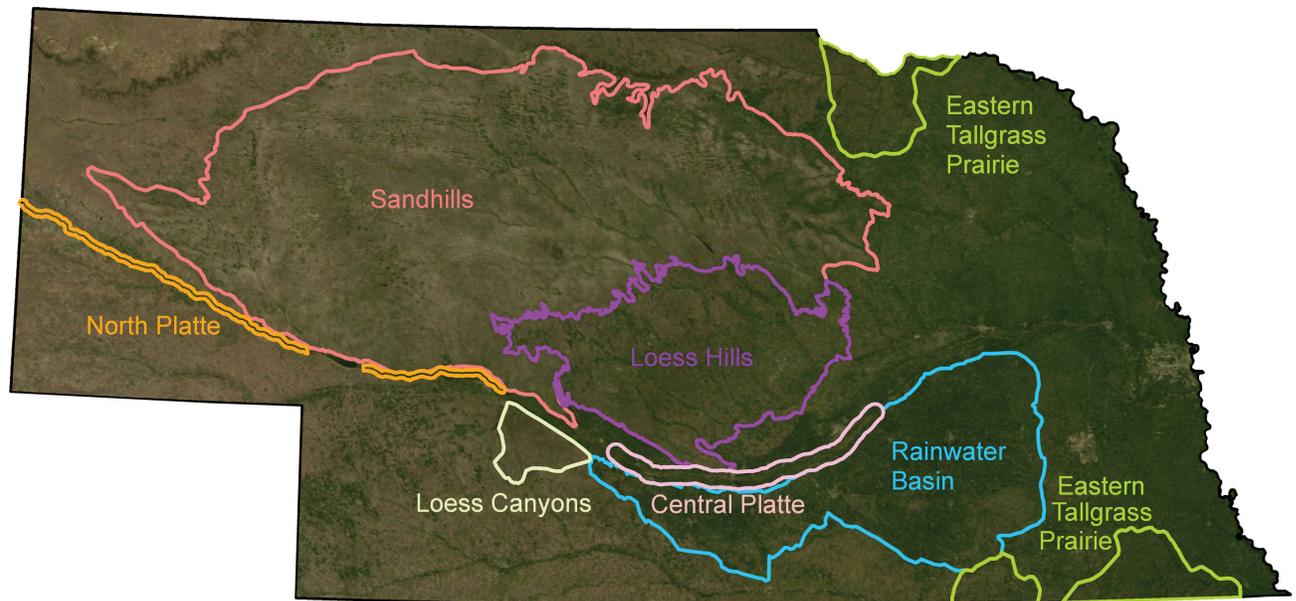


Nebraska



Nebraska Partners Program Conservation Focus Areas

Introduction and Overview

Nebraska is strategically located in the heart of the central Great Plains and the Central Flyway. Its landscapes, and thus its wildlife resources are highly diverse and very dynamic due to geographic location, hydrology, and other physical properties. Approximately 97% of Nebraska is in private ownership with over 48,000 farms and ranches covering nearly 46 million acres (93% of the total land area). A significant share of Nebraska's overall biological diversity occurs on private lands and the conservation of Nebraska's diverse flora and fauna is largely dependent upon private landowners. Through the NE PFW program, the Service works with its diverse group of dedicated partners to provide technical and

financial assistance to help farmers and ranchers realize their goal of making their land a better place for fish and wildlife while sustaining profitable farming and ranching.

The NE PFW program set lofty habitat goals for the Partners Program Strategic Plan for 2007-2011. Thanks to the numerous private landowners who voluntarily entered into landowner agreements to restore, enhance, and manage habitat on their land for Federal trust species (and our numerous conservation partners) the program was very successful and accomplished 291 new projects throughout Nebraska's conservation focus areas over the 5-year strategic plan period of performance (2007-2011). Nebraska's private landowners continue to be our most

important partner and none of the habitat projects could have been accomplished without their interest and desire to conserve and restore habitat on their lands.

The overall objectives of the NE PFW program are to work cooperatively with landowners and other partners throughout the state to restore and maintain habitat for Federal trust species. This is completed while maintaining biological diversity through the careful selection, design and implementation of restoration projects. PFW provides technical assistance to landowners and our partners involved in the implementation of key conservation programs. Our main emphasis for FY 2012-2016 will be to continue to develop successful partnerships to restore wetland, grassland,

riverine, and riparian habitat on private lands. The program will continue to work with private landowners and other partners to help prevent the need for further listing of species as Federally endangered or threatened.

The NE PFW program will continue to focus its delivery in ecosystems or watersheds where efforts will accomplish the greatest biological benefits per conservation dollar expended. We will also focus on restoring and maintaining the functionality of natural communities and ecological systems as a way to ameliorate potential effects of climate change. Projects will be prioritized, planned and designed to address current stressors (e.g., invasive species, habitat fragmentation, lack of fire, changes in hydrologic regimes) that will be most exacerbated by climate change. The NE PFW program will continue to work with our partners to provide high quality migration habitat for migratory birds (e.g., waterbirds, waterfowl, shorebirds, wading birds, listed species, grassland birds) and high quality prairie grassland habitat for grassland nesting birds and the numerous other species of plants and animals that depend on these systems for their survival.

To more successfully implement the program throughout Nebraska, we have revisited our existing conservation focus areas and have made adjustments for the FY 2012-2016 strategic plan. Changes to our conservation focus areas were made based on numerous criteria. These include habitat loss, future threats, analysis of habitat functions and values along with benefits to Federal trust species. Proximity to Service lands and other protected areas, available funding, staff, and partner goals were also evaluated.

GIS data layers and habitat/species modeling efforts were utilized to refine the focus areas and will be used to prioritize projects for target species/habitats. Primary data sources included the various GIS land coverages and species/habitat models developed by Rainwater Basin Joint Venture GIS Team and

the Nebraska Bird Partnership. In addition, habitat actions proposed for Nebraska's conservation focus areas are closely aligned with the goals of numerous existing national, regional, state and local conservation plans.

A high priority will continue to be given to projects located in four of our original focus areas that are recognized as being of international importance to wildlife. These include projects located within the Rainwater Basin area of south-central Nebraska, the Big Bend reach of the central Platte River, the Sandhills in north-central Nebraska, and the North Platte River valley. In addition, portions of the Eastern Tallgrass Prairie, Loess Canyons, and the Loess Hills/Loup River systems have also been identified as conservation focus areas. While the Missouri and Republican rivers are no longer identified as conservation focus areas, they will continue to be high-priority for PFW program staff in terms of providing technical assistance to other partners in their efforts to deliver conservation programs in those areas.

