

PLAYA LAKES JOINT VENTURE

***Area Implementation Plan
for the
Shortgrass Prairie
Bird Conservation Region (18)
of Oklahoma***



PLAYA LAKES
JOINT VENTURE

***Date* 2008
(draft April 18, 2008)**

APPROVALS

By adopting this plan, PLJV Oklahoma partners signify:

- Endorsement of the planning process used to develop these habitat conservation recommendations.
- Recognition that the habitat acreage recommendations are based on a modeling process which sometimes required using sparse data and assumptions.
- Recognition that the overall direction and magnitude of the habitat recommendations are more important than specific acreages.
- Awareness that recommendations for some priority species may be detrimental to others, but that collectively the recommendations are balanced to consider the needs of all species.
- Intent to begin working towards the habitat recommendations and to develop the capacity to deliver habitat conservation at the scale needed.
- Intent to develop and support evaluation initiatives (testing assumptions inherent in the planning process) to facilitate re-planning and improvements to the habitat recommendations in future iterations of this plan.
- Understanding that this plan is dynamic and will be improved and updated with suggestions from PLJV Oklahoma partners.

PLJV Management Board Chairperson

_____ Date _____

State Management Board Representative

_____ Date _____

State Monitoring, Evaluation, and Research Team Representative

_____ Date _____

CONTACTS

Wade Free
Oklahoma Dept. of Wildlife Conservation
3014 Lakeview
Woodward, OK 73801
Tel. 580-254-9173
odwcnwr25@sbcglobal.net

Mike Carter
Playa Lakes Joint Venture
103 E. Simpson St.
Lafayette, CO 80026
Tel. 303-926-0777
mike.carter@pljv.org

TABLE OF CONTENTS

APPROVALS.....	2
CONTACTS.....	3
EXECUTIVE SUMMARY.....	5
BACKGROUND AND INTRODUCTION.....	6
Goal, Purpose, and Intended Audience.....	6
Plan Format.....	6
General Planning Approach.....	7
Implementation Timeframe.....	7
Decision Support Tools.....	7
Relationship of this Plan to other PLJV Biological Planning Reports.....	8
Plan Updates.....	8
NONBREEDING BIRDS.....	8
Waterfowl.....	8
Shorebirds – Wetland Guild.....	9
Waterbirds.....	10
BREEDING BIRDS.....	11
Grassland Guild.....	11
Riparian Guild.....	14
Shrubland Guild.....	14
INTEGRATED BIRD HABITAT RECOMMENDATIONS.....	15
Badlands/Cliffs/Outcrops.....	15
Cropland.....	16
Mixed Grass.....	16
Other.....	16
Other Wetlands.....	16
Pinyon/Juniper.....	17
Playa.....	17
Reservoirs, Lakes, and Ponds.....	17
Riverine Systems.....	17
Sand Sage.....	17
Shortgrass.....	18
NEXT STEPS.....	18
RECOMMENDED READING.....	19
GUIDELINES FOR INTERPRETING THE TABLES.....	20
Table 1.....	22
Table 2.....	25
Table 3.....	34
Figure 1.....	35

EXECUTIVE SUMMARY

This Plan presents habitat management recommendations that, if implemented, should allow priority bird species to reach and sustain objective levels in the Shortgrass Prairie Bird Conservation Region of Oklahoma. The goal of this plan is to “communicate broad-scale, long-term habitat requirements needed to maintain or increase bird numbers at levels that satisfy socio-economic desires”. Management recommendations in this plan are intended to direct attention and resources toward habitats and habitat management actions that are most important for priority bird species. This plan also may help identify new habitat programs or changes to existing programs that are needed to deliver conservation at a scale sufficient to produce positive changes in bird numbers. The primary audiences for this plan are agency and organization administrators, local working groups, and habitat conservation organizations that can use this information to develop and direct specific habitat conservation programs to attain these broad goals.

The following represent the major habitat conservation actions (i.e., conversion, restoration, management) recommended. Priority bird species that are expected to benefit as a result of the actions are shown in parentheses.

