



Kansas Partners Program Conservation Focus Areas

Introduction and Overview

Kansas is known as the "Prairie State." Often, people will drive through and have the perception of miles and miles of nothing, not even a tree. The lack of trees, cities, and crop fields, or rather, the presence of vast intact grasslands is exactly what makes Kansas unique. This feature provides an extraordinary view of the past and what the landscape can continue to look like in the future. The fact that someone can drive and see only miles and miles of unaltered terrain is beautiful to many. A landscape void of trees, forms the unique character of the prairie and hosts a vast amount of native wildlife.

Certain areas of Kansas represent the last stronghold of Tallgrass prairie on the continent. Many of these areas are so large they are

visible on global satellite images. It is within this prairie landscape, where PFW program is needed. With 97% of the state in private ownership (Kansas Department of Wildlife and Parks 2008), there are ample opportunities for the PFW program to assist ranchers and farmers with voluntary fish and wildlife habitat restoration projects. Over time, invasive species, fragmentation, and poor land management have led to degradation and loss of prairie habitats, contributing to the decline of numerous Federal trust species. Through educational efforts and the application of appropriate land management strategies, the remaining 17 million acres of native vegetation can provide much needed habitat for these resources. Some of the facts and information used to describe Kansas land areas were inspired by passages from

"Natural Kansas" edited by Joseph T Collins, University Press of Kansas.

Focus Area Selection

Through continued communication with our conservation partners we established four focus areas for the KS PFW program. The Southwest Kansas Prairies and Playas, North Central Prairies, Flint Hills, and Central Wetlands and Prairies prioritize our conservation efforts. Using Geographic Information Systems (GIS) technologies, we incorporated datasets created by conservation partners that included; species habitat models, strategic plans, satellite imagery, and statewide landuse/landcover data to create our focus areas.



Kansas Native Prairie. USFWS Photo.



The Southwest Prairies and Playas Focus Area is a complex and diverse landscape composed of mixed-grass, shortgrass, sand prairie and sage-steppe that extend throughout western and south central Kansas. Portions of this focus area are also home to the highest densities of playa lakes in the state. Physiographic regions within this focus area include the Red Hills, the Smoky Hills, the Arkansas River Lowlands and the High Plains of Kansas. Each of these regions is defined by unique soil characteristics, topography and plant communities. The Red Hills and Smoky Hills comprise the mixed-grass portion of this focus area. The red-colored Permian soil of the Red Hills with its many buttes and mesas supports Kansas' second largest intact tract of native prairie (second only to the Flint Hills). The Smoky Hills, so named for their dark shales that produce a "smoky" heat haze when viewed by settlers approaching from the east, comprises rolling to nearly level Tallgrass and mixed grass prairie.



Red Hils are an area dominated by mixed-grass and sand-sage prairie within the Southwest Kansas Prairies and Playas Focus Area. Photo by Greg Kramos, USFWS.



Eastern red cedar is a major threat to Kansas prairies and is controlled through mechanical removal and periodic fire. Photo by Tony Ifland, USFWS.

Within this focus area the Smoky Hills can be considered a transition zone between the Tallgrass and shortgrass prairies. Just south of the Smoky Hills lie the Arkansas River Lowlands. This area includes sand and sandsage prairies composed of sandy soils supporting grassland covered (and at times exposed) sand dunes. Finally, the short-grass prairie portion of this area includes the High Plains region. To some, this area seems a bleak and featureless expanse. Early settlers stated "You can see so far...it hurts". The High Plains are more functionally dynamic than a cursory view can assess. The geology of the High Plains paints a picture of river borne sands and gravels, windblown silts, volcanic ash beds and diatomite deposits. The diversity of the Southwest Kansas Prairies and Playas Focus Area topography, geology and plant communities supports a multitude of Federal trust species. From waterfowl and shorebirds using its plava lakes, to lesser prairiechickens inhabiting its grasslands, the wildlife species that occur in this area can be as diverse as the landscape, making this a high priority for conservation.

Threats of fragmentation and invasive species are major concerns. Two of the key priorities for the program in this focus area are controlling invasive trees such as Eastern red cedar and promoting proper prairie management. This will be done in cooperation with several partners and through organized grazing groups such as the Comanche Pool Prairie **Resource Foundation** (Comanche Pool). The Comanche Pool is a producer driven interest group that promotes proper grassland management throughout the Red Hills. Ranching is one of the major land-use patterns in this focus area and ranchers have been receptive to conservation strategies that also incorporate their overall objectives. The lesser prairie-chicken, who's numbers have dropped by over 90% since the 1800's, is just one of the species the PFW program is working to conserve in the area.