In November, 2005, the Service approved the Nebraska Natural Legacy Project which is Nebraska's Comprehensive Wildlife Action Plan. The original plan was developed with the collaboration of over 500 biologists/conservation practitioners, citizens and private landowners. A twenty-member partnership team that included representatives from major conservation, agricultural, and tribal organization guided the planning efforts. The Nebraska Natural Legacy Project represents Nebraska's comprehensive strategy to conserve at-risk and other wildlife species throughout Nebraska. The Natural Legacy Project identifies over 500 species of animals and plants that are considered at-risk. It lists key threats to those species, conservation actions needed to overcome threats and priority research and survey needs. Forty biologically unique landscapes were identified that provide the best opportunities to conserve the

majority of Nebraska's biological diversity.

A second edition (Schneider et. al 2011) of the plan was developed, which included some minor changes in the boundaries of existing biologically unique landscapes. During the 5-year review of the original plan, NE PFW program staff participated in the numerous conservation practitioner workshops, public input meetings, and partnership team meetings held during the spring and summer of 2010. The original plan and the draft second edition were used in this planning effort to assist in the identification of conservation focus areas. PFW conservation focus areas include all or portions of numerous biologically unique or important migratory bird landscapes identified in Nebraska's revised wildlife action plan.

Partner Coordination:

The priorities for the PFW program were developed in coordination with our diverse group of funding partners including the Nebraska Game and Parks Commission (NGPC), Rainwater Basin Joint Venture (RWB JV), Sandhills Task Force (STF), Platte River Whooping Crane Trust, Ducks Unlimited (DU), USDA Natural Resource Conservation Service (NRCS), The Nature Conservancy (TNC), Northern Prairie Land Trust, Rocky Mountain Bird Observatory (RMBO), Platte River Basin Environments (PRBE), National Audubon Society's Rowe Sanctuary, Pheasants Forever (PF), private landowners, and numerous other groups and organizations located throughout the state.

An overall priority of the NE PFW program is to continue to develop successful partnerships with private landowners and other agencies and organizations to improve habitat on private land throughout Nebraska. PFW also works in coordination with the National Wildlife Refuge System to implement conservation actions that compliment Service lands. In addition, we coordinated with other Service program staff including the Nebraska Ecological Services (ES)

Field Office and the RWBJV Office to ensure that restoration projects provide the greatest biological benefit for Federal trust species.

Input on general PFW program direction, conservation focus areas, priority focal species, and future strategies/activities was solicited from key partners during a stakeholders meeting held in Nebraska on April 28, 2011. The stakeholder meeting was well attended and included representation from 17 different groups and organizations. In addition, representatives from 4 different Service programs were present (Nebraska ES Field Office, Rainwater Basin Wetland Management District Office, RWBJV Office, and the PFW program). A stakeholder survey was provided to 45 stakeholders soliciting their input regarding the PFW program and the new 5-year strategic plan.

Rainwater Basin Focus Area



The Rainwater Basin wetland complex encompasses 6,150 square miles and occupies parts of 21 counties in south-central Nebraska. The area is characterized by flat to gently rolling loess plains with poor surface water drainage, resulting in closed watersheds that drain into low-lying wetlands. Precipitation from intense summer storms and runoff from winter

snowfall fill these playa wetlands providing critical important fall and spring habitat for migratory waterfowl. Recent GIS analysis of historic soil surveys, National Wetlands Inventory (NWI), and SSURGO data indicate that at the time of settlement, approximately 11,000 individual playa wetlands comprising 204,000 wetland acres existed across the Rainwater Basin landscape. Approximately 1,000 semi-permanent and seasonal wetlands totaled nearly 70,000 acres and over 10,000 temporary wetlands accounted for an additional 134,000 acres. It has been determined that less than 10 percent of these seasonal wetlands and 22 percent of the temporary wetland acres remained in 1982. A large percentage of the remaining wetlands have been impacted by hydrologic modifications within the footprint of the wetland and/or its watershed and from invasive plant species (e.g., reed canary grass, hybrid cattail, and river bulrush).

The Rainwater Basin Focus Area is identified as an important migratory bird landscape in Nebraska's revised Comprehensive Wildlife Action Plan. The Rainwater Basin is also identified in the North American Waterfowl Management Plan as a waterfowl habitat area of major concern in North America and is recognized as the focal point of the Central Flyway spring migration corridor. In 1991, the North American Waterfowl Management Plan Committee officially recognized the Rainwater Basin as the 8th area in the United States to receive official Joint Venture status. The overall goal of the RWBJV is to restore

and maintain sufficient wetland habitat in the Rainwater Basin to assist in meeting population objectives identified in the North American Waterfowl Management Plan (Gersib et al. 1992).

The Rainwater Basin is recognized as an internationally important spring staging area for waterfowl. The Central Flyway narrows at the Rainwater Basin as birds migrate north from their wintering grounds. Millions of ducks and geese stop annually in the basin to feed and roost during their spring migration. Approximately 90% of the mid-continent white-fronted goose population, 50% of the mid-continent population of mallards, and 30% of the continent's northern pintail population stop in the Rainwater Basin each spring. A major focus of the RWBJV is to annually provide wetland-derived forage in quantities sufficient to meet the nutritional needs (4.4 billion kilocalories) of the estimated 7 million ducks and 1.5 million geese that stop in the Rainwater Basin area during the spring migration.

In addition, approximately 300,000 shorebirds, comprising more than thirty species use the Rainwater Basin. These include the Baird's sandpiper, stilt sandpiper, lesser and greater yellowlegs, and some of the largest known concentrations of buff-breasted sandpiper. The Rainwater Basin also serves as important migration habitat for

Priority Species

- Greater white-fronted goose
- Hudsonian Godwit
- Mallard
- Dunlin
- Northern pintail
- American bittern
- Blue-winged teal
- Black tern
- Whooping crane (Endangered)
- Grasshopper sparrow
- Bald eagle
- Dickcissel
- Lesser yellowlegs
- Sprague's pipit
- Upland sandpiper



Waterfowl utilizing Rainwater Basin wetland. USFWS photo.

Rainwater Basin Focus Area Five-year Targets

- Wetlands Restored/Enhanced: 1,825 acres
- Uplands Restored/Enhanced: 250 acres
- Watershed Enhancements: 40 pit fills

Implementation strategy for habitat objectives: NE PFW program will continue to work cooperatively with private landowners and its diverse group of partners to restore, enhance, and manage wetland and upland habitat throughout the Rainwater Basin for the benefit of migratory waterbirds (waterfowl, wading birds, shorebirds) endangered species (e.g., whooping cranes), and grassland nesting birds. The current draft implementation plan for the RWBJV identifies a goal of restoring approximately 730 acres of wetland habitat each year through the use of short-term conservation programs (wetlands under 10-year conservation agreements). This goal will assist in meeting the nutritional requirements of the millions of ducks and geese that use the Rainwater Basin each spring. The NE PFW program wetland target will constitute 50 percent (365 acres/year) of the Joint Venture's short-term conservation program goals. For example, to assist in meeting the Joint Venture's goal of filling 75% of the pits affecting long-term conservation land, a target of eight watershed enhancement projects (pit fills) per year have been identified as a PFW goal. No upland goals have been established by the JV for short-term conservation programs, however, to provide some level of buffer for restored wetlands, 75 acres of upland habitat is targeted per year.