- Protect playas from sedimentation by installing grass buffers around playas located in cropland. Restore natural hydrology by filling pits and removing excessive accumulated sediments. Install fences around playa basins to manage livestock grazing.
- Manage 468 acres of playas as moist-soil units (**waterfowl**)
- Restore 326,432 acres of sand sage (**Cassin’s Sparrow**)
- Reconfigure 22,659 acres of sand sage to contribute to large blocks of habitat (**Lesser Prairie-Chicken**)
- Convert 204,304 acres of CRP to native grass-mixes (**Lesser Prairie-Chicken**)
- Reconfigure 192,556 acres of CRP to contribute to large blocks of habitat (**Lesser Prairie-Chicken**)
- Manage 575,422 acres of sand sage acres for high grass (**Lark Bunting**)
- Manage 632,490 acres of shortgrass prairie for high grass (**Grasshopper Sparrow, Lark Bunting**)
- Add 38,671 acres of prairie dogs primarily in Cimarron County (**Mountain Plover**)
- Manage 302,863 acres of shortgrass prairie for few shrubs and a heterogeneous mix of grass heights to contribute to large blocks of habitat (**Long-billed Curlew**)

This plan also recommends many other important actions to preserve the function of existing habitats that are thought to be threatened and declining. These recommendations are intended for implementation over a 30-year timeframe (2008-2038). Implementing these actions within this timeframe will be a major undertaking, requiring greater commitments of human and fiscal resources in the future than has occurred in the past. Adoption of these general habitat conservation recommendations is intended to help PLJV partners focus bird habitat conservation and management activities where they are most needed in Oklahoma’s Bird Conservation Region 18.

BACKGROUND AND INTRODUCTION

This Area Implementation Plan (AIP) is a product of the PLJV biological planning process. It presents habitat management recommendations that, if implemented, should allow priority bird species to reach and sustain objective levels as prescribed by the four national/continental bird conservation initiatives (*North American Waterfowl Management Plan*, *U. S. Shorebird Conservation Plan*, *Waterbird Conservation for the Americas*, and *Partners in Flight*).

Goal, Purpose, and Intended Audience

The goal of this plan is consistent with the goal of PLJV biological planning: “**Communicate broad-scale, long-term habitat requirements needed to maintain or increase bird numbers at levels that satisfy socio-economic desires**”. Recommendations in this plan are intended to direct attention and resources toward habitats and habitat management actions that are most important for priority bird species. Although this plan is general in nature, the plan may help to identify new habitat programs or changes to existing programs that are needed to deliver conservation at a scale sufficient to produce positive changes in bird numbers. The primary audiences for this plan are agency and organization administrators, local working groups, and habitat conservation organizations that can use this information to develop and direct specific habitat conservation programs to attain these broad goals.

Plan Format

Habitat management recommendations in this plan are grouped as follows. First, we present recommendations for nonbreeding birds (waterfowl, shorebirds, and waterbirds) and breeding birds (by guild; e.g., grassland birds). In these sections we discuss priority species, abundance trends, seasonal importance of the Area, important habitats and threats to those habitats, abundance targets, planning approach, results of carrying capacity analyses, and specific habitat management recommendations and justification. Details of the carrying capacity analysis are shown in Tables 1 and 2 for all priority species/guilds, including estimated current carrying capacity, and expected carrying capacity after the habitat recommendations are implemented. These sections should be of interest to readers interested in specific birds or bird groups.

Next, we present integrated bird habitat recommendations by habitat. In these sections we explain which birds benefit from recommended management actions, and how birds may be increased or maintained by implementing those actions. We also summarize estimated current habitat acreages, and desired future acreages, in Table 3. These sections should be of interest to readers wanting to know the implications of management actions in a specific habitat to all priority birds.

General Planning Approach

Briefly, we used a process based on principles of *Strategic Habitat Conservation* (USFWS and USGS 2006) to develop habitat management recommendations in this plan. In general, we developed (1) bird abundance targets that are stepped-down from continental objectives in the bird initiatives, and (2) *habitat* objectives that are linked biologically to the abundance targets.