Across western Kansas, depressions that formed years ago, store precious water from seasonal rains and provide a temporary oasis to wildlife on the semi-arid landscape. When flooded, these depressions, called playas, attract ducks, geese, shorebirds, and waterbird species such as mallards,

Canada geese, greater yellowlegs, long-billed dowitchers, whooping cranes and sandhill cranes. Playas provide important migratory stopovers for these birds to rest and refuel, some traveling thousands of miles between breeding grounds and wintering sites. Precipitation is inconsistent in the playa region and drought is a common occurrence. Playa lakes may be the most important wetland habitat type for birds in the region. The KS PFW program is working with producers to increase awareness of the value playas hold and assists landowners in establishing a wetland buffer to help maintain these sites.

From the waterways of the Arkansas, Cimmaron and Smoky Hill rivers to the spring-fed streams that dissect the Red Hills. the Southwest Kansas Prairies and Playas Focus Area is home to many aquatic and riparian species. Through proper prairie management PFW program staff and their conservation partners have already detected increased flows and better riparian habitat conditions due to the installation of proper grazing systems, fire return intervals and invasive woody species removal.



The Southwest Kansas Prairies and Playas focus area contains some of the best habitat for lesser prairie-chickens, such as this male performing on a lek. Photo by Greg Kramos, USFWS.

Priority species

- Lesser prairie-chicken
- Ferruginous hawk
- Grasshopper sparrow
- Loggerhead shrike
- Cassin's sparrow
- Western burrowing owl
- Northern pintail
- Long-billed curlew
- American bittern
- Upland sandpiper
- American avocet
- Whooping crane
- Texas horned lizardArkansas shiner
- (Threatened) • Arkansas darter
- (Candidate)

Southwest Kansas Prairies and Playas Focus Area Five Year Targets

Upland Restoration/Enhancement Wetland Restoration/Enhancement River Miles

15,000 acres 40 acres 2 miles

Partnerships

Landowners Technical Assistance 40 125/days

The primary objective for KS PFW in the Southwest Kansas Prairies and Playas focus area is to coordinate with USDA, KDWPT, TNC, and other conservation partners to enhance/restore native habitat on large tracts of land in order to provide adequate habitat for Federal trust species. This collaboration enables KS PFW program to work with organized producers such as the Comanche Pool Resource Foundation on large tracts of land owned by several landowners involved with many different programs, all with common goals.

Cost-share

3% (KDWP) 34% FWS Funds 58% Landowners and In-Kind 5% Other Partners

Implementation strategy: Both upland and wetland objectives will be met by conducting technical assistance and on-the-ground conservation efforts on private land within this focus area. Many stream and wetland areas are in need of enhancement and/or restoration and will be a primary target for the KS PFW program. One of the top conservation practices promoted by the program is prescribed fire. Through the organization of burn associations our cooperators can share information, equipment, and techniques with others in the conservation community to better facilitate the enhancement/ management of our native prairies. The KS PFW program will deliver information concerning how to get involved with these conservation efforts through landowner workshops, other organizations, such as the Comanche Pool, and the communication of participating landowners.

North Central Prairies Focus Area



The North Central Kansas Prairies focus area is considered a transition zone between the Tallgrass and shortgrass prairies within the state. The Tallgrass on the eastern edge, mixed-grass in the middle and short-grass to the west. The Smoky Hills is the primary physiographic region within this focus area. Many theories exist that attempt to explain where the Smoky Hills got their name. One historian suggests they were named for their dark shales that produce a "smoky" heat haze observed by settlers as they approached from the east. Other tales include a vast grove of cottonwoods along the Smoky Hill river that when seen from afar looked like clouds or "smoke" in the distance. This region also contains abundant outcrops of sandstone and limestone. The sandstone and limestone rock, as well as lack of rainfall, helped to keep much of this area in prairie. This landscape still contains some large tracts of high quality Tallgrass and mixed-grass prairie that are used



Greater prairie-chickens, such as these males competing on a lek, can be found in mixed and Tallgrass prairies in Kansas. Photo by Greg Kramos, USFWS.

primarily for grazing. These native prairie pastures provide important seasonal habitat for migrating birds such as the Baird's sparrow. They also provide crucial nesting and brood rearing habitat for grassland nesting birds such as the upland sandpiper, grasshopper sparrow and the greater prairie-chicken. Portions of this area contain some of the highest densities of greater prairie-chickens in the state.

