STRATEGIC PLAN
PARTNERS FOR FISH AND WILDLIFE PROGRAM
SOUTHWEST REGION (R2)

Regional Overview

Introduction

The Partners for Fish and Wildlife Program in the Southwest Region has been operational since 1989 and is fully operational in the states of Arizona, New Mexico, Oklahoma and Texas. All activities carried out by the Region 2 Partners program are designed to meet the mission of the Service through cooperative partnerships on private lands. These activities target high priority federal trust resources, including endangered species, migratory birds, as well as at-risk species identified by the Service and our partners. None of the accomplishments achieved through this valuable program would have been possible without the full support of private landowners, state agencies and non-governmental organizations.

Since the Partners program became operational, we have enrolled 2,434 private landowners, non-governmental organizations (NGO) and other cooperators who have completed wildlife habitat enhancement and restoration activities on lands they owned or managed. Such activities have been carried out on approximately 714,000 total acres, to include 607,400 acres of uplands, 106,600 acres of wetlands, 1,132 miles of riparian habitat and 131 miles of stream habitat.

The Partners for Fish and Wildlife Program has participated in several landscape level efforts over the past several years. Our partners in those efforts include Ducks Unlimited, Natural Resources Conservation Service, Texas Parks and Wildlife Department, Oklahoma Department of Wildlife Conservation, New Mexico Game and Fish, Arizona Game and Fish Department, The Nature Conservancy, Environmental Defense, Audubon, National Wild Turkey Federation, High Plains Resource Conservation & Development (RC&D), Sam Houston RC&D and numerous other cooperators and stakeholders. Landscape level activities include:

- Texas Prairie Wetland Project (Texas Gulf Coast)
- East Texas Wetland Project
- Playa Lakes Joint Venture
- High Plains Partnership
- Grazing Lands Conservation Initiative
- Coastal Prairie Conservation Initiative
- Lesser Prairie Chicken Initiative

National Priorities

The Partners Program is guided by a national policy (U.S. Fish and Wildlife Service Manual, section 640 fw1) that has identified these objectives:

1. Promote and implement habitat improvement projects that benefit Federal trust species
2. Provide conservation leadership and promote partnerships

3. Encourage public understanding and participation
4. Work with U.S. Department of Agriculture (USDA) to implement conservation programs

Regional Priorities

During Fiscal Year 2006, The Southwest Region Management Team identified 10 Regional Priorities for all programs for the next 5 years. They include:

1. Border Issues
2. ***Wolf Management***
3. Bighorn sheep - Kofa
4. Native American Affairs
5. Focal Area Funding
6. Joint Ventures
7. Fisheries Resource Office – San Marcos
8. Energy Development
9. Minimizing wolf controversy
10. ***Attwater's prairie chicken (survival and recovery)***
11. International conservation efforts focused with Mexico
12. ***Mottled duck declines***
13. Masked bobwhite quail
14. Phelps Dodge settlement
15. Silvery minnow 10j
16. Outreach / recruitment / retention
17. San Juan River
18. ***Lesser prairie chicken***
19. ***AZ native fishes***
20. ***Children in Nature***
21. ***Strategic habitat conservation/implementation***

Those items shown in bold italics are resources the Partners Program has focused on in the past. The program has participated, primarily with Tribes, on management activities that benefit the wolf. Arizona fishery projects have focused on a large number of the native fishes of Arizona with focus areas identifying where we have and will continue to focus our efforts on Gila trout, Apache trout and other native fishes. Additionally, other species such as the Chiricahua leopard frog have been targeted. Two priorities that are included in focus areas along the Texas coast are Attwater's prairie chicken and mottled duck. The lesser prairie chicken has long been a key species targeted for our efforts in western Oklahoma, the Texas Panhandle and eastern New Mexico. We will continue those efforts.

Item 21 of the Regional Director's Priorities includes Strategic Habitat Conservation/Implementation. This approach has been the concept that has guided the Partners program for most of the 20 years it has been in existence. Strategic Habitat Conservation involves using good science to plan and implement "on the ground" conservation and to monitor the results to improve our efforts in the future. Region 2 has identified three broad geographic focal areas where the Regional Director wants our efforts directed. They are broad geographical areas and include federal, state, local and private lands. They are:

- Lower Colorado River Watershed in Arizona

- Plains, Prairies and Playa Lakes System
- Gulf Coastal Plain, Bay and Estuary System.

Focus Areas developed by Region 2 for the Partners Program include most of the areas identified by the Regional Director's Focal Areas. The Lower Colorado River Watershed in Arizona encompasses mostly Federal lands, thus few, if any, opportunities exist for the Partners Program. However, the Plains, Prairies and Playa Lakes System Focal Area encompasses the following Focus Areas identified by the Partners Program:

- Lesser prairie chicken – New Mexico
- High Plains – Texas Panhandle
- Trans-Pecos Western Edwards Plateau – Texas
- Short Grass Prairie – Oklahoma
- Mixed Grass Prairie – Oklahoma
- Rare, Imperiled and Listed Species – Oklahoma

The Focus Areas are identified primarily with non-federal lands and spatially display the areas issues identified by the Fish and Wildlife Service, our landowners and other stakeholders as having valuable resources. While spatially displayed, they identify specific opportunities to restore or enhance habitat for Federal trust resources on non-federal lands identified by each State through consultation with our stakeholders.

The intent of the Partners program in the Southwest Region is to address the issues identified by our Regional Management Team, our stakeholders and other partners through Cooperative Conservation. This step-down plan identifies how the Southwest Region proposes to address the five goals identified in the Partners for Fish and Wildlife Program Vision Document. Those goals include:

- Conserve Habitat
- Broaden and Strengthen Partnerships
- Improve Information Sharing and Communications
- Enhance Our Workforce
- Increase Accountability.

Goal 1: Conserving Habitat – *Identifying Focus Areas*

Focus areas have been identified for each of the four states in the Southwest Region. Identification of Focus Areas was based on regional priorities, as identified by the Regional Management Team, stakeholder input, and the combined experience of our highly qualified staff. The four states and combined focus area maps are shown in the Appendix. Criteria for selection of focus areas included:

- Fish and Wildlife Service, State Game and Fish Agency, NGO and other stakeholder identified priorities
- Presence of Federal trust resources (federally listed species, candidate species, inter-jurisdictional species, at-risk species, migratory birds)
- Habitat fragmentation issues of importance to Federal trust resources (will work in the focus area connect important habitat types and reduce fragmentation of habitat?)
- Proportion of private lands within the focus area
- Past success in the area (landowner and other stakeholder interest)

Objective 1.1: Work with our landowners and other partners to identify geographic focus areas within the Southwest Region to ascertain resource priorities, develop accomplishment targets and identify implementation strategies for Federal trust resources on private lands over the next five years (Fiscal Years 2007-2011).

The Partners staff from the Southwest Region will continue to work with private landowners, state agencies and NGOs to provide financial and technical assistance to identify resource issues, develop and implement habitat improvement practices on private lands within the focus area to address those local, State, and Regional priorities that have been identified. Leveraging of funds will be a critical component of our strategy.

The following ***State Tables*** identify focus areas within the Southwest Region where most of the funding will be dedicated. These tables display accomplishment targets for each focus area, based on level funding from Fiscal Year 2006, and identifies Federal trust resources that will be targeted in each Focus Area.

ARIZONA

Table 1
Arizona Focus Areas and Habitat Improvement Target Summary

Focus Area Name	Habitat Type	Accomplishment Type	Acres	Miles	Quantity
Chiricahua					
	Wetland	Enhancement	1		
	Upland	Enhancement	200		
Salt Gila					
	Wetland	Enhancement	1.8		
	Upland	Enhancement	100		
	Riparian Corridor	Enhancement		0.5	
	Stream Channel	Enhancement		0.3	
	Aquatic Access Structures	Enhancement			1
Santa Cruz San Pedro					
	Wetland	Enhancement	1.6		
	Upland	Enhancement	200		
	Riparian Corridor	Enhancement		0.6	
	Stream Channel	Enhancement		0.2	
Santa Maria Big Sandy					
	Upland	Enhancement	100		
	Stream Channel	Enhancement		0.1	
Verde					
	Wetland	Enhancement	1.6		
	Upland	Enhancement	100		
	Riparian Corridor	Enhancement		0.4	
	Stream Channel	Enhancement		0.1	

* Annual targets based on 5 year habitat improvement projections are as follows: Wetland 6 acres, Upland 700 acres, Riparian Corridor 1.5 miles, Stream Channel 0.7 miles and Aquatic Structure 1 (barrier, fish passage, etc.)

The following stakeholders were involved in determining focus areas:

1. Partners State Committee
2. Arizona Game and Fish Department
3. Arizona Department of Environmental Quality
4. Arizona Department of Water Resources
5. Arizona State Lands
6. Arizona Department of Agriculture
7. Natural Resources Conservation Service
8. Bureau of Land Management
9. The Nature Conservancy (Presentation at project evaluation meeting, February 15, 2006)
10. Arizona Riparian Council (Presentation at Annual Meeting, March, 2006)
11. The Nature Conservancy (Presentation at southern Arizona Coordination meeting with Arizona Ecological Services, April, 2006)
12. Arizona Ecological Services (Presentation at September, 2006 Staff Meeting)

The following table represents the species identified by the entities listed above as priorities for the State of Arizona. The table includes both listed and un-listed species that will be targeted with Partners program funding.