Specific habitat actions include: (a) restoring wetland hydrology (silt removal, filling pits, plugging drains, installing low-level berms and water control structures); (b) removing and controlling invasive species (e.g., reed canary grass, undesirable woody species, hybrid cattails); and (c) restoring and managing native grassland habitat (cropland conversion, reseeding, prescribed management).

Partnerships

- Number of new landowner partners: 50 landowners
- Amount of technical assistance: 300 staff days
- Percentage of leveraging: 70% or more of non-PFW program sources

Implementation strategy for partnership objectives: NE PFW program will continue to focus its efforts on maintaining existing successful partnerships and develop new partnerships to restore wetland and upland habitat throughout the Rainwater Basin. New partners will primarily be landowners who have an interest in restoring and maintaining wetland and upland habitat. PFW program will continue to provide a significant level of technical assistance to USDA NRCS in the delivery of the Wetlands Reserve Program (WRP) and Wildlife Habitat Incentives Program (WHIP) in the Rainwater Basin. Staff will also work closely with employees from the RWBJV, NGPC, DU, and other groups and organizations to assist in the delivery of habitat conservation programs. NE PFW program will continue to secure a high proportion of non-Partners Program funding sources for Rainwater Basin wetland and upland habitat restoration projects.

Rainwater Basin Habitat/Species Models and Decision Support Tools

Numerous habitat/species models and GIS land coverage databases have been developed for use in the Rainwater Basin. Below is a list of models/GIS land coverage databases, and other decision support tools that were used to help identify habitat targets for the Rainwater Basin Focus Area. These models along with other decision support tools will be used to prioritize habitat restoration projects for the target species.

- Rainwater Basin Wetland Complex Waterfowl Habitat Use Model
- Rainwater Basin Pit Fill Prioritization Model
- Whooping Crane Habitat Suitability Index Model for the Rainwater Basin
- Rainwater Basin Bio-Energetics Model
- Wetland Reserve Program Model

Related Plans

- Rainwater Basin Joint Venture Implementation Plan
- The Nebraska Natural Legacy Project
- North American Waterfowl Management Plan
- U.S. Shorebird Conservation Plan
- North American Waterbird Conservation Plan
- Partners in Flight – North American Landbird Conservation Plan
- Ducks Unlimited Nebraska Conservation Plan
- Conserving the Biological Diversity of the Central Mixed-Grass Prairie
- Platte/Kansas Rivers Ecosystem Plan
- Nebraska Wetlands Priority Plan

state and Federally listed species (e.g., whooping cranes), wading birds, and neotropical migratory birds. Rainwater Basin wetlands and adjacent upland areas also provide habitat to hundreds of species of plants, butterflies, reptiles, amphibians and mammals.

Primary partners in the Rainwater Basin Focus Area include the RWBJV, NGPC, DU, Natural Resource Districts, NET, USDA NRCS, and numerous private landowners located throughout the Rainwater Basin.

Central Platte River Focus Area



The Central Platte River Focus Area extends approximately 90 miles from Lexington to Chapman. The combination of broad open river channels, its shallow braided character, adjacent wet meadows, and abundant food supplies attract millions of migratory birds each

year. The Big Bend reach of the central Platte River provides important habitat for fish and wildlife resources of national and international significance. The Central Platte River Focus Area is identified as a biologically unique landscape in Nebraska's Comprehensive Wildlife Action Plan. This stretch is also the focus of the Platte River Recovery Implementation Program (PRRIP) which is a cooperative effort between the states of Nebraska, Colorado, Wyoming, and the Department of the Interior (DOI) to address water and habitat needs



Sandhill cranes in low light along the Platte River. USFWS photo.



Central Platte Riverine wetland restoration project located in Hall County, Nebraska. Photo by Shawn Harder of Harder Dozer and Scraper, contractor for project.

of four Federally threatened and endangered species.

The central Platte River provides critical migration habitat for the endangered whooping crane as well as spring staging habitat for 80% of the world's sandhill crane population. Its sandbars are breeding habitat for the threatened piping plover and endangered least tern. Millions of waterfowl utilize it for migration and wintering habitat. Over 300 bird species have been observed along the Platte River, and over 140 species are known to nest along the river. The central Platte River also provides a variety of habitat types (e.g., backwaters, sloughs, side channels) for a diverse fish community (e.g., western silvery minnow, plains topminnow, flathead chubs, and speckled chubs). The Platte River provides year-round habitat for numerous species of plants (e.g., western prairie fringed orchid), invertebrates (e.g., American burying beetle, regal fritillary butterfly), shellfish, amphibians, mammals (e.g., river otter), and reptiles (USFWS 2006).

The central Platte River is also considered to be one of the most endangered waterways in the United States. Open riverine channel and wet meadow grassland

habitats for Federally listed species (i.e., whooping cranes, interior least terns and piping plovers) shorebirds, waterfowl, and waterbirds have diminished over the decades. Native grassland nesting birds, and other native fish and wildlife species have declined substantially throughout the Platte River watershed during the last 100 years. The Platte River once consisted of riverine and palustrine wetlands located within the active floodplain and channels of the river. An increase in scrub-shrub and forested areas has occurred at the expense of active open riverine channel habitat, riverine wetland habitat (e.g., backwaters, sloughs, and side channels), and adjacent wet meadow/grassland habitat. A large percentage (i.e., 60 - 80 percent) of the open riverine/sandbar and 55 percent of the wet meadow habitat has been lost in the Big Bend reach of the central Platte River due to agricultural conversion, development, and hydrologic changes (Sidle et al 1989). Other threats include invasion of exotic species (e.g., phragmites, purple loosestrife, eastern red cedar, smooth brome, reed canary grass) gravel mining, and residential and commercial development.

The NE PFW program and its Platte River partners have actively worked on over 160 projects throughout this focus area to restore and maintain riverine habitat for the target species. Primary partners in the Central Platte River Focus Area include the Platte River Whooping Crane Trust, Audubon's Rowe Sanctuary, NGPC, DU, TNC, NET, Prairie Plains Resource Institute, National Fish and Wildlife Foundation (NFWF), and numerous private landowners located along the central Platte River.