Threats of fragmentation and invasive species are a major concern. Proper grazing management systems and fire return intervals are two major conservation priorities in this area. The program has been successful in delivering these priorities due to increased cooperation with several partners, especially organized grazing groups such as the Smoky Hills Grazers. It is a producer driven interest group that promotes proper grassland management throughout the region. Ranching is one of the major land-use patterns in this focus area and ranchers have been receptive to conservation strategies that also incorporate their overall objectives.

Historically, the Smoky Hill, Saline and Solomon Rivers along with their associated tributaries provided in-stream and riparian habitat to multiple Federal trust species within this focus area. As demonstrated in other parts of Kansas, proper prairie management



This landscape photo is indicative of the Smoky Hills also known as "post rock" country due to the use of limestone fence posts used by early settlers. Photo by Tony Ifland, USFWS.

through the installation of grazing systems, appropriate fire return intervals and invasive woody species removal can provide secondary benefits to riverine habitats via increased flows and overall conditioning. The endangered Topeka shiner once occurred within many reaches of these rivers and is a priority species for this focus area.

Priority Species

- Upland sandpiper
- Ferruginous hawk
- Black tern
- American avocet
- Loggerhead shrike
- Western burrowing owl
- Bobolink
- Rusty blackbird

- Northern harrier
- Greater prairie-chicken
- Topeka shiner (Endangered)
- Grasshopper sparrow
- Bell's vireo
- Short-eared owl

North Central Kansas Prairies Focus Area Five Year Targets

15,000 acres 80 acres 3

Upland Restoration/Enhancement	
Wetland Restoration/Enhancement	
River Miles	

Partnerships

Landowners Technical Assistance 40 75/days

The primary objective for Kansas PFW in the North Central Kansas Prairies focus area is to coordinate with USDA, KDWPT, TNC and other conservation partners to enhance/restore native habitat on large tracts of land in order to provide adequate habitat for Federal Trust Species. This collaboration enables Kansas PFW program to work with organized producers such as the Smoky Hills Grazers on large tracts of land owned by several landowners involved with many different programs, all with common goals.

Cost-share 40% FWS Fund 40% Landowner 20% Other Partners (NGO, KDWPT)

Implementation strategy: Both upland and wetland objectives will be met by conducting technical assistance and on-the-ground conservation efforts on private land within this focus area. Many stream and wetland areas are in need of enhancement and/or restoration and will be a primary target for the program. One of the top conservation practices promoted by PFW is prescribed fire. Through the organization of burn associations our cooperators can share information, equipment and techniques with others in the conservation community to better facilitate the enhancement/management of our native prairies. The KS PFW program will deliver information concerning how to get involved with these conservation efforts through landowner workshops, other organizations such as the Smoky Hills Grazers and the communication of participating landowners.

Flint Hills Focus Area



The Tallgrass prairie is the most altered ecological community in North America. Of the 142 million acres that once covered the American heartland, less than 3% remain. The greater Flint Hills area of Kansas is by far the largest Tallgrass prairie landscape on the continent, with more acres remaining in Kansas than in all the other prairie states and provinces combined. The shallow soils and rough terrain managed to keep the plow and other disturbances to a minimum. Even so, a sizable portion of the Flint Hills has been degraded by invasive plants, urban sprawl, woody encroachment, and continued prairie fragmentation. Physiographic regions within this focus area include: the Flint Hills uplands, characterized by multiple layers of flint that quickly wore out settlers' plows due to flint being harder than steel. The Osage Cuestas, made from alternating layers of limestone and shale form what resembles a slightly collapsed staircase across the landscape. The Chautauqua Hills, derived from prehistoric sandstones that support dense groves of post and blackjack oak forest due to the porous sandstone's ability to retain water. Lastly, the Glaciated Region at the northern end of the Flint Hills comprised of rolling hills containing glacial till composed of quartzite and other rocks transported by glaciers from the Great Lakes region.

Ranching is king in the Flint Hills, due to the fact there are over 3 million acres of intact native grassland, making it ideal for grazing. The ranching community in the Flint Hills has many threats. One which weighs heavy on ranchers minds are the presence of invasive species, such as Sericea lespedeza, and the encroachment of trees like Osage orange and eastern red cedar. These invasive species add to fragmentation and threaten heterogeneity within native grassland plant communities. The PFW program is working with several partners to control woody invasives and maintain heterogeneity within the Flint Hills by promoting burning, grazing, and

invasive species control strategies. Leading these efforts is the Tallgrass Legacy Alliance (TLA). The TLA has enhanced over 150,000 acres of Tallgrass prairie in the Flint Hills and is essential to changing ranchers philosophies about grassland management within the area.