Table 2
Arizona Listed and Unlisted Species for Focus Areas

Listed Status	Focus Area Name	Species Common Name
Endangered		
	Chiricahua	Gila chub, Gila topminnow (incl. Yaqui), Huachuca water-umbel, jaguar, lesser long-nosed bat, Mount Graham red squirrel, Sonora tiger salamander, Yaqui chub
	Santa Cruz San Pedro	Canelo Hills ladies'-tresses, Desert pupfish, Gila chub, Gila topminnow (incl. Yaqui), Huachuca water-umbel, Jaguar, lesser long-nosed bat, Pima pineapple cactus, Sonora tiger Salamander, southwestern willow flycatcher
	Santa Maria Big Sandy	Arizona Cliff-rose, Hualapai Mexican vole, southwestern willow flycatcher, Yuma clapper rail
	Verde	Arizona Cliff-rose, Colorado pikeminnow (=squawfish), Gila topminnow (incl. Yaqui), Hualapai Mexican vole, lesser long-nosed bat, razorback sucker, southwestern willow flycatcher, Yuma clapper rail
Threatened		
	Chiricahua	beautiful shiner, Chiricahua leopard frog, Cochise pincushion cactus, Mexican spotted owl, New Mexican ridge-nosed rattlesnake, Yaqui catfish
	Santa Cruz San Pedro	Chiricahua leopard frog, loach minnow, Mexican spotted owl, spikedace
	Santa Maria Big Sandy	Mexican spotted owl
	Verde	Apache trout, Chiricahua leopard frog, Little Colorado spinedace, Mexican spotted owl, San Francisco Peaks groundsel, spikedace
Candidate		
	Santa Cruz San Pedro	Acuna Cactus, lemmon fleabane, Stephan's Riffle beetle, yellow-billed cuckoo
	Santa Maria Big Sandy	yellow-billed cuckoo
	Verde	Page springsnail, yellow-billed cuckoo
Other		
	Santa Cruz San Pedro	western burrowing owl
	Verde	Arizona agave

"Other" status represents all other possible listing status categories.

The following section provides a detailed discussion of the Focus Areas, identified in Table 1.

Chiricahua

The Chiricahua Focus Area is located in southeastern Arizona. It consists of 2,078,694 acres (3,247 square miles) and is located entirely within Cochise County. Major cities and towns in the focus area are Douglas and Willcox. Landownership patterns include private ownership (51.5%), State Trust (31.1%), National Forest (12.6%) with the remaining 4.8% managed by Bureau of Land Management, National Park Service, U.S. Military, U.S. Fish and Wildlife Service National Wildlife Refuges, and Arizona Game and Fish Department.

This area is dominated by grassland habitat with 1,589,313 acres of which 1,446,201 acres are located on non-federal lands. Based on The Nature Conservancy's grassland assessment, a large percentage of these non-federal grasslands (32.3%) are disturbed and degraded native grasslands with 10-35% shrub cover. The encroachment of invasive shrub species has reduced their viability to grassland species. Due to the lower density of shrub cover, it is economically feasible and biologically important to restore and protect them (Gori and Enquist 2003). Based on population projections, if significant grasslands are not protected in the next 10 years, these valuable grassland ecosystems will likely be lost to development (Gori and Enquist 2003). According to The Nature Conservancy, native grasslands with low shrub cover now cover only 15.4% of current and former grassland. In the U.S., shrub encroachment has been extensive and severe and efforts are being made in this focus area to protect grasslands. An additional 235,852 acres (16%, 368 sq. miles) are native grassland with less than 10% shrub cover.

Two groups are working to protect grassland habitats:

Malpai Borderlands Group - This group is comprised of local ranchers concerned with preserving ranching in the area. The goal of the Malpai Borderlands Group is to restore and maintain the natural processes that create and protect a healthy, unfragmented landscape to support a diverse, flourishing community of human, plant and animal life in our borderlands region.

Arizona Open Land Trust - This non-profit land trust works with private landowners and communities by providing assistance in developing conservation easements. The goals of these easements are to protect land with important natural and cultural resources, to expand existing protected areas and keep working agricultural landscapes intact.

Salt Gila

The Salt-Gila focus area is located in central eastern Arizona. It covers about 5,052,754 acres (7,894.93 square miles) and is located in parts of Apache, Gila, Graham Greenlee, and Navajo Counties. The major towns in the focus area are Safford and San Carlos. Landownership is dominated by Tribal lands owned by the White Mountain Apache and the San Carlos Apache Tribes (58%), National Forest (27%), and Bureau of Land Management (8%), with a small percentage of lands held in private ownership (4%).

This area is dominated by conifer woodland habitats on over 1,662,000 acres of non-federal lands. The focus area includes 951 miles of streams on non-federal lands.

The Salt and Gila rivers, two major rivers in the state, flow in this focus area. These are the headwaters of the White and Black Rivers where most of the Apache trout habitat

exists within its limited range. Partners' personnel will continue to work with the White Mountain Apache Tribe and the San Carlos Apache Tribe in developing fish enhancement projects and other wildlife habitat projects.

Santa Cruz San Pedro

The Santa Cruz/San Pedro focus area is located in southern Arizona. It covers about 4,427,936 acres (6,918 square miles) and is located in portions of Cochise, Graham, Pima, Pinal, and Santa Cruz Counties. The major cities and towns in the focus area are Sierra Vista, Tucson, Benson, Nogales, Rio Rico, and Dudleyville. Landownership is dominated by State Trust lands (35.3%) and federal lands (31.8%), with private ownership at 31.6%.

Headwaters for the Santa Cruz River originate in Arizona. The river flows south into Mexico, turns west then flows northward, back into Arizona. The Santa Cruz River is largely an effluent dominated stream receiving discharges from the Nogales International Wastewater Treatment Plant located at the U.S. and Mexico border.

The San Pedro River originates in Sonora, Mexico, and flows north into southeastern Arizona. The San Pedro River is an international basin with significantly different cross border legal and land use practices. The Upper San Pedro Watershed represents a transition area between the Sonoran and Chihuahuan deserts and is internationally renowned for its biodiversity. It supports the second highest land mammal diversity in the world and provides habitat for almost 400 bird species. The San Pedro is the largest perennially flowing un-dammed river within the state.

The dominant vegetation type in this area is semi-desert grassland. Based on The Nature Conservancy's 2003 grassland assessment (Gori and Enquist, 2003), over 43% of the grasslands are historically native and/or contain shrub cover densities that are suitable for restoration. Sonoran desert scrub and Madrean evergreen woodland biotic communities are also present. The Sonoran desert scrub consists of Acacia, mesquite, saguaro, creosote, ocotillo, and dogwood.

The focus area contains the Santa Cruz and San Pedro Rivers and offers tremendous opportunities for riparian enhancement. However, development pressures are increasing in this focus area and are impacting the remaining riparian and wetland resources as well as water courses.

There are several community and watershed groups in this focus area. The Upper San Pedro Partnership, The Middle San Pedro Watershed Partnership, the Sonoita Valley Planning Partnership, the Altar Valley Conservation Alliance, the Quitobaquito Rio Sonoyta Watershed Group, and the San Rafael Valley Ecosystem Planning are some of the groups that have formed to protect and/or enhance their watersheds. These groups can be contacted and Partners personnel can attend their meetings and present information on the program.

Santa Maria Big Sandy

The Santa Maria Big Sandy focus area is located in northwestern Arizona. It covers about 2,731,520 acres (4268 square miles) and is located in parts of Mohave and Yavapai Counties. The major towns in the focus area are Bagdad and Wikieup. Landownership is

dominated by State Trust (33%), Bureau of Land Management (30.4%) and private (30%). The remaining landownership of 6.7% is comprised of military, local, county, and Hualapai Tribe.

This area is dominated by Interior Chaparral and Arizona upland subdivision - Sonoran Desert Scrub habitats. The focus area contains 811,182 acres of chaparral with 505,077 acres on non-federal lands, and 760,590 acres of Sonoran Desert Scrub with 294,494 acres on non-federal lands. The focus area contains 213 stream miles with 154 miles (72%) on non-federal lands.

The Santa Maria/Big Sandy has several perennially flowing streams that support native fish. There is one watershed group, the Northwestern Arizona Watershed Council, comprised of state and federal agencies and local land owners, which can be contacted to develop potential projects that would benefit wildlife.

Verde

The Verde focus area is located in the north central portion of Arizona and includes portions of Yavapai and Coconino counties. It consists of 2,858,668 acres (4,466 square miles). The major cities and towns in the focus area are Chino Valley, Cottonwood, and Camp Verde. Landownership is dominated by National Forest (83.2%) and Private (10.5%). The remaining 6.3% is comprised of Bureau of Land Management, National Parks and Monuments, military, Arizona Game and Fish Department lands, state trust, county, and tribal (Yavapai Prescott Indian Reservation, Yavapai Apache Indian Reservation, and Fort McDowell Indian Reservation).