Priority Species

- Greater white-fronted goose
- Northern pintail
- Sandhill crane
- Whooping crane (Endangered)
- Least tern (Endangered)
- Piping plover (Threatened)
- Bald eagle
- Lesser yellowlegs
- Upland sandpiper
- Grasshopper sparrow
- Henslow's sparrow
- Northern river otter
- Plains topminnow
- Western prairie fringed orchid (Threatened)

Central Platte River Focus Area Five-year Targets

- Riverine Roosting Habitat Restoration/Enhancement: 7.5 miles
- Riverine Slough and Backwater Habitat Restoration: 10 miles
- Upland Grassland Restoration/Enhancement: 1,250 acres
- Wetland/Wet Meadow Restoration/Enhancement: 1,250 acres

Implementation strategy for habitat objectives: The NE PFW program will continue to work with landowners along the central Platte River with key Platte River partners to restore, enhance, and manage the ecological functions and values of riverine/grassland habitat throughout this focus area. Specific habitat actions include: (a) restoring riverine backwater, wetland slough, and sandbar habitats; (b) clearing and controlling undesirable woody and other invasive vegetation from riverine and grassland habitats; (c) restoring and managing native wet meadow and grassland habitat by establishing diverse stands of native prairie plants; and (d) maintaining active riverine habitats by disking and mowing riverine channels, sandbars, and islands.

Partnerships

- Number of new landowner partners: 25 landowners
- Amount of technical assistance: 250 staff days
- Percentage of leveraging: 70% or more of non-PFW program sources

Implementation strategy for partnership objectives: The PFW program will focus its efforts on developing new partnerships to restore riverine habitat throughout the central Platte River. New partners will primarily be landowners who are interested in restoring and maintaining riverine habitats for Federal trust resources. Nebraska PFW staff will work closely with the Platte River Whooping Crane Trust, NGPC, DU, Audubon's Rowe Sanctuary, PRRIP, TNC, Prairie Plains Resource Institute, and other groups and organizations to assist in the restoration of riverine habitats in a strategic manner. PFW will also provide technical assistance to USDA's NRCS in the delivery of USDA conservation programs throughout the Platte River corridor. The program will work with its Platte River partners to secure a high proportion of non-Partners Program funding sources for central Platte River habitat restoration projects.

Central Platte River Habitat/Species Models and Decision Support Tools

Below is a list of both existing and future models/GIS land coverage databases, and other decision support tools that will be used to prioritize habitat restoration projects for the target species along the central Platte River.

- Cooperative Whooping Crane Tracking Project GIS
- Whooping Crane Habitat Suitability Index Models
- Wet Meadow/Grassland GIS Land Coverage Databases
- Invasive Species GIS Land Coverage Database
- Central Platte River GIS Vegetative Mapping Database
- Sandhill Crane Surveys and Distribution Maps
- Least Tern and Piping Plover Surveys

Related Plans

- The Nebraska Natural Legacy Project
- U.S. Shorebird Conservation Plan
- North American Waterbird Conservation Plan
- Partners in Flight – North American Landbird Conservation Plan
- Ducks Unlimited Nebraska Conservation Plan
- Conserving the Biological Diversity of the Central Mixed-Grass Prairie
- Habitat Management, Restoration, and Acquisition Plan for the Big Bend Reach of the Platte River in Central Nebraska
- Platte River Recovery Implementation Program
- Whooping Crane Recovery Plan
- Great Lakes and Northern Great Plains Piping Plover Recovery Plan
- Recovery Plan for the Interior Population of the Least Tern
- Western Prairie Fringed Orchid Recovery Plan
- Platte/Kansas Rivers Ecosystem Plan
- Nebraska Wetlands Priority Plan

Sandhills Focus Area



The Sandhills of Nebraska is a 19,600-square-mile sand dune formation covered by native grasses in north-central Nebraska. The Sandhills represents the largest contiguous tract of grassland remaining in the United States and the largest stabilized sand dune area in the Western Hemisphere. The hydrology associated with sand dunes has created a vast groundwater reservoir and 1.3 million acres of wetlands. This high wetland to grassland ratio (1:10 acres) provides excellent habitat for resident and migratory wildlife and the abundance of wetlands and grasslands makes the area important to both wildlife and ranching. Ranching is the primary economic use, with approximately 94% of the land in private ownership.

The Sandhills are identified in the North American Waterfowl Management Plan as a waterfowl habitat area of major concern in North America and are considered to be the best duck production

area south of the prairie pothole region. The Sandhills Focus Area encompasses numerous biologically unique landscapes (e.g., Cherry County Wetlands, Sandhills Alkaline Lakes, Dismal Headwaters, Elkhorn Headwaters, Upper Loup Rivers) identified in Nebraska's Comprehensive Wildlife Action Plan. In 1991, a sixteen member task force was formed, made up of local Sandhills ranchers and representatives from the Service, NGPC, TNC, USDA NRCS, Nebraska Cattlemen, and the North Central Resource Conservation and Development. The goal of the STF is to work cooperatively with state and federal conservation agencies, non-government organizations, and landowners to enhance the natural resources in the Sandhills by supporting wildlife and profitable ranching.

The Sandhills remain as one of the best examples of a functioning prairie landscape in the country. Approximately 700 native plant species have been documented, including several at-risk species such as blowout penstemon, marsh marigold, and bog bean. The area provides habitat for 55 species of mammals, 75 species of fish, and 27 species of amphibians and reptiles. Over 300 species of resident and migratory birds have been documented, including large

numbers of waterfowl, shorebirds, wading birds, and other wetland and grassland dependent species. The Sandhills are considered to be an important breeding site for many native nesting birds including: sharp-tailed grouse, greater prairie chicken, long-billed curlew, upland sandpiper, vesper sparrow, lark bunting, grasshopper sparrow, western meadowlark, American avocet, trumpeter swan, black tern, ferruginous hawk, and numerous species of ducks.

The NE PFW program and its Sandhills partners have worked with over 150 landowners throughout this focus area to restore and enhance wetland, riparian, stream, and native grassland habitats. Major partners in this focus area include the numerous ranchers, STF, NGPC, NET, USDA NRCS, Nebraska Cattlemen, Weed Management Areas, and TNC.



Trumpeter swans nesting in the Nebraska Sandhills Focus Area. Photo by Matt Filsinger, USFWS.

Sandhills Focus Area Five-Year Targets

- Stream/Riparian Habitat Restoration/Enhancement: 25 miles
- Upland Habitat Restoration/Enhancement: 50,000 acres
- Wetland/Wet Meadow Restoration/Enhancement: 5,000 acres

Implementation strategy for habitat objectives: The STF has been a key partner in the successful delivery of the PFW program throughout the focus area over the past 20 years. Program staff will continue to cooperatively work with the STF and its diverse group of partners to work with ranchers to restore and enhance wetland, riparian, stream, and native grassland habitat throughout this area. Specific habitat actions include developing and implementing grazing management plans and wetland, riparian, and stream restorations projects throughout high priority areas. These projects will be conducted to enhance the wetland-grassland ecosystem in a way that sustains both profitable private ranching and floral/faunal diversity.