More specifically, we used the following model to estimate current carrying of each habitat for each priority bird species:

$$\text{Birds} = \text{Acres of habitat} * \text{habitat availability factor} * \text{habitat suitability factor} * \text{large block factor} * \text{bird density}$$

The estimated number of birds supported in each habitat is summed, and compared to the bird abundance target. This process quantifies the importance of each habitat to each species. It also quantifies current carry capacity relative to desired carrying capacity, which allows crafting specific habitat acreage recommendations to bring a species to desired levels.

Habitat recommendations herein are only as good as the model inputs used to develop them. Readers interested in providing information to update the model inputs and resulting habitat recommendations are encouraged to contact the PLJV.

Implementation Timeframe

These recommendations are intended for implementation over a 30-year timeframe (2008 – 2038), although some management actions may require longer intervals to develop desired conditions (e.g., creating late successional riparian forest).

Decision Support Tools

The biological planning results and recommendations in this plan are intended to address the question of whether there is enough habitat (in the right quantity and quality) to support desired levels of birds. Another aspect of the planning process (beyond the scope of this plan) can be to delineate specific places on the landscape where habitat work can best benefit priority species. PLJV staff is available to work with partners to develop spatial models and maps (“decision support tools”) as needed. Habitat program managers with specified funding levels, priority species, habitats, or project areas are encouraged to contact PLJV staff to begin developing these tools for targeting habitat dollars for maximum benefit.

Relationship of this Plan to other PLJV Biological Planning Reports

This plan presents detailed habitat recommendations for the Area. It is beyond the scope of this plan to present all the details of the planning process. Some users may want to consult sources of additional information relevant to PLJV biological planning in general, and specifically to the habitat recommendations in this plan:

- *Implementation Planning Guide* (PLJV 2007a). This document describes the PLJV's general approach to biological planning, and describes in detail the *Hierarchical All Bird System* (HABS) database. This database stores the biological data used to model the current carrying capacity of the PLJV for priority birds (e.g., Tables 1 and 2), and to design a landscape that supports desired numbers of all priority bird species.
- *Habitat Assessment Procedures* (PLJV 2006c). This document describes the PLJV's habitat classification system and procedures for estimating acreages of important habitats as shown in this plan (Tables 1 - 3). These acreages were determined from the PLJV's GIS database and additional non-spatial data.
- *Planning Team Reports for Waterfowl* (PLJV 2005), *Shorebirds* (PLJV 2007b), *Waterbirds* (PLJV 2006b), and *Landbirds* (PLJV 2007c). These reports present details on priority species selection, determining important seasonal use periods, developing abundance and vital rate targets, determining limiting factors, and describing the planning approach used to develop habitat objectives. Consult these reports for background and justification for the carrying capacity model parameters shown in Tables 1 and 2.

Plan Updates

Consistent with the principles of adaptive management, this plan is intended to be dynamic. It will be updated as new bird and habitat information becomes available, to accommodate changes in strategic direction for habitat conservation, or as otherwise desired by PLJV partners and staff. Interested users of this plan should check the PLJV web site (www.pljv.org) for updates.

NONBREEDING BIRDS

Waterfowl

This Area is primarily important to migrating waterfowl with relatively low numbers of wintering waterfowl, primarily geese, in some years. Although several species of waterfowl also breed in the Area, they are at low densities relative to primary waterfowl breeding areas. During the nonbreeding seasons, waterfowl must obtain enough food resources to maintain body condition during winter, and increase body condition during fall and spring for subsequent migration. Studies have shown that birds in better body condition survive at higher rates during the nonbreeding seasons. Ducks can best meet energetic and nutritional needs through a combination of native foods provided in wetland habitats and waste grains available from

agricultural operations, especially when wetlands are unavailable due to drought, ice cover, etc. Geese typically will meet their energetic and nutritional needs primarily through use of available cropland, including winter wheat. Agricultural habitats, such as winter wheat, corn, and sorghum are critical to providing food resources to sustain migrating and wintering populations of geese. Open water roosting areas for ducks and geese can be especially limiting in most years.