The Verde River is 170 miles long and is primarily perennial. There are two major dams on the Verde River, Horseshoe and Barlett dams. There are several other watercourses in this focus area including: Sycamore Creek, Oak Creek, Wet Beaver Creek, West Clear Creek, Fossil Creek, and Tangle Creek. Within the Verde focus area there are 1775.5 miles of streams with 303 miles on non-federal lands.

Non-federal lands in the Verde focus area support four major plant communities: Madrean Evergreen Woodland (327,671 acres), Great Basin Conifer Woodland (100,750 acres), Sonoran Desert Scrub (103,775 acres), and Plains and Great Basin Grassland (106,521). Evergreen oaks dominate the Madrean Evergreen Woodland with junipers and sometimes pines also growing in the mix. Conifer Woodland is characterized by an overstory of one-seed juniper and pinon pine. Important shrubs include cliffrose and Apache plume. Foothill palo verde and saguaro cactus dominate the overstory of the Sonoran Desert Scrub plant community while creosote bush is more common at lower elevations. Whitethorn acacia, ocotillo, jojoba, and desert hackberry occur throughout. The Plains and Great Basin Grassland is dominated by tall, medium, and short grasses. Shinnery oak and midget oak are common shrubs. Associated cacti include plains prickly pear, hedgehogs, and pincushion.

The Verde is one of the largest perennial rivers within the state. As the Verde Valley area becomes more urbanized, the pressures tend to increase on dwindling riparian and precious water resources. The Verde has been recognized as having riparian and stream habitat of high conservation value to native fishes and associated species. The Fish and Wildlife Service will work closely with local community and watershed groups such as, Upper Verde River Adaptive Management Program, Verde Watershed Association, the

Verde River Basin Partnership, and the Yavapai County Water Advisory Committee comprised of State and Federal agencies as well as local land owners, to identify opportunities to protect, restore and/or enhance habitat associated with the Verde River.

Table 3
New Mexico Focus Areas and Habitat Improvement Target Summary

Focus Area Name	Habitat Type	Accomplishment Type	Acres	Miles	Quantity
Gila-Mimbres					
	Wetland	Restoration	10		
	Upland	Restoration	20		
	Upland	Enhancement	20		
	Riparian Corridor	Restoration		4	
	Riparian Corridor	Enhancement		9	
	Stream Channel	Restoration		3	
	Aquatic Access Structures	Restoration			1
Lesser prairie-chicken					
	Wetland	Restoration	30		
	Wetland	Enhancement	30		
	Upland	Restoration	1000		
	Upland	Enhancement	2000		
	Riparian Corridor	Restoration		1	
	Riparian Corridor	Enhancement		1	
	Stream Channel	Restoration		0.6	
	Stream Channel	Enhancement		0.6	
Upper Rio Grande					
	Wetland	Restoration	5		
	Wetland	Enhancement	10		
	Upland	Restoration	60		
	Upland	Enhancement	100		
	Riparian Corridor	Restoration		4	
	Riparian Corridor	Enhancement		9	
	Stream Channel	Restoration		3	
	Stream Channel	Enhancement		3	
	Aquatic Access Structures	Restoration			1

* Annual targets based on 5 year habitat improvement projections are as follows: Wetland 85 acres, Upland 3200 acres, Riparian Corridor 28 miles, Stream Channel 10.2 miles and Aquatic Structure 2 (barriers, fish passage, etc.)

The following stakeholders were involved in determining focus areas:

1. Bureau of Indian Affairs
2. New Mexico Department of Game and Fish
3. New Mexico Environment Department
4. The Nature Conservancy – New Mexico Chapter
5. New Mexico Department of Agriculture
6. Natural Resources Conservation Service
7. Shawn Knox - NM State Land Office
8. Theodore Roosevelt Conservation Partnership
9. Playa Lakes Joint Venture
10. Private Landowners

Table 4

New Mexico Listed and Unlisted Species for Focus Areas

Listed Status	Focus Area Name	Species Common Name
Endangered		
	Gila-Mimbres	Southwestern willow flycatcher
	Salt Gila	desert pupfish, Gila chub, Gila topminnow (incl. Yaqui), lesser long-nosed bat, Mount Graham red squirrel, Razorback sucker, Southwestern willow flycatcher
	Upper Rio Grande	Rio Grande silvery minnow, Southwestern willow flycatcher
Threatened		
	Gila-Mimbres	Chihuahua chub, Chiricahua leopard frog, loach minnow, Mexican spotted owl, spikedace
	Salt Gila	Apache trout, Chiricahua leopard frog, Little Colorado spinedace, loach minnow, Mexican spotted owl, spikedace
	Upper Rio Grande	Mexican spotted owl
Candidate		
	Gila-Mimbres	yellow-billed cuckoo
	Lesser prairie-chicken	lesser prairie-chicken, sand dune Lizard
	Salt Gila	yellow-billed cuckoo
	Upper Rio Grande	yellow-billed cuckoo
Other		
	Gila-Mimbres	gray wolf

"Other" status represents all other possible listing status categories.

Gila-Mimbres

The Gila-Mimbres Riparian focus area in southwestern New Mexico encompasses approximately 8,765,203 acres within Grant, Sierra, and Catron counties for the Gila River watershed, and Grant and northern Luna counties for the Mimbres River watershed.

The Gila watershed in New Mexico is composed of two major streams, the Gila and San Francisco Rivers and the headwaters of both rivers lie at high elevations in the Mogollon Mountains of southeastern Arizona and southwestern New Mexico. Headwater streams are bordered by blue spruce, Douglas fir, and aspen at high elevations, shifting to ponderosa pine, juniper, and piñon further downstream. Willow stands are common in moderate gradient reaches. The Gila River flows westerly through the mountains to the town of Gila. Along this stretch the river is bordered by ponderosa pine, piñon, juniper, cottonwood, Arizona sycamore, boxelder, and Arizona walnut.

Mountainous portions of the Gila River are almost entirely within lands administered by US Forest Service (USFS). From the town of Gila, the river flows westerly through the Cliff-Gila Valley to the Arizona border near Virden. Portions of lower Gila River flow through lands administered by US Bureau of Land Management and US Forest Service but most lands are privately owned. The primary land uses along the river in this section are livestock grazing and irrigated cropland. Downstream, the Gila River flows across

desert grasslands to another constriction, the Lower Box where it crosses desert shrub lands and exits New Mexico. Arizona sycamore, cottonwood, and mesquite are the primary woody vegetation in lower reaches.

The Gila River watershed is habitat to several federally endangered, threatened, and candidate species, including: Southwestern willow flycatcher (endangered), loach minnow (threatened), spikedace (threatened), yellow-billed cuckoo (candidate), Mexican spotted owl, Gila chub (endangered), Gila trout (threatened), Chiricahua leopard frog (threatened), Chihuahua chub (threatened), and Gila springsnail. Species of concern in this watershed include several birds, mammals, snails, reptiles, amphibians, plants, and insects.

Historically, extensive cienegas were found in the middle and lower reaches of the Gila River. Groundwater pumping, livestock grazing, and draining have altered or destroyed these habitats. Few headwater streams have continuous surface flow throughout their entire course. Domestic livestock have been removed or precluded from grazing along most headwater streams within West Fork, Middle Fork, and East Fork Gila drainages. Wildfires have burned large portions of the West and Middle forks in recent years and resultant ash flows have diminished or eliminated fish from portions of the affected streams. Riparian areas along the lower elevation reaches of the Gila and its main tributaries consist mainly of cottonwood, willow, and boxelder. Aquatic habitat consists of large boulder pools, long moderately deep runs, and short riffles. Years of grazing pressure have contributed to large sediment loads in the East Fork. All native fishes extant in the Gila River occur in these lower gradient streams. Saltcedar, an exotic invasive tree, is impacting the riparian habitat quality in some areas.

The headwaters of the Mimbres River are on the west and south-facing slopes of the Black Range. It flows southward and dissipates onto the desert north of the town of Deming. Much of the permanently watered portion of the river is in the Mimbres Valley, where the system was historically more swamp-like in character than river. Formerly small farms, orchards, and dispersed livestock grazing were the predominant land use in much of the Mimbres Valley. Upstream of the village of San Lorenzo, the valley becomes a checkerboard of small “ranchettes”. The uplands are mostly administered by the U.S. Forest Service, but most valley lands are privately owned. The valley has been subdivided into numerous small tracts. Many of these tracts have been developed with buildings, individual wells, and septic systems. In this section, the river channel is frequently mechanically realigned and most woody riparian vegetation has been removed. The Nature Conservancy and the New Mexico Department of Game and Fish own several tracts along the river which provide some protection to the aquatic habitat.

There are somewhat fewer federally listed species in the Mimbres River watershed than the Gila however many are the same, most importantly, Chiricahua leopard frog, southwestern willow flycatcher, Chihuahua chub and Gila trout.

Continued lowering of the water table for human and agricultural use will adversely affect all spring, seep, and cienega habitats remaining in the Mimbres Valley. Invasive and non-native plants (such as saltcedar) are a concern for the longevity of perennial spring-fed habitats. With increased demand on limited sources of water and the concomitant increase of non-native plants, the structure and stability of native plant communities will continue to degrade. Livestock access to springs increases sedimentation and denudes banks of vegetation.