Partnerships

- Number of new landowner partners: 40 landowners
- Amount of technical assistance: 250 staff days
- Percentage of leveraging: 70% or more of non-1121 (PFW program) sources

Implementation strategy for partnership objectives: NE PFW will focus its efforts on maintaining existing partnerships and developing new partnerships to enhance and restore wetland and grassland habitat throughout the area. New partners will primarily be ranchers and other private landowners who are interested in enhancing this unique ecosystem for both Federal trust resources and the local ranching community. Program staff will continue to work closely with the STF, NGPC, and other groups and organizations to assist in the restoration of wetland, upland, and stream habitats. In addition, the program will continue to provide technical assistance to USDA NRCS in the delivery of USDA conservation programs. Staff will work with partners to secure a high proportion of non-PFW program funding sources for habitat restoration and enhancement projects.

Sandhills Habitat/Species Models and Decision Support Tools

Below is a list of both existing and future models/GIS land coverage databases, and other decision support tools that will be used to prioritize habitat restoration projects for the target species throughout the Sandhills.

- Trumpeter Swan Landscape –Level Habitat Use Model for the Sandhills
- Prairie Grouse Habitat Use Models
- American Burying Beetle Habitat Use Model – Sandhills
- Long-Billed Curlew Habitat Suitability Model
- Cooperative Whooping Crane Tracking Project GIS
- Sandhills Wetland Complex Model
- Wet Meadow/Grassland GIS Land Coverage Databases
- Eastern Red Cedar GIS Land Coverage Database
- Nebraska Bird Partnership HABS Model/Databases

Related Plans

- Sandhills Management Plan
- Nebraska Natural Legacy Project
- North American Waterfowl Management Plan
- Ducks Unlimited Nebraska Conservation Plan
- Conserving the Biological Diversity of the Central Mixed-Grass Prairie
- U.S. Shorebird Conservation Plan
- North American Waterbird Conservation Plan
- Platte/Kansas Rivers Ecosystem Plan
- Partners in Flight – North American Landbird Conservation Plan
- Nebraska Wetlands Priority Plan

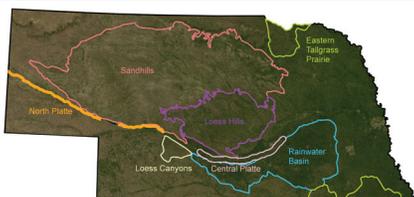
Priority Species

- Trumpeter swan
- Northern pintail
- Long-billed curlew
- Greater prairie-chicken
- American bittern
- American avocet
- Upland sandpiper
- Black tern
- Burrowing owl
- Grasshopper sparrow
- Whooping crane (Endangered)
- American burying beetle (Endangered)
- Western prairie fringed orchid (Threatened)
- Blowout penstemon (Endangered)



*Long-billed curlew in the Nebraska Sandhills Focus Area.
Photo by Matt Filsinger, USFWS.*

North Platte River Focus Area



The North Platte River and its associated wetlands contain important habitats for a diverse group of wildlife species. Wet meadows, freshwater and alkaline wetlands, river channels, backwater sloughs, oxbows, sandbars, and riverine islands provide important habitats for migrating, wintering, and breeding waterfowl, shorebirds, and waterbirds. It also supports grassland nesting birds, Federally threatened and endangered species, and numerous other wetland/riverine-dependent species. Over 225 migratory bird species have been documented using habitats found along the North Platte River valley including the Federally listed whooping crane, least tern, and piping plover. The focus area also provides habitat for 2 million ducks and 500,000 geese which utilize the North Platte River valley to rest and feed during their annual migration. North Platte River wetlands provide important migration habitat for shorebirds and the adjacent alkaline meadows support unique assemblages of

insects including tiger beetles, dragonflies, and butterflies. Riverine wetlands located throughout the valley also provide important habitat for numerous species of plants, amphibians, reptiles, and mammals including the state listed northern river otter.

The North Platte River Focus Area includes portions of two biologically unique landscapes (the North Platte River Wetlands and the Platte Confluence) as identified in Nebraska's Comprehensive Wildlife Action Plan. This focus area includes the North Platte River channel and the associated freshwater and alkaline wetland complexes within the river valley extending 180 miles from the Nebraska - Wyoming state line to North Platte, Nebraska. Habitat conditions along the North Platte River have degraded as a result of dams, diversions, altered hydrology, consumptive use, and the establishment of invasive species throughout the river corridor. River channels and adjacent riverine wetlands have narrowed and become heavily vegetated with undesirable woody and herbaceous vegetation (e.g., Russian olive, phragmites, reed canary grass, eastern red cedar).

The overall goal for this focus area is to continue to work with private landowners restoring and enhancing riverine habitat (uplands and wetlands) for Federal trust fish and wildlife resources along the North Platte River. The NE PFW program and its North Platte River partners have actively worked with approximately one hundred landowners in this area to restore and enhance riverine habitat for the target species. Primary partners include the numerous private landowners, NGPC, PRBE, DU, USDA NRCS, and the NET.

Priority Species

- Trumpeter swan
- Whooping crane (Endangered)
- Mallard
- Upland sandpiper
- Northern pintail
- Burrowing owl
- American bittern
- Grasshopper sparrow
- Bald eagle
- Northern river otter
- Sandhill crane
- Wilson's phalarope

North Platte River Focus Area Five-year Targets

- Riverine Slough and Backwater Habitat Restoration: 10 miles
- Riverine In-Channel Habitat Restoration/Enhancement: 15 miles
- Upland Restoration/Enhancement: 1,000 acres
- Wetland/Wet Meadow Restoration/Enhancement: 2,000 acres

Implementation strategy for habitat objectives: The PFW program will work with landowners and its North Platte River partners to restore and enhance riverine/grassland habitat throughout the area. Specific habitat actions include: (a) clearing Russian olive, eastern red cedar, phragmites, and other undesirable invasive woody and herbaceous vegetation from river channels, islands, and accretion land; (b) restoring backwater sloughs and other wetlands through excavation and installation of water control structures; and (c) restoring floodplain wet meadow/grasslands by clearing invasive vegetation, renovating wetlands, and developing grazing management systems (fencing, alternate sources of water, etc.) to re-establish and maintain diverse stands of native prairie plants.

Partnerships

- Number of new landowner partners: 35 landowners
- Amount of technical assistance: 250 staff days
- Percentage of leveraging: 70% or more of non-PFW program sources

Implementation strategy for partnership objectives: A primary emphasis of the program will be to ensure that existing successful partnerships are maintained and that new partnerships to restore riverine wetland and upland habitat throughout this focus area are formed. New partners will primarily be North Platte River landowners who are interested in restoring and maintaining riverine habitats for Federal trust fish and wildlife species. PFW program staff will continue to work closely with the NGPC, PRBE, DU, and other groups and organization to assist in the delivery of habitat projects on private lands throughout the North Platte River valley. PFW program will continue to provide a significant level of technical assistance to USDA NRCS in the delivery of WRP and WHIP in this focus area. The program will continue to secure a high proportion of non-PFW funding sources for North Platte riverine wetland and upland habitat restoration projects.