In 2010, the Service initiated the Flint Hills Legacy Conservation Area program which will voluntarily enroll landowners into perpetual easements to further conserve intact portions of the area. The amount of support that the PFW program provides in the Flint Hills Legacy Conservation Area will prove critical to its future success. The program looks forward to cooperating with the Flint Hills Legacy Conservation Area by providing technical assistance to prospective easement holders as well as helping to deliver habitat restoration projects on private lands already enrolled in the program.



Burning is an important part of the culture in the Flint Hills Focus Area. Education and communication concerning proper application are PFW program goals. Photo by Tony Ifland, USFWS



Sunset in the Flint Hills focus area. Cattle are an extremely important conservation tools and with proper management lead to healthy grasslands. USFWS photo.

Priority Species	Flint Hills Focus Area Five Year Targets	
 Greater prairie-chicken Short-eared owl Burrowing owl Upland sandpiper American golden-plover Black rail Dickcissel Bobolink Henslow's sparrow Cerlean warblerRegal fritillary butterfly Topeka shiner (Endangered) Mead's milkweed (Threatened) 	Upland Restoration/Enhancement Wetland Restoration/Enhancement River MilesPartnerships Landowners 	35,000 acres 100 acres 2 50 125/days V in the Flint Hills Focus Area LA, TNC, KGLC and other ore native habitat on large oort to the National Wildlife y Conservation Area easement
	Cost-share 20% Gran 33% FWS 33% Land 13% Othe	nts S Funds downers and In-Kind er Partners (NGO, KDWPT)
	Implementation strategy: Both upland be met by conducting technical assistan conservation efforts on private land wi stream and wetland areas are in need of restoration and will be a primary target the top conservation practices promote is prescribed fire. Through the organiz our cooperators can share information, with others in the conservation commu enhancement/management of our native will provide information concerning ho	and wetland objectives will nce and on-the-ground thin the focus area. Many of enhancement and/or et for the program. One of ed by the KS PFW program ation of burn associations equipment and techniques mity to better facilitate the re prairies. PFW program staff w to get involved with these

Central Wetlands and Prairies Focus Area



In central Kansas, the Arkansas River flows between the Smoky Hill River (to the north) and the Cimarron River (to the south). Over time, as the "Ark" (as it is called in Kansas) adjusted its course, it deposited vast amounts of sand and gravel creating a massive alluvial fan in the heart of the mixed-grass prairie of Kansas. These grass covered sand dunes associated with the river comprise the Great Bend Prairie. At the north end of this alluvial fan exists a unique geological phenomenon that includes closed depressional wetlands at Chevenne Bottoms and a little to the south at Quivira National Wildlife Refuge (NWR). Both of these wetland complexes have been designated as RAMSAR Wetlands of International Importance. Chevenne Bottoms and Quivira NWR are jointly considered one of the eight wonders of Kansas. From shorebirds to waterfowl, these wetlands are considered one of the most important stopover points for a multitude of Federal trust species including the sandhill crane and Federally endangered whooping crane. These wetlands also provide breeding habitat for the American avocet and black-necked stilt.

partner organizations and agencies.

conservation efforts through landowner workshops, and other outreach opportunities, in partnership with landowners and various

> The wetlands however, are not the only conservation priority in the area. The landscape surrounding both Cheyenne Bottoms and Quivira NWR include portions of the Great Bend Prairie. These grasslands support priority species such as the dickcissel, burrowing owl, short eared-owl and the upland sandpiper.

Proper prairie management and invasive species control are conservation priorities in this area. This focus area is a new addition to the Kansas PFW Strategic Plan and we look forward to partnering with landowners within this focus area to deliver grassland, riparian and wetland centered technical assistance and restoration.



Wetlands within the Central Kansas Prairies and Playas Focus Area provide important stop over habitat for many migratory birds, including the endangered Whooping crane. Photo by Ryan Hagerty, USFWS

Priority Species

- Whooping crane
- American avocet
- Black-necked stilt
- Black rail
- Loggerhead shrike
- Grasshopper sparrow
- Dickcissel
- Western burrowing owl
- Short eared owl
- Snowy plover

- Northern pintail
- American bittern
- Upland sandpiper
- Greater prairie-chicken
- Arkansas shiner (Threatened)
- Arkansas darter (Candidate)
- Checkered garter snake

Central Wetlands and Prairies Focus Area Five Year Targets

Upland Restoration/Enhancement	1000
Wetland Restoration/Enhancement	100
River Miles	2
Partnerships	
Landowners	8
Technical Assistance	40/days

The primary objective for Kansas PFW program in the Central Kansas Wetlands and Prairies Focus Area is to coordinate with USDA, KDWPT, TLA, KGLC, TNC and other conservation partners to enhance/restore native habitat on large intact landscapes in order to provide adequate habitat for Federal trust species.