Most of the natural springs in the Mimbres have been modified for human use. Within the Mimbres Valley, land ownership along the river is largely private and extensive reaches of the river are regularly bulldozed to straighten the channel and remove large woody debris. Pool habitat has been eliminated by such activities and the stream receives little shade. Diversion of water for agriculture seasonally diminishes flows in much of the river and it dries up downstream of San Lorenzo. Woody riparian vegetation has been removed from riverbanks on most private lands. Dispersed livestock grazing is the primary land use on upland portions of the watershed.

Habitat enhancement and restoration practices on private lands within this focus area include: livestock exclusion fencing for private holdings within U.S. Forest Service lands, invasive species removal and native riparian plant restoration, in-stream restoration, and wetland/cienega restoration.

Lesser prairie-chicken

The New Mexico Lesser Prairie-Chicken focus area encompasses approximately 18,574,261 acres of Western Great Plains Sandhill Sagebrush Shrubland and Western Great Plains Shortgrass Prairie vegetation associations (as described in the New Mexico Department of Game and Fish, Comprehensive Wildlife Conservation Strategy) along the eastern edge of New Mexico. This region is characterized by rolling grasslands, high plains plateaus broken by escarpments, and sandy hummocks and dunes in some areas. The Western Great Plains Sandhill Sagebrush Shrubland is a mosaic of hummock and coppice dunes dominated by sand sage and/or shinnery-oak with a mixed-grass composition. Grasses consist largely of little bluestem, sand bluestem, sand dropseed, and needle and thread grass. Soils are generally sand, loamy sand, and sandy loam. The shortgrass prairie was historically dominated by expanses of blue grama and buffalo grass. The shortgrass prairie, like other North American prairies, evolved with frequent disturbances, including fire, drought, grazing, and storms. Playa lakes dot the landscape throughout a portion of this focus area and provide unique wetland habitat for migratory birds and resident wildlife species.

Habitat restoration for the lesser prairie chicken, a candidate for Federal listing under the Endangered Species Act, is the first priority for this focus area. Species biologists believe that secure nesting and brood-rearing habitat is the most limiting need for the lesser prairie-chicken. The sand dune lizard is also a candidate for Federal listing. The least tern and the Arkansas River shiner, (threatened) occur in specific habitats within this focus area. In addition there are several species of concern to the Service found in this area including: American peregrine falcon, Arctic peregrine falcon, Baird's sparrow, mountain plover, northern goshawk, western burrowing owl, black-tailed prairie dog, swift fox, western red bat, Arkansas River speckled chub, and sandhill goosefoot.

Habitat fragmentation, drought, grazing practices, fire suppression, and invasive plant species encroachment have all impacted the quality and quantity of fish and wildlife habitats in this focus area. Conservation and restoration practices on private lands with coordinated efforts on Bureau of Land Management and New Mexico State trust lands are key to preventing the listing of the lesser prairie-chicken and sand dune lizard. Conservation practices on private lands includes removal and restoration of abandoned oil and gas infrastructures, fencing and grazing management (rest and rotation), prescribed fire, and especially thinning or removal of invasive plant species (e.g., mesquite, juniper, cholla). Private landowners in southeastern New Mexico often lease

large tracts of Bureau of Land Management lands and some State trust lands as part of their operations and coordinated conservation practices will improve habitat conditions on a landscape scale. These conservation practices should provide improved nesting and brood-rearing habitat for the lesser prairie chicken.

Similar practices (e.g., grazing management, brush control) within the focus area, but outside of suitable nesting habitat, will provide benefits to other grassland-dependent birds and resident wildlife. Livestock exclusion fencing around playas and playa restoration (e.g., planting native grasses on cropped playas, filling in and restoring "pitted" playas) will benefit many migratory birds that use these areas during spring migrations.

Upper Rio Grande

The Upper Rio Grande Riparian focus area watershed encompasses approximately 8,093,463 acres from Cochiti Dam in Sandoval County northward to the Colorado-New Mexico State Line. The focus area falls within Sandoval, Santa Fe, Los Alamos, Rio Arriba, and Taos counties in New Mexico. The main tributary to the Rio Grande in this focus area are the Rio Chama, which joins the Rio Grande in north central New Mexico and is its most significant tributary. The main stem of the Rio Grande and its major tributaries have been dammed to form three irrigation reservoirs within the focus area: Heron, El Vado, and Abiquiu. Most of these reservoirs are in canyon topography where rocky substrate and decaying woody vegetation provide the majority of fish habitat. Hydrology is governed by irrigation demands. The headwaters of the tributaries draining into the Upper Rio Grande watershed start in the Sangre de Cristo and San Juan mountains. These are small mountain streams flowing through montane vegetation. Most of these streams are degrading with bedrock, cobble, and/or gravel substrate. These streams are the least impacted by human activity within the watershed. There is some channelization and dewatering within these systems, but not to the degree noted lower in the watershed. Most headwater tributaries in this focus area mainly flow through U.S. Forest Service and Bureau of Land Management administered lands, with some in New Mexico State Trust lands, some belonging to the Jicarilla Apache Nation and the Ohkay Owinghe (formerly known as San Juan Pueblo), and scattered private lands along the waterways. In the lower gradient portions of the tributaries and the main stem, much of the land is privately owned.

The Rio Chama historically was degrading due to the complexity of the soils, meandering nature of the stream and seasonal flows that ranged from low to flood stage. This resulted in large amounts of sediment being deposited and then moved downstream. As the Rio Chama increased in size, meanders, over-bank flooding, and channel braiding provided habitat for numerous native species. Substrates typically consist of cobble, gravel, and sand. Irrigation diversion and excessive sedimentation have resulted from human activities and formerly complex habitats have been simplified. The Rio Grande silvery minnow (endangered) no longer occupies the Rio Chama.

The main stem of the Rio Grande enters New Mexico from Colorado. It flows through a narrow, deeply incised canyon with a very narrow floodplain, approximately 50 feet wide, until it nears the confluence with the Rio Chama. Piñon-juniper parkland is the dominant vegetation community found along these reaches. Downstream of the confluence of the Rio Chama, the Rio Grande again enters a deeply incised canyon until it reaches a broad valley of low relief near Cochiti Lake. The Pueblos of Cochiti, San

Ildefonso, Tesuque, Pojoaque, Nambe, Santa Clara, and Taos are found within this focus area, as well as the towns of Los Alamos, Tierra Amarilla, Chama, Taos, Espanola, and the State capitol of Santa Fe.

The focus area provides habitat for southwestern willow flycatcher (endangered), Rio Grande silvery minnow, yellow-billed cuckoo (candidate) and Mexican spotted owl. The Rio Grande cutthroat trout and Rio Grande sucker are two species of concern where attention is being given to improving their habitats to preclude listing.

Perennial spring-fed habitats, such as marshes and cienegas, occur sporadically throughout the Rio Grande watershed as isolated wetlands that discharge surface water to localized aquatic systems. These localized systems eventually recharge shallow aquifers within the basin and contribute surface flows to perennial tributaries of the Rio Grande. Dewatering, channelization, and land conversion have greatly reduced these habitats. Water tables have been lowered and areas that were formerly perennial cienegas and marshes have become ephemeral or no longer exist. This has caused a decline in a number of species including western painted turtles, leopard frogs, and New Mexico garter snakes. Habitat conversion processes that most adversely affect these habitats include land alterations that drain, fill, channelize or impound wetlands.

Sedimentation resulting from improper grazing or logging and associated infrastructure presents the most serious potential adverse effect to the substrate of small headwater streams. Native species such as the Rio Grande cutthroat trout, may also be adversely affected by the presence of nonnative salmonids through hybridization, competition, or predation. Invasion by nonnative (e.g., saltcedar and Russian olive) and native (e.g., pinon pine and juniper plant species has reduced the abundance of native riparian plant species and degraded the riparian wildlife habitat.

Habitat improvement projects within this focus area include: livestock exclusion fencing from wetland, cienega, and riparian areas; wetland/cienega restoration; removal of nonnative vegetation and replanting of native plant species; in-stream restoration; and tree thinning (pinon and juniper) in uplands to improve water infiltration and reduce run-off in storm events.