Priority waterfowl species for this Area include Northern Pintail, Mallard, and Canada Goose (Shortgrass Prairie Population) for the nonbreeding seasons only. However, the PLJV used a bioenergetics approach to habitat conservation planning, which assumes foraging habitat is the primary factor limiting waterfowl abundance, body condition, and survival. This approach assesses foraging habitat availability versus energetic demands of priority species and all other waterfowl species common to the region. Therefore, habitat needs of all nonbreeding waterfowl species are included in the habitat recommendations.

Waterfowl abundance targets for the Area include approximately 6,400 ducks and 1,600 geese during midwinter (early January). For bioenergetics planning purposes, waterfowl abundance targets were translated to “use-days” for three seasons during the nonbreeding period: fall (Sep. – Nov.), winter (Dec. – mid-Feb.), and spring (mid-Feb – Apr.) Use-day targets are approximately 1.7 million for fall, 0.8 million for winter, and 2.7 million for spring.

Habitat assessments and bioenergetics modeling suggested that existing foraging habitats in this Area cannot support the abundance targets in fall or spring. Wetland foraging habitats for ducks include playas (estimated acreage 7,359) and stock ponds (estimated acreage 2,071) (Table 1). Row crop agricultural fields are especially important foraging habitat for some ducks, including Mallards, Northern Pintails, American Wigeon and American Green-winged Teal, and geese when located in relatively close proximity (< 10 miles) to adequate roosting areas.

This Area needs additional wetland foraging habitat and open water roosting habitat to support its waterfowl abundance targets. To accomplish this, we recommend managing 468 acres of playas as moist-soil units by manipulating water levels as needed. These acres should be managed for ducks by encouraging dense stands of seed-producing plants. Additional acres of open water habitat should also be provided adjacent to agricultural areas so that field feeding waterfowl can exploit waste grain fields as a winter food source.

Shorebirds – Wetland Guild

Migratory shorebirds use this Area primarily from July through October for fall migration, and from April through May for spring migration. During migration, shorebirds must obtain enough food resources to maintain and increase body condition. Most migratory shorebirds meet energetic and nutritional needs primarily through invertebrate foods obtained in wetland habitats, although other foods are used (e.g., some seeds).

Priority shorebirds in this guild include Snowy Plover, Piping Plover, American Avocet, Long-billed Curlew, Hudsonian Godwit, Semipalmated Sandpiper, Least Sandpiper, White-rumped

Sandpiper, Baird's Sandpiper, Pectoral Sandpiper, Stilt Sandpiper, and Long-billed Dowitcher. However, the PLJV used a bioenergetics approach to habitat conservation planning, which assumes foraging habitat is the primary factor limiting shorebird abundance, body condition, and survival. This approach assesses foraging habitat availability versus energetic demands of priority species and all other migrant shorebird species (approx. 30 total species) common to the region. Therefore, habitat needs of all migrant, wetland-foraging shorebird species were considered during habitat conservation planning.

Existing shorebird survey data for this Area were used to develop an abundance target of approximately 156 use-days, which includes abundance increases recommended in the U. S. Shorebird Conservation Plan. The top shorebird foraging habitats are playas (estimated acreage 7,359) and stock ponds (estimated acreage 2,071) (Table 1). Habitat assessments and bioenergetics modeling suggested there is ample habitat to support the use-day objective (Table 1). Therefore, this Plan contains no specific habitat recommendations for this guild.

Waterbirds

Priority nonbreeding waterbirds include Eared Grebe, Western Grebe, American White Pelican, Sandhill Crane, Whooping Crane, Franklin's Gull, Forster's Tern, and Black Tern. Similar to waterfowl and shorebirds, nonbreeding waterbirds must obtain enough food resources to maintain body condition during winter, and increase body condition during fall and spring for subsequent migration. Waterbirds meet energetic and nutritional needs primarily through foods provided in wetland and aquatic habitats, although agricultural habitats also are used, especially by cranes and sometimes by gulls.