North Platte River Habitat/Species Models and Decision Support Tools

Below is a list of both existing and future models/GIS land coverage databases, and other decision support tools that will be used to prioritize habitat restoration projects for the target species throughout the North Platte River valley.

- Wet Meadow/Grassland GIS Land Coverage Databases
- North Platte River GIS Vegetative Mapping Database
- Trumpeter Swan Landscape –Level Habitat Use Model
- Prairie Grouse Habitat Use Models
- Eastern Red Cedar GIS Land Coverage Database
- Nebraska Bird Partnership HABS Model/Databases
- Cooperative Whooping Crane Tracking Project GIS
- Sandhill Crane Surveys and Distribution Maps
- Least Tern and Piping Plover Surveys



Northern river otters using habitat restoration project along the North Platte River. USFWS photo.



North Platte River post-restoration wetland adjacent to the main channel. USFWS photo.

Related Plans

- Nebraska Natural Legacy Project
- Ducks Unlimited Nebraska Conservation Plan
- Ecoregion-Based Conservation in the Central Shortgrass Prairie
- Partners in Flight – North American Landbird Conservation Plan
- Platte/Kansas Rivers Ecosystem Plan
- U.S. Shorebird Conservation Plan
- North American Waterbird Conservation Plan
- Nebraska Wetlands Priority Plan

Loess Canyons Focus Area



The Loess Canyons Focus Area is located in the mixed-grass prairie ecosystem of Nebraska and is identified as a high-priority biologically unique landscape in Nebraska’s Comprehensive Wildlife Action Plan. The Loess Canyons occur along the south side of the Platte River in Lincoln, Dawson, and Frontier counties and consist of rolling to steep loess grass covered hills and canyons. The Loess Canyons grasslands have been heavily invaded by eastern red cedar and exotic cool-season

grasses. It has been estimated that 36 percent of the Loess Canyons landscape has been invaded by eastern red cedars in a relatively short period of time and continues to increase at a rate of greater than two percent annually. At this rate a large percentage of the region’s mixed grass prairie will be invaded in the very near future.

The Loess Canyon prairie landscape provides important habitat for hundreds of species of plants, state and Federally listed species, grassland nesting birds, insects, reptiles, amphibians and mammals. The Loess Canyons contain one of the largest known populations of the Federally endangered American burying beetle.

The NE PFW program and its Loess Canyon partners have actively worked with approximately 40 landowners throughout this focus area under the previous strategic plan. During FY 2012-2016, the PFW program will continue to cooperate with our partners to work with additional Loess Canyon landowners to restore and maintain grassland habitat for Federal trust wildlife resources. Potential partners in the Loess Canyons include the numerous private landowners located throughout the Loess Canyons, NGPC, PF and Quail Forever, USDA NRCS, NET, Rocky Mountain Elk Foundation (RMEF), and the National Wild Turkey Federation (NWTf).



Habitat restoration through removal of invasive eastern red cedar. The fallen trees are tightly stacked against standing cedars to increase burn temperatures during management fires. USFWS photo.

Priority Species

- Greater prairie-chicken
- Swainson's hawk
- Upland sandpiper
- Burrowing owl
- Bell's vireo
- Grasshopper sparrow
- American burying beetle (Endangered)



American Burying Beetle with tag. USFWS photo.

Loess Canyons Five-year Targets

- Upland Restoration/Enhancement: 10,000 acres

Implementation strategy for habitat objectives: The NE PFW program will continue to work with its Loess Canyon partners to control invasive species, improve grassland conditions, and to promote biodiversity by restoring and enhancing important habitats throughout this area. Specific habitat actions include: (a) clearing eastern red cedar and other undesirable invasive vegetation from grassland habitats; (b) implementing planned grazing systems to reduce exotic cool-season grasses and improve native plant diversity and vigor; and (c) maintaining restored areas through the use of prescribed management.

Partnerships

- Number of new landowner partners: 25 landowners
- Amount of technical assistance: 125 staff days
- Percentage of leveraging: 70% or more of non-PFW program sources

Implementation strategy for partnership objectives: NE PFW program staff will continue to work with its partners to develop and implement habitat restoration projects on private lands throughout this area. New partners will primarily be landowners who value grassland habitats. Along with financial assistance, the program will provide technical assistance to our conservation partners in their efforts to deliver habitat projects throughout this focus area. A primary emphasis will be placed on assisting private landowners with removing invasive species and restoring grassland habitats for Federal trust species. A high proportion of non-PFW program funding sources will be secured for habitat restoration projects throughout the Loess Canyons.

Loess Canyons Habitat/Species Models and Decision Support Tools

Below is a list of both existing and future models/GIS land coverage databases, and other decision support tools that will be used to prioritize habitat restoration projects for the target species throughout the Loess Canyons.

- Loess Canyon GIS Vegetative Mapping Database
- Prairie Grouse Habitat Use Models
- Eastern Red Cedar GIS Land Coverage Database
- Nebraska Bird Partnership HABS Model/Databases
- American Burying Beetle Habitat Use Model – Loess Canyons

Related Plans

- Nebraska Natural Legacy Project
- Conserving the Biological Diversity of the Central Mixed-Grass Prairie
- Partners in Flight – North American Landbird Conservation Plan
- Terrestrial Natural Communities of Nebraska
- The Recovery Plan for the American Burying Beetle



The Loess Prairie is being invaded by eastern red cedar trees. The Nebraska PFW program works with private landowners to control the cedar trees, as well as other invasive species. USFWS photo.

Central Loess Hills and Loup River Systems Focus Area



The Central Loess Hills and Loup River Systems Focus Area is located in the mixed-grass prairie ecoregion of Nebraska. It includes two new habitat sub-areas (the Central Table Playas and the Lower Loup rivers) as priorities for FY 2012-2016. This NE PFW focus area includes two high-priority biologically unique landscapes identified in Nebraska's Comprehensive Wildlife Action Plan (i.e., the Central Loess Hills and the Lower Loup Rivers).

The Central Loess Hills consist of rolling to steep loess hills dissected by the valleys of the Loup Rivers. Portions of the Central Loess Hills have been heavily invaded by eastern red cedar and exotic cool-season grasses. The Central Loess Hills landscape provides important habitat for hundreds of species of plants, state and Federally listed species, grassland nesting birds,

migratory waterbirds, insects, reptiles, amphibians and mammals. Playa wetlands are scattered throughout the flat tablelands of the Central Loess Hills and are used by whooping cranes and numerous species of waterbirds during migration. The Central Table Playa wetland complex includes a series of shallow playa wetlands located in portions of Custer, Dawson, Lincoln, and Logan counties.