OKLAHOMA

Table 5
Oklahoma Focus Areas and Habitat Improvement Target Summary

Focus Area Name	Habitat Type	Accomplishment Type	Acres	Miles	Quantity
Mixed Grass Prairie					
	Wetland	Restoration	30		
	Wetland	Enhancement	20		
	Wetland	Establishment	50		
	Upland	Restoration	2800		
	Upland	Enhancement	1000		
	Upland	Protection	400		
	Riparian Corridor	Restoration		2	
	Riparian Corridor	Enhancement		1	
	Riparian Corridor	Protection		1	
	Aquatic Access Structures	Establishment			1
Rare, Imperiled and Listed Species					
	Wetland	Restoration	100		
	Wetland	Enhancement	100		
	Wetland	Establishment	200		
	Wetland	Protection	50		
	Upland	Restoration	200		
	Upland	Enhancement	800		
	Upland	Establishment	20		
	Upland	Protection	50		
	Riparian Corridor	Restoration		2	
	Riparian Corridor	Enhancement		2	
	Riparian Corridor	Protection		6	
	Stream Channel	Enhancement		1	
	Aquatic Access Structures	Establishment			1
Short Grass Prairie					
	Wetland	Restoration	2		
	Wetland	Enhancement	2		
	Wetland	Establishment	2		
	Upland	Restoration	2000		
	Upland	Enhancement	1000		
	Upland	Protection	10		
	Riparian Corridor	Restoration		1	
	Riparian Corridor	Enhancement		1	
	Riparian Corridor	Protection		0.4	
	Aquatic Access Structures	Establishment			1
Tall Grass Prairie					
	Wetland	Restoration	5		
	Wetland	Enhancement	5		
	Wetland	Establishment	10		
	Upland	Restoration	10		
	Upland	Enhancement	1000		
	Upland	Establishment	10		
	Upland	Protection	100		
	Riparian Corridor	Restoration		0.2	
	Riparian Corridor	Enhancement		0.2	
	Riparian Corridor	Establishment		0.2	
	Aquatic Access Structures	Establishment			1

* Annual targets based on 5 year habitat improvement projections are as follows: Wetland 576 acres, Upland 9400 acres, Riparian Corridor 17 miles, Stream Channel 1 miles and Aquatic Structure 3 (barriers and fish passage, etc.)

The following stakeholders were involved in determining focus areas:

1. Tulsa Ecological Services Biologists and Supervisors
2. The Nature Conservancy – Oklahoma Chapter
3. Oklahoma Department of Wildlife Conservation
4. Private Landowners

Table 6
Oklahoma Listed and Unlisted Species for Focus Areas

Listed Status	Focus Area Name	Species Common Name
Endangered		
	Mixed Grass Prairie	black-capped vireo, least tern, whooping crane
	Rare, Imperiled and Listed Species	American burying beetle, black-capped vireo, gray bat, Indiana bat, Least tern, Ouachita rock pocketbook, Ozark big-eared bat, red-cockaded woodpecker, scaleshell mussel, whooping crane
	Short Grass Prairie	least tern, whooping crane
	Tall Grass Prairie	American burying beetle, least tern, whooping crane
Threatened		
	Mixed Grass Prairie	Arkansas River shiner, piping plover
	Rare, Imperiled and Listed Species	Arkansas River shiner, leopard darter, Neosho madtom, Ozark cavefish, piping plover, western prairie fringed orchid
	Short Grass Prairie	Arkansas River shiner, piping plover
	Tall Grass Prairie	piping plover
Candidate		
	Mixed Grass Prairie	lesser prairie-chicken
	Rare, Imperiled and Listed Species	Arkansas darter, lesser prairie-chicken, Neosho Mucket
	Short Grass Prairie	Arkansas darter, lesser prairie-chicken
	Tall Grass Prairie	Neosho Mucket
Other		
	Rare, Imperiled and Listed Species	American alligator, black-tailed prairie dog, winged mapleleaf

"Other" status represents all other possible listing status categories.

Mixed Grass Prairie

The mixed grass prairie region covers most of western Oklahoma. This region contains a mixture of both tall and short grass species. Mixed grass prairies have a diverse species composition and are dominated with grasses such as little bluestem, side-oats grama, blue grama, hairy grama, buffalograss, and in sandy soils where big bluestem, Indian grass, and switchgrass may occur. They also contain forbs and legumes such as western ragweed, asters, leadplant, sunflowers, Illinois bundleflower, and showy partridge pea.

Much of the historic mixed grass prairie has been converted to other land uses, especially cropland and introduced grasses. Nearly 4 million acres of mixed grass prairie has been altered by several factors including fire suppression, heavy year-round grazing, introduced grasses, and the expansion of eastern redcedar (ODWC 2005).

Rare, Imperiled and Listed Species

The Rare, Imperiled and Listed Species focus area is located in several regions of Oklahoma. These regions are; Ozark, tallgrass prairie, cross-timbers, mixed grass prairie, Ouachita, Arkansas River Valley, and the Gulf Coast Plain region. One watershed in this focus area is home to 50 listed, proposed, or candidate wildlife and plant species. The focus area contains many rivers, streams, and lakes with different conservation issues. Several issues have been identified and they include: water quality, habitat loss from geomorphic alteration of river channels, commercial harvest, heavy recreational use, altered patterns of water flow, impediments to the movement of fish within waterways, and invasion of exotic plants and animals (ODWC 2005).

Short Grass Prairie

The short grass prairie is found mainly in the three panhandle counties; western Harper County, western Woodward County, and Ellis County of Oklahoma. Short grass prairie vegetation consists of side-oats grama, blue grama, and buffalo grass. Some forbs and legumes are also present and include western ragweed, sunflowers, asters, showy partridge pea, scurf pea, and snow-on-the-mountain. Other common plants are yucca and prickly pear. The expanse of short grass prairie is less than half of what occurred historically as the result of agricultural production and exotic grass introductions (ODWC 2005). This region also contains depressional wetlands called “playa lakes.” Playa lakes are important habitat resources for several endemic and migratory wildlife species. Some migrating waterfowl and shorebirds depend heavily upon the playas due to specialized migratory routes or other life history requirements (Brown 2001). The 1986 North American Waterfowl Management Plan identified the playa lakes region as one of the critical habitat conservation needs for migrating waterfowl.

Tall Grass Prairie

Historically, the tallgrass prairie spanned portions of 14 states and covered about 150 million acres. Today, the largest unbroken tracts of the tallgrass prairie exist in the flint hills of Oklahoma and Kansas and covers only 1 percent of its former range (ODWC 2005). European settlers suppressed natural fires and converted the prairie to working landscape of agricultural areas and settlements. Tall grass prairie is an herbaceous plant community dominated by four tall grass plant species such as big bluestem, Indian grass, switchgrass, and little bluestem. Other grasses present are prairie dropseed, side-oats grama, and eastern grama grass. Some common forbs may include compass plant, lead plant, scurf pea, Illinois bundle flower, golden rod, Indian paintbrush, and Maxmillian sunflower. Urban development and vegetation conversion are the major causes of habitat

fragmentation and emerge as a problem for grassland bird species in this region (NALCP 2004)

TEXAS

Table 7
Texas Focus Areas and Habitat Improvement Target Summary

Focus Area Name	Habitat Type	Accomplishment Type	Acres	Miles	Quantity
Coastal					
	Wetland	Restoration	200		
	Wetland	Enhancement	50		
	Wetland	Establishment	40		
	Riparian Corridor	Enhancement		1	
	Upland	Restoration	540		
	Upland	Enhancement	1050		
High Plains					
	Riparian Corridor	Enhancement		4	
	Upland	Enhancement	500		
Upland Pine and Bottomland Hardwood Forest					
	Upland	Restoration	100		
	Upland	Enhancement	100		
	Upland	Establishment	100		
	Upland	Protection	100		
	Upland	Maintenance	1000		
	Wetland	Restoration	100		
	Wetland	Enhancement	100		
	Wetland	Establishment	100		
Edwards Aquifer and Plateau					
	Upland	Enhancement	100		
Houston Toad					
	Wetland	Establishment	2		
	Upland	Enhancement	50		
North Central Texas Prairies					
	Wetland	Restoration	25		
	Wetland	Enhancement	25		
	Upland	Restoration	50		
	Upland	Enhancement	50		
South Texas Brushland					
	Upland	Restoration	100		
Trans-Pecos Western Edwards Plateau					
	Riparian Corridor	Restoration		1	

	Upland	Enhancement	100

* Annual targets based on 5 year habitat improvement projections are as follows: Wetland 642 acres, Upland 3940 acres, Riparian Corridor 6 miles, Stream Channel 0 miles and Aquatic Structure 0 (barriers, fish passage, etc.)

The following stakeholders were involved in determining focus areas:

1. Texas Parks and Wildlife Department
2. Natural Resources Conservation Service
3. Farm Services Agency
4. Environmental Defense
5. Texas Forest Service
6. The Nature Conservancy
7. Natural Area Preservation Association
8. Texas Audubon
9. U.S. Fish and Wildlife Service –Texas Coastal Program
10. Plateau Land Management Corporation
11. Oaks and Prairies Joint Venture
12. Lower Colorado River Authority
13. Ducks Unlimited

Table 8
Texas Listed and Unlisted Species for Focus Areas

Listed Status	Focus Area Name	Species Common Name
Endangered		
	Trans-Pecos / Western Edwards Plateau	Texas poppy-mallow, Pecos gambusia
	Edwards Aquifer and Plateau	golden-cheeked warbler, black-capped vireo, Tobusch fishhook cactus, Robber Baron Cave slsamander, Braken Bat Cave meshweaver, Government Bat Cave meshweaver, fountain darter, Tooth Cave ground beetle, Texas snowbells, Texas blind salamander, Texas wild-rice
	Coastal	hawksbill sea turtle, northern aplomado falcon, whooping crane, Kemp's ridley sea turtle, South Texas ambrosia, Attwater's greater prairie-chicken
	Upland Pine and Bottomland Hardwood Forest	red-cockaded woodpecker
	High Plains	least tern, Sonoran pronghorn, whooping crane
	Houston Toad	Houston toad
	South Texas Brushlands	ashy dogweed, Gulf Coast jaguarundi, Johnston's frankenia, ocelot, star cactus, Texas ayenia, Walker's manioc, Zapata bladderpod
Threatened		
	Coastal	loggerhead sea turtle, piping plover, green sea turtle
	Upland Pine and Bottomland Hardwood Forest	Louisiana black bear, Geocarpon minimum
	High Plains	Arkansas River shiner, piping plover
Candidate		
	Edwards Aquifer and Plateau	Austin blind Salamander
	Trans-Pecos / Western Edwards Plateau	yellow-billed cuckoo
	Upland Pine and Bottomland Hardwood Forest	Louisiana pine snake, Neches River rose-mallow
	High Plains	lesser prairie-chicken
Other		
	Trans-Pecos / Western Edwards Plateau	Pecos pupfish, San Felipe gambusia
	Coastal	brown pelican
	High Plains	black-tailed prairie dog, ferruginous hawk, grasshopper sparrow, migrant loggerhead shrike, mountain plover, swift fox, Texas horned lizard, western burrowing owl

"Other" status represents all other possible listing status categories.