Cost-share	40% FWS Fund
	40% Landowner
	20% Other Partners (NGO, KDWPT)

Implementation strategy: Both upland and wetland objectives will be met by conducting technical assistance and on-the-ground conservation efforts on private lands within this focus area. Many stream and wetland areas are in need of enhancement and/or restoration and will be a primary target for PFW program staff. One of the top conservation practices promoted by the program is prescribed fire. Through the organization of burn associations our cooperators can share information, equipment and techniques with others in the conservation community to better facilitate the enhancement/management of our native prairies. PFW will deliver information concerning how to get involved with these conservation efforts through landowner workshops, coordination with other organizations (e.g., the KGLC) and the communication with participating landowners.



The Kansas Grazing Lands Coalition is a strong partner for Kansas PFW and organizes multiple events to conduct education and outreach for cooperators and conservation partners (such as Fall Tour 2007 above) throughout Kansas. Photo courtesy of Tim Christian, KGLC.



Improve Information Sharing and Communication

The Kansas PFW program staff has an excellent relationship with many partners and interest groups. It is of highest priority to maintain these relationships. This will be done through semi-annual coordination meetings with NRCS, Pheasants Forever, and KDWP staff. In addition the Kansas PFW program staff will continue to be active members of the state technical committee and sub-committee members for the Conservation Reserve Program, Wetland Reserve Program, Grassland Reserve Program, Environmental Quality Incentive Program and Wildlife Habitat Incentive Program. KS PFW program staff will continue to be active with NGOs, such as, the Comanche Pool, Tallgrass Legacy Alliance, Smoky Hill Grazers, The Kansas Grazing Lands Coalition, TNC, Pheasants Forever, National Wild Turkey Federation and Kansas Alliance for Wetlands and Streams. This will be accomplished through attending meeting/conferences/ workshops, leading tours and being involved in educational programs across the state. KS PFW program staff will continue to maintain information concerning habitat restoration efforts and technical assistance that will be input into the PFW program HabITS database.

Measurable Objectives

- Participate in 45 workshops, ranch tours, conferences or meetings involving or partners in Kansas
- Contribute to 10 media events involving the Kansas PFW
- Participate in 10 Semi-annual Coordination meetings with NRCS and KDWPT staff.
- Sponsor or assist in 15 rancher conferences, workshops or tours throughout Kansas.

Enhance Our Workforce

The KS PFW program staff is responsible for large geographic areas and must have the knowledge to accurately answer questions about a wide variety of subjects. These range from agriculture, water law, wildlife management, invasive species control, plant identification, contracts and grazing systems. PFW staff is required to have a broad knowledge-base of habitat types within their focus area. This is obtained through experience, mentoring and training. Providing appropriate training is required to maintain a highly-motivated staff.

Measurable Objectives

- KS PFW staff spend 40 hours in another KS PFW biologist's area to exchange techniques, ideas and problems.
- Work with KS PFW staff to update Individual Development Plan and provide opportunities to achieve goals identified within the Plan.
- Annually assist PFW staff in scheduling pertinent training for the most recent habitat techniques.
- Semi-annual staff meeting to provide policy updates, issues of concern across the state and guest speakers.
- Annual award recognition for outstanding accomplishments

Increase Accountability

Increase Accountability

The KS PFW program will use many factors in ranking projects, such as contribution to Federal trust species or Kansas Species of Concern and proximity to National Wildlife Refuges. Projects within the identified four conservation focus areas will be given the highest priority.

Measurable Objectives

- Increase the amount of photos entered into HabITS by 10%
- Provide summary updates to partners at semi-annual coordination meeting
- Work with FWS-HAPET office to develop KS PL GIS database
- Work with universities and extension service to increase monitoring and reporting of research/PFW sites

External Factors

The conversion of native prairie is a major factor that the PFW program has to anticipate. Whether it is conversion to cropland, cool-season grasses, or urban development, all are real threats to native prairie and may cause fragmentation of large intact grasslands. How much of this actually occurs depends on the everchanging agricultural community. Continuing drought cycles will also impact the number of projects that landowners may be able to complete. They may not be able to leverage funds for projects if profits are small. Also, an increase in fuel prices drastically impacts contractor prices and reduces the number of acres the PFW program is able to fund.



KS PFW Staff working closely with cooperator on restoration plan. Photo by Heather Johnson, USFWS

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