The Lower Loup River System includes the lower reaches of the Middle Loup, North Loup, South Loup, and Loup rivers. The Loup rivers originate from springs and maintain a fairly constant year-round flow. The Loup River system contains important habitats for a diverse group of wildlife species. Wet meadows, palustrine/riverine wetlands, river channels, backwater sloughs, oxbows, and sandbars provide important habitats for migrating, wintering, and breeding waterbirds; grassland nesting birds; Federal and state threatened and endangered species (e.g., whooping cranes, least terns, piping plovers, western prairie fringed orchids, white lady's slipper); and numerous other wetland/riverine-dependent species. Riverine wetlands located throughout the valleys also provide important habitat for numerous

species of other plants, amphibians, reptiles, and mammals including the state listed northern river otter.

The overall goal for this focus area is to work with private landowners to restore and enhance grassland and wetland habitats for Federal trust fish and wildlife species found throughout the Loess Hills, Central Table Playas, and the Lower Loup rivers. Primary partners in the Central Loess Hills and Loup River Systems focus area include numerous private landowners, NGPC, PF and Quail Forever, DU, USDA NRCS, NWTf, RWBJV and the NET.

Central Loess Hills and Loup River Systems Focus Area Five-year Targets

- Upland Grassland Restoration/Enhancement: 5,000 acres
- Wetland/Wet Meadow Restoration/Enhancement: 750 acres
- Riverine Habitat Restoration (sloughs and backwaters): 5 miles
- Riverine Roosting Habitat Restoration/Enhancement: 5 miles

Implementation strategy for habitat objectives: The NE PFW program will work with its partners to control invasive species, improve grassland conditions, and to promote biodiversity by restoring and enhancing important habitats throughout this area. Specific habitat actions include: (a) clearing eastern red cedar and other undesirable invasive vegetation from grassland habitats; (b) implementing planned grazing systems to reduce exotic cool-season grasses and improve native plant diversity and vigor; and (c) restoring hydrology to playa and riverine wetlands.

Partnerships

- Number of new landowner partners: 25 landowners
- Amount of technical assistance: 125 staff days
- Percentage of leveraging: 70% or more of non-PFW program sources

Implementation strategy for partnership objectives: NE PFW program staff will continue to work with its partners to develop and implement habitat restoration projects on private lands throughout this area. New partners will primarily be landowners who value grassland, wetland, and riparian habitats. Along with financial assistance, the PFW program will provide technical assistance to our other conservation partners in their efforts to deliver habitat projects throughout this focus area. A primary emphasis will be placed on assisting private landowners with removing invasive species and restoring grassland, wetland, and riverine habitats. A high proportion of non-PFW program funding sources will be secured for Central Loess Hills and Loup River Systems focus area habitat restoration projects.

Central Loess Hills Loup River Systems Habitat/Species Models and Decision Support Tools

Below is a list of both existing and future models/GIS land coverage databases, and other decision support tools that will be used to prioritize habitat restoration projects for the target species throughout the Loess Hills and Loup River Systems focus area.

- Prairie Grouse Habitat Use Models
- Whooping Crane Habitat Use Models
- Cooperative Whooping Crane Tracking Project GIS
- Central Table Playas Wetland/Waterfowl Model
- Wet Meadow/Grassland GIS Land Coverage Databases
- Eastern Red Cedar GIS Land Coverage Database
- Nebraska Bird Partnership HABS Model/Databases

Related Plans

- Nebraska Natural Legacy Project
- Conserving the Biological Diversity of the Central Mixed-Grass Prairie
- Partners in Flight – North American Landbird Conservation Plan
- Terrestrial Natural Communities of Nebraska
- Ducks Unlimited Nebraska Conservation Plan



Nebraska PFW riverine wetland slough restoration and invasive species removal project located along the Loup River. USFWS photo.

Nebraska Eastern Tallgrass Prairie Focus Area



The Eastern Tallgrass Prairie Focus Area includes three high priority biologically unique

landscapes identified in Nebraska's Comprehensive Wildlife Action Plan. This area includes the Sandstone Prairies, Southeast Prairies, and the Verdigre-Bazile Creek Watershed, all located in the Tallgrass prairie ecoregion of Nebraska. The Sandstone Prairies and Southeast Prairies include the bluffs and breaks along the Little Blue River and Rose Creek in Jefferson and Thayer counties and the rolling hills of portions

of Richardson, Pawnee, Johnson, and Gage counties. The Verdigre-Bazile Creek Watershed includes the watershed of the Verdigris and Bazile creeks in Cedar, Knox, Holt, and Antelope counties. The northern portion of this focus area also includes the Missouri River and its associated habitats. In addition, it has been expanded to include the land that lies within the confluence of the Verdigre-Bazile, Lower Niobrara, and Missouri Rivers and

now includes a portion of eastern Boyd County.

Primary partners in the Eastern Tallgrass Prairie Focus Area include the NGPC, Northern Prairies Land Trust, Northeast Nebraska Resource Conservation and Development, NET, USDA NRCS, PF, Audubon Nebraska, TNC, Natural Resource Districts, Santee Sioux Tribe of Nebraska, Missouri River Futures, and numerous private landowners.

Priority Species

- Wood duck
- Mallard
- Greater prairie-chicken
- Upland sandpiper
- Grasshopper sparrow
- Henslow’s sparrow
- Massasauga rattlesnake
- Regal fritillary butterfly
- Western prairie fringed orchid (Threatened)
- Bald eagle
- Plains topminnow

Eastern Tallgrass Prairie Five-year Targets

- Upland Grassland Restoration/Enhancement: 12,500 acres
- Wetland/Wet Meadow Restoration/Enhancement: 500 acres

Implementation strategy for habitat objectives: The NE PFW program will continue to work with its partners to control invasive species, restore and improve native grassland conditions, and to promote biodiversity by restoring and enhancing important habitats. Additional opportunities may arise to work with our partners to restore riverine wetlands and wet meadow habitats along the confluence area of the lower Niobrara and Missouri Rivers. Specific habitat actions include: (a) removing invasive species (e.g., eastern red cedar, smooth brome, Kentucky bluegrass); (b) facilitating landscape scale increases in heterogeneity by implementing innovative management strategies made possible by the removal of trees; (c) improve habitat conditions on large tracts of intact grassland by reducing fragmentation; (d) demonstrating sustainable management of grasslands and associated native woodlands; (e) restoring native plant communities by improving native plant diversity and vigor; and (f) restoring riverine backwater, wetland slough, and other riverine (e.g., river channels, sandbars, islands, riparian) and palustrine wetland habitats.

Partnerships

- Number of new landowner partners: 35 landowners
- Amount of technical assistance: 125 staff days
- Percentage of leveraging: 70% or more of non-PFW program sources

Implementation strategy for partnership objectives: PFW staff will work with its partners to develop and implement habitat restoration projects on private lands throughout this focus area. New partners will primarily be landowners located throughout the landscape who are interested in restoring and maintaining native grassland habitats for Federal trust fish and wildlife species. Along with financial assistance, PFW will also provide technical assistance for habitat projects. Emphasis will be placed on assisting private landowners with removing invasive species and restoring grassland and wetland habitats. A high proportion of non-PFW program funding sources will be secured for habitat restoration projects throughout this focus area.