Coastal

South Texas Estuarine and Salt Lakes

The 1,100,000 acre South Texas Estuarine and Salt Lakes emphasis area encompasses coastal marshes, marine environments, and near-coastal saline lakes. Much of this description was taken from The Nature Conservancy's Gulf Coast Prairies and Marshes Regional Conservation Plan and Laguna Madre Site Conservation Plan.

Coastal marshes are some of the most dynamic and productive ecological systems that exist. They provide food and shelter for numerous fish and wildlife species, and perform important roles in maintaining water quality and mitigating storm surges from the Gulf of Mexico. The abundant commercial and recreational fisheries along the coast also depend on marshes, as they provide the critical nursery and spawning ground for many species of finfish and shellfish. It is estimated that over 95% of marine species in the Gulf of Mexico rely on coastal marshes (freshwater, brackish water and saline) for their survival. From Matagorda Bay to the hypersaline lagoons and wind tidal flats of the Laguna Madre, the South Texas Estuarine and Salt Lakes Emphasis Area represents a grand array of wetland systems. Freshwater wetlands have experienced the greatest loss overall. Most losses were attributed to subsidence (mostly induced by anthropomorphic sources [oil/gas extraction]), deepwater intrusion (i.e. channelization), agriculture, and urban/rural development.

Although there are several biologically outstanding bays along the coast of the South Texas Estuarine and Salt Lakes, one is unique. The Laguna Madre of Texas and Tamaulipas, Mexico, is the only coastal, hypersaline ecosystem on the North American continent and one of only five worldwide. The laguna itself is only five miles across at its widest point, with an average depth less than three feet. Under the hot southern sun, the shallow laguna evaporates rapidly, turning the remaining water hypersaline. These hypersaline conditions create a premier nursery area for finfish, shrimp and shellfish. Underwater meadows of seagrass team with young aquatic life, a rich cafeteria for larger fish, wading birds and waterfowl. The laguna’s waters are also home to speckled trout, redfish, red drum and flounder - prized by sport fisherman worldwide.

Other species within the Laguna Madre include colonial waterbirds (twenty-three species of herons, egrets, ibises, pelicans, terns, gulls and skimmers). The largest concentration of reddish egrets in the world can be found in the Laguna Madre. Shorebirds such as Wilson’s plovers and snowy plovers nest here, or scurry after small prey in the tidal flats surrounding the laguna. Eighty per cent of the world population of redhead ducks winter on the Laguna Madre of Texas and Mexico. The majority of the Great Plains population of federally-listed threatened piping plovers winters in the Laguna Madre. The region is also one of the world’s most important fall and spring stopover areas for the peregrine falcons. Barrier islands also provide vital nesting habitat for the federally protected Kemp’s Ridley, Atlantic hawksbill, loggerhead, and green sea turtles.

Despite heavy development pressure along parts of the coast, much of this region remains untouched. The Laguna Madre's relatively pristine conditions make it one of the most important coastal conservation sites in the world. We will work with private landowners and other entities to preserve and enhance intact ecosystems. Where we can, we will use the best available science and restoration techniques to restore degraded habitats. We will work with area developers and leaders to strategically develop ecologically compatible residential and commercial development along the coast and inland. We will work to control exotic plants and animals and encourage sustainable land management in rural areas. Successful conservation here must be community-based, taking into account both biological and human needs within the Laguna Madre.

Austin Woods

Neotropical migratory birds annually migrate in the spring from Central and South America and the Caribbean Islands across the Gulf of Mexico to their nesting areas in the United States and Canada. These birds depend on the near- coastal forests of Austin's Woods for rest and energy replenishment during migration. At least 237 species totaling 29 million individuals migrate through the area every year. In addition to neo-tropical migrants, the forested areas are important resting breeding, feeding, and escape habitats for a great number of other birds and wildlife. Many species of waterfowl winter in the bottomlands, and some such as wood duck, breed in bottomland wetlands. A significant population of bald eagles is found in the area due largely the quality of the breeding habitat. The area is threatened by logging and development as well as a degradation of the forest understory. The Partners for Fish and Wildlife Program should work toward reforestation, understory improvement and the restoration fragmented habitat. Possible partners in undertaking such activities include: Texas Parks and Wildlife, Natural Resources Conservation Service, The Nature Conservancy and Houston Audubon Society.

Coastal Grasslands

The 5,400,000 acre coastal grasslands emphasis area provides habitat for 6 endangered species and critically important migratory bird habitat. Most of the coastal prairie has been lost to cultivation and urbanization. Much of the remaining prairie has been further fragmented by woody invasives. This emphasis area encompasses some of largest and best remaining examples of the coastal prairie. A cooperative effort has been undertaken with The Nature Conservancy, the Coastal Prairies Coalition of the Grazing Lands Conservation Initiative, Texas Parks and Wildlife Department, and the Natural Resources Conservation Service to work with the areas landowners to conserve habitat to support viable migratory bird populations and endangered species recovery.

Texas Prairie Wetlands

Texas Prairie Wetlands Project, borne from formation of the Gulf Coast Joint Venture, a component of the North American Waterfowl Management Plan (NAWMP), spans the coastal regions and adjacent agricultural lands of Texas, Louisiana, Mississippi, and Alabama. The Gulf Coast Joint Venture's goal is the conservation and perpetuation of continental waterfowl populations through restoration of wetlands and associated ecosystems within priority landscapes of Canada, the United States, and Mexico. The Texas Prairie Wetlands Project incorporates multiple watersheds along the entire Texas Coast. The area's greatest contribution in fulfilling the goals of the NAWMP is to provide habitat for wintering waterfowl and ensure they survive and return to breeding grounds in good condition and to provide amble breeding and post-breeding habitat for resident waterfowl. Mottled duck nesting habitat has been at risk for a number of years and has been identified by Texas Parks and Wildlife Department and Fish and Wildlife Service as a high resource priority. The Partners program will continue to work with our private landowners and other partners to develop projects that address declining habitat issues for the mottled duck.

The Texas Coast is divided into the Gulf Chenier Plain Initiative Area (Chambers, Jefferson, Liberty, and Orange Counties), the Mid-Coast Initiative Area (Aransas, Austin, Brazoria, Calhoun, Colorado, Fort Bend, Galveston, Harris, Jackson, Lavaca, Matagorda, Refugio, San Patricio, Vitoria, Waller, and Wharton Counties), and the Laguna Madre Initiative Area (Brooks, Cameron, Kenedy, Hidalgo, Nueces, Starr, and Willacy Counties).

Upland Pine and Bottomland Hardwood Forest

East Texas Upland Pine Forest

The upland longleaf pine community is one of the rarest plant communities remaining across the West Gulf Coastal Plain, and across its entire range in the southeastern United States. Less than 3 percent of the southeastern landscape that was formerly in longleaf pine remains. In East Texas, there are only about 45,000 acres of longleaf remaining in scattered blocks. Upland pine savannah is generally associated with sandy, well-drained soils, moderate to sparse midstory; and a well-developed herbaceous understory dominated by grasses. The amount of herbaceous vegetation is related to canopy closure and the frequency of fire. Generally, a rich ground layer requires a high degree of solar penetration onto the forest floor. A well-managed upland pine savannah, where prescribed fire is frequently implemented has the potential to produce and sustain habitat for rare species such as the red-cockaded woodpecker, Bachman's sparrow, and Henslow's sparrow. In addition to these rare species, well burned pine savannah benefits the wild turkey and northern bobwhite, which is declining across its range. Applications of prescribed burning also encourage a number of native grasses, forbs and herbaceous plants including little bluestem. The longleaf pine-little bluestem vegetation series is globally threatened throughout its range, extremely rare throughout the West Gulf Coastal Plain, and vulnerable to extirpation in Texas.

The opportunity to collaborate with large landholders provides an excellent forum for conserving this landscape-scale conservation area. We will partner with public, private, and commercial landowners engaged in conservation on their own lands to coordinate and leverage their separate efforts, taking conservation beyond property boundaries and expanding it across the landscape. Such activities need to be undertaken with other partners such as the Texas Parks and Wildlife Department, Natural Resources Conservation Service, National Wild Turkey Federation, The Nature Conservancy, and local Soil and Water Conservation Districts.

