses were announced in the Federal Register, local newspapers, and sent out to various agencies, local libraries, elected officials, organizations, stakeholders, and individuals. Copies of the CCP/EA were made available at the Salt Plains NWR headquarters and at the Cherokee Public Library. Comments received were considered, and to the degree possible, incorporated into the final document.

Conclusion:

The alternative selected for implementation is Alternative B. This alternative, (now the CCP) describes how habitat objectives will be accomplished through a combination of management activities to encourage ecological integrity and to protect, enhance, and restore habitat for migratory birds, federally listed species, and resident wildlife. This alternative was selected because it best meets the purposes and goals of the refuge. This action will not adversely impact threatened or endangered species or their habitat. Opportunities for wildlife-dependent activities such as hunting, fishing, wildlife observation, photography, environmental education, and interpretation will be enhanced. Partnerships with county, state, and federal agencies, private landowners, and conservation groups will enable the refuge to achieve its goals and objectives, minimize costs, and bridge relationships with others. Archeological or cultural resources will not be adversely impacted. Future management actions will have a neutral or positive impact on the local economy. In addition, following the recommendations in the CCP will ensure that refuge management is consistent with the mandates of the National Wildlife Refuge System.

For the reasons presented above, and based on the review and evaluation of information contained in the CCP and EA, I have determined that the formal approval of refuge management goals, objectives, and strategies, as described in the CCP and Proposed Alternative of the EA (Alternative B), is not deemed a major federal action that would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969. Accordingly, the preparation of an Environmental Impact Statement on the proposed action is not required.



Regional Director, Region 2
U.S. Fish and Wildlife Service

9/5/02

Date

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Canada geese on Salt Plains NWR
Photograph by David Metscher

June 2006