The Area hosts migrating Sandhill Cranes; abundance targets were developed by stepping down objectives from the *Central Flyway Plan* for Midcontinent Population Sandhill Cranes. The Sandhill Crane abundance target is 24,944 use-days in fall.

In this Area, the most important limiting factor for cranes is roosting habitat. Important wetland types for crane roosting habitat are playas, lakes, rivers and moist-soil units (Table 1). However, the quality of existing river habitat is suspect due to reductions in hydroperiod (reduced stream flows caused by water impoundments and diversions, irrigation, infestations of exotic hydrophytes, etc.). Agricultural lands provide the primary crane foraging habitat. Playas and moist-soil units (estimated acreage 7,359 and 11, respectively) also provide additional foraging sites.

Habitat assessments and bioenergetics modeling suggested that this Area can support the use-day objectives for cranes (Table 1). However, the degraded and declining state of many wetlands important to cranes calls for restoration and protection efforts. Riverine systems should be restored by controlling hydrophytes (exotic and native), increasing in-stream flows (e.g., through water use and management policies) where possible. For other wetland types, restoration and protection recommendations described above for waterfowl also apply for cranes, especially suitable open water roosting areas adjacent to agricultural areas.

For other priority waterbird species (grebes, pelicans, gulls, and terns), we lacked any meaningful information to relate abundance and/or vital rates to habitat conditions. Therefore, we defer developing abundance targets and habitat objectives for these species until such information becomes available. However, we note that conservation recommendations were made for wetland habitats used by these species during the PLJV planning process for nonbreeding shorebirds and cranes. Until more explicit planning can be conducted, we assume that fulfilling habitat needs for shorebirds and cranes will also fulfill habitat needs for other nonbreeding waterbirds.

BREEDING BIRDS

In tackling the needs of priority landbirds for this Area, the PLJV worked off the assumption that providing the habitat needs for breeding landbirds would also, then, provide the habitat needs for migrant and wintering landbirds in the Area. Secondly, we assumed that appropriate breeding habitat was the primary limiting factor for breeding grassland birds. The planning approach assigned a density to each condition of every habitat that a priority species occupied, developed an estimation of current carrying capacity for each priority species, evaluated trends in the BCR to determine those species with statistically significant declining trends from Breeding Bird Survey (BBS) data (Sauer et al. 2005), and then used those trends to determine a number of birds needed to bring a species up to goal, by calculating the birds lost over the last thirty years and adding to the current estimated carrying capacity. Species with trends which did not fit our data quality requirements or with significant positive trends were assigned a goal of maintaining the current carrying capacity. If data quality increases for any non-significantly declining species in the future, the trend will be utilized to determine a population goal at that time.

For some species, when data dictated an abundance goal greater than 100% of the current estimated numbers, a provisional goal of doubling was utilized. In BCR 18 – OK those species were Mountain Plover, Long-billed Curlew, Lark Bunting, and Grasshopper Sparrow. Lesser Prairie-Chicken has good documentation of a regional decline, although it does not have a trend from the BBS. The abundance goal for Lesser Prairie-Chicken was determined by the Oklahoma representative to the Lesser Prairie-Chicken Interstate Working Group (R. Horton, *pers. comm.*).

Grassland Guild

Grasslands comprise the largest overall habitat type found in this Area and support priority species such as Scaled Quail, Swainson's Hawk, Mountain Plover, Long-billed Curlew, Burrowing Owl, Western Kingbird, Loggerhead Shrike, Chihuahuan Raven, Cassin's Sparrow, Lark Sparrow, Lark Bunting, and Grasshopper Sparrow. As a guild, grassland birds are declining more rapidly than any other group of landbirds.

The grassland bird guild includes both those species that need primarily grass and those that require shrubs within a grassland matrix. However, the species that are driving this Area's grassland needs are those that reach their highest densities with relatively taller grass and few shrubs on the landscape (Grasshopper Sparrow and Lark Bunting) with the exceptions of the two

species requiring models to evaluate landscape context (Lesser Prairie-Chicken and Long-billed Curlew).