East Texas Wetlands Project

Initiated in 2001, the East Texas Wetlands Program (ETWP) provides private landowners a way to receive the technical, financial, and management assistance necessary for restoring, enhancing, or creating wetlands and adjacent upland communities. Through a 5-year cooperative partnership which was renewed in 2006, Ducks Unlimited (DU), U.S. Fish and Wildlife Service Partners for Fish and Wildlife Program (USFWS), Texas Parks and Wildlife Department (TPWD), and Natural Resources Conservation Service (NRCS) are working to provide technical guidance and cost-sharing support for improvement of waterfowl, shorebird, and other migratory bird habitat on privately owned lands in East Texas. Projects typically involve hydroperiod restoration, reforestation, plant propagation, vegetation management, fencing (to control grazing), and conservation easements. The wetland habitats targeted include forested wetlands, moist-soil areas, harvested croplands, and waterfowl food plots to increase biodiversity for waterfowl, other migratory birds (including shorebirds, wading birds, and neotropical migratory land birds), and other wetland wildlife. Additionally, the ETWP brings federal, state, NGOs, and local people together for the common purpose of wildlife conservation.

Edwards Aquifer and Plateau

The Edwards Aquifer is challenged with urbanization, groundwater depletion, fragmentation and juniper encroachment. Many of the protected species are associated with spring flow or riparian habitats directly dependant on groundwater. The grassland/shrub mosaic of the uplands supports the majority of the priority bird species. The Partners Program work in this focus area consists of invasive vegetation control, primarily ashe juniper, followed by revegetation and reintroduction of a fire regime, which improves groundwater recharge for protected species.

Houston Toad

Habitat essential for the Houston toad occurs on roughly 143,000 acres of forested land and was formerly interspersed with small agricultural production and family farms and ranches. The Houston Toad focus area is experiencing rapid suburbanization and groundwater depletion as a result of the growth of the greater Austin metropolitan area. Breeding pond creation increases the suitability of the remaining forested land for this

endangered species. Numerous local conservation easements are in place and the Partners for Fish and Wildlife Program efforts enhance this work.

High Plains

The emphasis areas identified below represent a focus of both geographic and species' concerns. While we depicted the broad High Plains Focus Area geographically, it contains both species (lesser prairie chicken) and "systems" (Canadian River) that the Fish and Wildlife Service and our partners believe are important.

Lesser prairie-chicken

The lesser prairie-chicken emphasis is designed to improve habitat on existing rangeland fragments throughout the range of the species in Texas, and link these fragments together to expand overall occupied range. Linkage and restoration of fragments is expected to occur by restoring cropland to native prairie, removing invasive brush species from degraded native rangeland, applying prescribed fire as a rangeland restoration and maintenance tool, and working with USDA and TPWD to improve Conservation Reserve Program (CRP) habitat suitability for the lesser prairie-chicken. Implementation of the Partners for Fish and Wildlife Program within this focus area will be aided by the Candidate Conservation Agreement with Assurances (CCAA) held by TPWD, and boundaries of the focus area may shift as habitat restoration goals are met. This focus area is also expected to benefit riparian-dependent species such as the interior least tern, improve habitat conditions for waterfowl and shorebirds by restoring playas, and further the conservation of several species of concern identified by TPWD's Comprehensive Wildlife Conservation Strategy. Goals of this focus area are consistent with Partners in Flight and Playa Lakes Joint Venture regional habitat initiatives.

Canadian River

The Canadian River provides habitat for two listed species, the threatened Arkansas River shiner and the endangered interior least tern. The river faces a number of conservation issues, including the construction of impoundments, encroachment of exotic invasive species, and depletion of the underlying High Plains Aquifer. The Partners for Fish and Wildlife Program should work to stabilize the decline of listed species on the Canadian River and restore natural plant composition and streamflow regimes where appropriate. Such activities need to be undertaken with other partners such as the Texas Parks and Wildlife Department, Natural Resources Conservation Service, National Wild Turkey Federation, The Nature Conservancy, and local Soil and Water Conservation Districts.

North Central Texas Prairies

This is the most severely altered of Texas' ecoregions, since most of the Blackland Prairie (all four native Blackland Prairie grass communities are rare) have been converted for cropland or urban development. This area has also been identified as a priority in Texas

Parks and Wildlife Department's Comprehensive Wildlife Conservation Strategy. Only an estimated 5,000 acres remain in their historic condition in terms of plant species. All habitats in this ecoregion are threatened by rapid population growth and accompanying conversion to urban areas and pastureland, fragmentation and decreased land parcel size. Many tall grass prairie birds have declined drastically due to land conversion and fragmentation. This region is an important stopover habitat for migrants.

South Texas Brushland

The 7,400,000 acre South Texas Brushland focus area is known for its high biodiversity yet is confronted with severe habitat fragmentation due to a variety of causes. Historically the ocelot is known to have ranged widely across Texas. The only two breeding populations of any size currently known to persist in the United States occur in South Texas Brushland focus area in Cameron and Willacy Counties.

Humid Tamaulipan thornscrub occurs along the Laguna Madre in the east grade into arid gravelly hills along the Rio Grande. This focus area contains 6 endangered plant species that are primarily restricted in range to South Texas and Northeast Mexico. Ten unlisted, imperiled (G2 or rarer) plant species co-occur with the above-mentioned listed species. These co-occurring species are Vasey's adelia, Kleberg saltbush, prostrate milkweed, Runyon's cory cactus, plains gumweed, Correll's bluet, St. Joseph's staff, threeflower broomweed, Bailey's ballmoss and San Patricio tansyaster.

Rapid development in South Texas makes conservation of rare species and communities an urgent priority. While a few South Texas counties are losing residents, population growth rates for the counties in the Lower Rio Grande Valley are among the highest in Texas. Immigration and commercial traffic associated with the North American Free Trade Agreement (NAFTA) have contributed to rapid economic growth and development along the Rio Grande with two major Canada-to-Mexico arteries (I-69 and TTC-35) planned for South Texas. The increasing pressures of urbanization pose short- and long-term threats to rare species and their habitats as land-use practices change.

The Partners program will work with private landowners and other partners to conserve and restore rare species in South Texas where 99% of land-holdings are privately owned. In the Lower Rio Grande Valley, many private landholdings are interspersed among conservation tracts managed by the U.S. Fish and Wildlife Service's South Texas Refuges Complex. Additional conservation tracts in this area are held by The Nature Conservancy and by Texas Parks and Wildlife Department. Cooperative efforts will be expanded with the Nature Conservancy and Environmental Defense to continue their work with private landowners to conserve and restore endangered plants and to restore thornscrub to provide habitat for ocelots and jaguarundi. The newly formed Rio Grande Joint Venture will be beneficial to addressing these critical resource issues on the South Texas Brushland Focus Area.

Trans-Pecos / Western Edwards Plateau

This focus area is primarily the Texas extent of the Chihuahuan Desert, highlighted by mountains and isolated plateaus. Available surface water is rare except for a few rivers and creeks with perennial flow. Exceptions are springs and associated wetlands (cienega) that support many Federally listed species. These include 7 aquatic invertebrates, 5 fishes, 1 reptile, 1 bird and 2 plants. These habitats and species are stressed by climatic fluctuations and agricultural needs for irrigation and livestock water. The lack of fire and excessive grazing during drought has resulted in mesquite and cresotebush encroachment of the desert grasslands. This increase in brush species reduces the recharge from uplands into local aquifers and riparian habitats, further accentuating a reduction in surface water.

The Partners for Fish & Wildlife program will work to 1. reduce invasive plants, in both riparian and grassland habitats, with mechanical and appropriate chemical methods and prescribed fire, 2. control exotic plant species to enhance populations of protected aquatic species and 3. work to develop additional water sources for wildlife with rain catchment systems.

Goal 2: Broaden and Strengthen Partnerships -- *Accomplish our work through partnerships*

Objective 2.1: Increase awareness within our partnership base
This goal supports the Service's mission to "work with others" by engaging external partnerships and other Service programs in stewardship activities that restore, enhance and protect fish and wildlife habitats. The Southwest Region will participate in state agency, other federal agency and NGO planning activities and provide outreach to these groups to ensure they are knowledgeable of our activities and capabilities.

Objective 2.1.a: Increase the partnerships base
The Southwest Region proposes to increase the number of partnerships in the Southwest Region over the next five years by establishing a minimum of **120** new individual private landowner agreements and **4** new multiple cooperator agreements each year for the next five years. This will be accomplished as follows:

Arizona – **10** new individual private landowner agreements and **1** new multiple cooperator agreement each year.

New Mexico – **10** new individual private landowner agreements and **1** new multiple cooperator agreement each year.

Oklahoma – **50** new individual private landowner agreements and **1** new multiple cooperator agreement each year.

Texas -- 50 new individual private landowner agreements and **1** new multiple cooperator agreement each year.