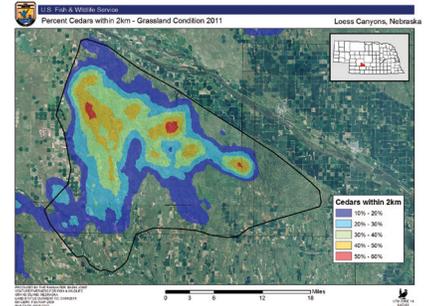
Eastern Tallgrass Prairie Habitat/Species Models and Decision Support Tools

Below is a list of both existing and future models/GIS land coverage databases, and other decision support tools that will be used to prioritize habitat restoration projects for the target species throughout the Eastern Tallgrass Prairie focus area.

- Greater Prairie-Chicken Habitat Use Models
- Grassland/Wet Meadow GIS Land Coverage Databases
- Eastern Red Cedar GIS Land Coverage Database
- Invasive Species GIS Land Coverage Database
- Massasauga Habitat Use Data
- Nebraska Bird Partnership HABS Model/Databases



Nebraska PFW program habitat restoration project overlooking the Niobrara River Valley just upstream of the confluence with the Missouri River. Project involved mechanical cutting eastern red cedars. USFWS photo.



Example of planning map to assist NE PFW with targeted delivery. USFWS photo.

Related Plans

- Nebraska Natural Legacy Project
- Partners in Flight – North American Landbird Conservation Plan
- Terrestrial Natural Communities of Nebraska
- Conserving the Biological Diversity of the Central Mixed-Grass Prairie
- Conservation in a Highly Fragmented Landscape: the Central Tallgrass Prairie Ecoregional Conservation Plan



Planning meeting with NE PFW staff and partners. USFWS photo.

Nebraska Statewide Goals



Improve Information Sharing and Communication

Effective internal and external communication and collaboration continues to be critical to the success of the PFW program in Nebraska. An overarching objective of the program is to maintain and enhance communication and collaboration with our diverse group of internal and external partners. Information sharing and communication is an essential part of conservation and Nebraska PFW program staff will continue to make efforts to increase awareness of the program and the Service's mission, while informing the public on the importance of conserving species and habitats on private lands.

Five-year Targets

- Actively participate in 50 landowner/watershed meetings, site visits, conferences and/or workshops.
- Make 25 presentations at local, state, and national meetings, conferences, and workshops.
- Conduct 75 field tours and site visits to habitat restoration projects throughout the state to exchange information regarding restoration techniques and funding opportunities.
- Participate in five congressional staff meetings regarding the Nebraska PFW program.
- Actively participate in the USDA NRCS technical committee, USDA conservation program sub-committees, and WRP Bio-Engineering Teams.
- Continue to coordinate with the NGPC to deliver habitat restoration projects on private lands throughout our conservation focus areas.
- Collaborate and coordinate with the Nebraska ES Field Office, Refuge offices located throughout Nebraska, Desoto NWR, and the RWBJV Office.
- Continue to improve communications with our partners by maintaining a strong presence in a wide variety of work groups and committees and participate with numerous Nebraska stakeholders in the development of strategic landscape planning efforts throughout Nebraska.
- Conduct 5 school field trips or outdoor educational activities in support of the Director's priority to re-connect America's youth to the outdoors.

Enhance Our Workforce

The NE PFW program fully funds five full-time private lands positions (including the state coordinator). PFW program biologists are extremely dedicated to working with private landowners and our partners to restore Federal trust resources on private lands. In order to maintain a high level of professionalism and to better accomplish the Service's goal of conserving fish, wildlife, plants and their habitats, NE PFW staff will continue to participate in numerous training opportunities (e.g., formal training, workshops, seminars, conferences). This will lead to improved program operations (habitat restoration techniques, GIS, partnership development), and to improve career opportunities (research, evaluation, communication, policy). In addition, PFW program staff will have an opportunity to spend time working with other staff biologists outside of their primary areas of responsibility to share ideas, methods, and build support. This will allow a better understanding about what is occurring in other parts of the state, region, and country. Our efforts to successfully meet targets is largely dependent on our ability to maintain a highly effective workforce and to provide both financial (dirtwork funds) and technical support (staffing) to our partners throughout our conservation focus areas.

Increase Accountability

- Ensure that NE PFW program staff has the opportunity to acquire a minimum of 40 hours of training a year.
- Maintain a highly-skilled and motivated staff.
- Maintain close coordination, at least biweekly, among the NE PFW state coordinator and PFW field staff.
- In accordance with the Service's Employee Performance Appraisal System, performance and special achievement awards will be used to recognize exceptional projects and achievements.

Increase Accountability

The NE PFW program state coordinator will continue to serve as Project Officer and fiduciary for all PFW program funds. These include cooperative agreements, grants and other funding agreements. The state coordinator will also continue to work closely with the Nebraska Field Office's Administrative Officer, Regional Office staff, and Nebraska PFW program staff, to ensure that all appropriate procedures and guidelines are followed and necessary paperwork is completed for projects.

To ensure habitat restoration projects provide the greatest biological benefit for Federal trust species, NE PFW personnel will use habitat/species models, GIS land cover databases, and other decision support tools provided by the RWBJV and the Nebraska Bird Partnership offices to help guide delivery of future conservation practices to benefit species of conservation concern throughout NE PFW focus areas.

Five-year Targets

- The NE PFW program will work with the RWBJV GIS Team and other partners to:
- Develop GIS coverage and associated databases for NE PFW focus areas.
- Develop and field test habitat/species models that will assist in more strategically targeted PFW program conservation efforts.
- The PFW program state coordinator will ensure that all new projects are accurately entered into HabITS by the established due date for each FY.
- NE PFW staff will continue to provide the state coordinator with accurate information regarding technical assistance efforts throughout their areas of responsibility for inclusion into HabITS.
- Program field staff will be equipped with digital cameras to increase the number of before, during, and after construction photos for projects. The goal is to increase the number of projects that are entered into HabITS with associated photos.

External Factors

External factors may influence the NE PFW program's ability to meet our 5-year targets. The single largest factor is the ability of our staff to maintain strong and lucrative partnerships, throughout the state, in the face of difficult economic times.

In addition, NE PFW program focus areas include both relatively intact landscapes with ranching as the primary land use, and highly modified landscapes that are primarily in row crop production. The economic and social pressures associated with a rapidly changing agricultural economy could have a significant impact on the program's ability to deliver effectively. Additional external factors that could potentially influence program efforts include the accelerated rate of occurrence of invasive species and the placement and location of utility-scale wind turbines, oil pipelines, and associated infrastructure. Others include, potential changes to ecological processes associated with climate change and environmental factors such as flooding or prolonged drought.