Objective 2.2: Increase the proportion of technical assistance projects resulting in on-the-ground habitat conservation

Each state in the Southwest Region (R2) will continue to work with private landowners and other cooperators to provide technical assistance that results in landowner, or other cooperator, funded projects and to convert technical assistance projects to on-the-ground actions, depending on the amount of funding available. At present, there is a back-log of viable projects due to the lack of adequate funding to carry out projects. As funding increases, on the ground activities will increase.

Objective 2.3: Leverage levels or proportion of Federal to non-federal matching funds

Over the past 5 years, the Partners for Fish and Wildlife Program in the Southwest Region has developed projects with a total per acre cost of $66. Service costs have averaged $22 or 33% of total project costs. That represents a very efficient per acre cost with a very high leveraging ratio. The Southwest Region will continue to work toward efficient and effective leveraging, where we can, to ensure the best "bang for the buck." To improve leveraging, Partners for Fish and Wildlife Program staff will seek additional partnerships and with corporations and other benefactors and assist voluntarily enrolled landowners to find additional grants that are compatible with the Partners for Fish and Wildlife Program funding.

Goal 3: Improve Information Sharing and Communications – *Collaborate and share information and concerns with our partners, stakeholders, potential future partners, decision-makers and others to protect, restore and enhance Trust Resources*

Objective 3.1: Increase coordination with other agencies (local, state and federal) and stakeholders in project development and implementation

Objective 3.1.a: The Southwest Region will continue to use stakeholder meetings and other outreach opportunities to increase coordination with other agencies and stakeholders in project development and implementation. The Southwest Region will increase our coordination across Service programs lines within the Region and the Service to ensure that all divisions/programs understand our function. This will enable the Partners field staff to have access to all levels of expertise from endangered species to engineering to cultural resources. The combined experience and expertise of the Partners staff can also be utilized to assist other programs within the Southwest Region to work toward Regional priorities.

Objective 3.1.b: The Field Staff in the Southwest Region will continue to work with our sister state agencies, NGOs and other stakeholders and partners to implement our projects. This will include direct coordination with the NRCS,

who designs many of our wetland projects: the State Game and Fish agencies, who are direct partners with us in many "joint ventures", and NGOs, who are also direct partners with us. The Service has included their direct input into development of our focus areas. We share common resource issues and will continue to develop stronger partnerships with these groups. We have developed a geo-spatial data base that will include their, and our, priorities. Through sharing this data base with others, we can be more efficient in our time and funding. Our Field Staff is very knowledgeable of all other "conservation programs" in the Southwest Region and can act as "one stop shopping" for potential landowners.

Appendix

1. **Focus Areas for Southwest Region**
2. **Arizona Focus Areas**
3. **New Mexico Focus Areas**
4. **Oklahoma Focus Areas**
5. **Texas Focus Areas**

Objective 3.1.c: Connecting People With Nature is a National and Regional priority. This initiative seeks to expose our future generations to the wonders of the natural world. From the onset of the Partners program in Region 2, one our more productive information sharing and outreach tools is our Outdoor Classroom Program. Over the years we have developed partnerships with over 150 Independent School Districts, Private Schools, Community Colleges and Universities to install outdoor classrooms on their campuses. These have served as "community-based" outreach opportunities. Included in these outdoor classrooms are outdoor learning opportunities for students, family fishing days and seminars for other schools. We are currently working with Bass Pro Shops Outreach staff to develop outdoor learning opportunities at their Wonders of Wildlife Museum in Springfield, Missouri and at other locations in Region 2 where they have retail centers. To quote our Oklahoma State Partners Program Coordinator, "these outdoor classrooms, small as they are, could be more important that 1,000 acres of wetlands or other habitats in the wild because they enable the Service and the School Staff to reach thousands of students directly. Those students and their parents are the future and present constituency of all things outdoors." Region 2 will continue to focus our efforts on outdoor classrooms.

Goal 4: Enhance our Workforce – *Maintain and Grow our Support Staff.*

Objective 4.1: Ensure Individual Development Plans include annual job-related training that addresses identified resource issues and relate to the goals of our strategic plan and addresses the Service priority of connecting our people with nature. Training will proportionally divided between training associated with annual job-related activities pertinent to the 5 goals and training to maintain the Partners program's institutional knowledge while building on leadership.

Objective 4.1.a: The leadership of the Partners program in the Southwest Region will ensure that job-related training devoted to the five goals of this strategic plan range from 75% to 90%. The remaining training will focus on development of the staff for leadership and other career opportunities. The Southwest Region currently supports 20.5 Biological Full Time Equivalents, plus Administrative Staff, with sub-activity 1121 funding. Each state will target between 65 to 70 hours annually, per biological staff person and 25-50 hours annually per administrative staff to current with restoration and administrative activities.

Training scheduled to meet the goals of this strategic plan include the following:

Goal 1 – Conserving Habitat (focus areas)

Basic new employee training (2 new staff)
Partners for Fish and Wildlife Program Class (2 new staff)
Westland restoration/enhancement techniques
Short and tall grass restoration techniques
Invasive species control techniques

GIS training
Section 7 training
Safe Harbor/CCAA training
Cultural Resource training
Habitat restoration techniques
Riparian restoration techniques
In-stream restoration techniques
Ecosystem approach to conservation

Goal 2 – Broaden and Strengthen Partnerships

Conservation Partnerships (basics and advanced)
The 4 C's – Making Partnerships Work
The 4 C's – Advanced Tools for Partnering

Goal 3 – Improve Information Sharing and Communications

Grant Writing
Computer software training
Media training
Task Force Meetings
Working Group participation
Toastmasters

Goal 4 – Enhancing our Workforce

Advanced Leadership Training
Various Work Details
    Budget Training
    Contracting
    Administrative Techniques
    Serving in "Acting" roles in Regional Office and other Field Offices
Mentoring graduate students and others for recruitment
Toastmasters
Supervisory Training
Seminars on such topics as "handling different people"; Relationship building

Goal 5 – Increased Accountability

Administering Grants and Agreements
Contracting and Accounting procedures

Goal 5: Increase Accountability – *Measure, assess and report on the effectiveness, efficiency and fiscal integrity of our habitat conservation programs and activities.*

Objective 5.1: Increase the number of acres and miles of priority Federal trust species habitat restored or protected based on available funding

Objective 5.1.a: The Southwest Region will continue our ongoing efforts to work collaboratively with our cooperators and stakeholders and recruit new cooperators and stakeholders in and near the identified focus areas. We realize this is an on-going process that will involve continuously "tweaking" our focus areas. We have developed a geo-spatial data base that accounts for all the reportable activities in HabITS that we will work on. These will be stored by focus area and will be easily converted to Congressional District and other categories that we may deem important. The geo-spatial data base will allow us to expeditiously generate periodic and annual reports on our accomplishments and technical assistance. Accomplishment targets are displayed in state focus area Tables.

Objective 5.2: Improve management and control of program activities

Objective 5.2.a: The Southwest Region recently completed an internal Administrative Review that identified some aspects of the program that can be improved. The recent Administrative Review included all field stations and Regional Office organization codes funded partially or totally by sub-activity 1121 funds. Changes have been instituted that provide improved management efficiency of the Partners program in the Southwest Region. The Southwest Region will carry out similar Administrative Reviews on a 2 to 3-year recurring cycle to ensure the program is operating efficiently and in accordance with National Guidance.

Objective 5.3: Improve program quality control and quality of accomplishment data

Objective 5.3.a.: Currently, all Partners accomplishments are accounted for in our Habitat Improvement Tracking System (HabITS). It is a user interactive web-based system that requires individual users to enter all project related data, including type of accomplishment, acres and miles, and financial information. This has proved difficult for many remote users without high speed internet access. It is also difficult to understand.

Region 2 has developed (it is a work in progress) a geo-spatial data base will assist the Partners Program in the Southwest Region to exercise greater control of the quality of data. The geo-spatial data base is a user-friendly, easily mastered technology that will save significant time in accurately reporting our accomplishments in our national data base. Region 2's data base manager has worked closely with the HabITS data base manager to develop an easy upload of our data. This will ensure greater reporting accuracy and improve our data quality control.

Objective 5.4: Increase HabITS visual resources (before and after pictures of project accomplishments)

Objective 5.4.a.: The Southwest Region will include such requirements in annual performance plans for supervisors and field staff to ensure sufficient documentation of projects is available in HabITS.

Objective 5.5: Increase sub-activity funding fidelity

Objective 5.5.a.: The Administrative Review, completed in Fiscal Year 2006, identified aspects of the program that can be improved to ensure sub-activity funding fidelity. A Fund Target Table has been in use for the past 4 years that identifies those "program driven" activities that must be supported for an effective program. Safeguards are in place to ensure accountability, at the appropriate staff level and funding fidelity. Our annual report will include such items as Full Time Equivalents supported, operation expenses and project expenses.

Objective 5.6: Insure Performance Plans accurately reflect accountability for accomplishment targets.

Objective 5.6.a: Performance plans for all Partners for Fish and Wildlife Program staff and their supervisors will include accountability for aoutcomes in the Operational Plan. Performance plans should clearly articulate Regional Director, Assistant Regional Director, Regional Coordinator, Project Leader, State Coordinator and Field Staff responsibilities for meeting targets.