Threats to grassland habitats include fire suppression and grazing regimes which overutilize grass, especially during the breeding season. In some areas, fire suppression has allowed shrubs to increase. This has had a deleterious effect on those species which require grasslands with few shrubs. Managing grasslands so that there is an even utilization across the landscape has had a negative effect on the maintenance of the suite of species that requires a heterogeneous mix of grass heights upon the landscape. Some birds, such as Long-billed Curlew, require very short grass for nesting habitat, but require nearby taller grasses for brood rearing. Grasslands with relatively taller grasses during the breeding season support significantly higher densities of some species such as Grasshopper Sparrow. Other threats include conversion to agriculture. Although many agricultural fields are utilized by some priority birds to some extent, their utilization tends to be at lower densities, and some species will not utilize cropland at all. Additionally, the extent to which crop maintenance and harvest timing affects productivity has not been well-established for many species. The extent of agricultural conversion on the landscape may be a factor for the decline in Lesser Prairie-Chicken. They thrived with small-scale agriculture adjacent to nearby grass/shrub prairie, but in recent decades with larger-scale conversion to agriculture they have declined. Likewise, the extent to which unutilized agricultural lands are kept or converted back to grasses (and the types of grass mixes used) will have an effect on some species, though these effects have not been well-quantified in Oklahoma.

The advent of CRP in the 1985 Farm Bill has helped to increase numbers of many grassland birds. Recent literature, inside and outside the region, has shown that the seed mixtures used in various CRP fields and the ultimate field species composition greatly influences the bird community utilizing those fields. Programs which may allow increased management of CRP fields, such as burning or short-term grazing as well as conversion to native grass seed mixtures or interseeding with forbs and legumes, may greatly increase use by priority grassland birds.

Specific recommendations are below:

Grasshopper Sparrow has declined in the last 30 years at an average rate of 3.3% per year in BCR 18, meaning more than 50% of the population has been lost. We assume that the decline is due to loss of habitat and that a more than doubling of habitat is needed to meet the population goal which is consistent with the PIF goal of doubling the population. Recommended actions are: 1) Manage sand sage prairie so that 199,192 acres of sand sage is managed for relatively taller grass, providing an additional 25,341 birds. Currently the PLJV estimates that 12,450 acres are managed this way; and 2) Manage 632,490 acres of shortgrass prairie for relatively taller grass, providing an additional 151,306 birds. Currently the PLJV estimates that 374,330 acres are maintained in this condition. These recommendations, fully implemented, are modeled to meet only 70% of the goal. However, we recommend implementing toward these acreage goals while partners determine what further habitat work is possible and the models and assumptions are further evaluated.

Lark Bunting has declined in the last 30 years at an average rate of 2.3%/yr in BCR 18. Recommended actions are: 1) Convert 326,432 acres of agricultural lands to sand sage,

providing 32,419 birds; 2) Manage all resultant sand sage acres for relatively taller grass, providing an additional 11,097 birds; 3) Add 38,671 acres of prairie dogs, providing an additional 7,271 birds; 4) Manage 632,490 acres of shortgrass prairie for relatively taller grass, providing an additional 3,436 birds; and 5) Maintain wheat production at the same level (a PLJV-estimated 544,978 acres), while reducing overall cropland acreage as recommended elsewhere, which will maintain 53,135 birds as currently modeled. These recommendations, fully implemented, are modeled to meet only 59% of the goal. However, we recommend implementing toward these acreage goals while partners determine what further habitat work is possible and the models and assumptions are further evaluated.

Long-billed Curlew has declined in the last 30 years at an average rate of 4.3% per year in BCR 18, meaning more than 50% of the population has been lost. We assume that the decline is due to loss of habitat and that a more than doubling of habitat is needed to meet the population goal which is consistent with a goal of doubling the population. Recommended actions are: 1) Add 38,671 acres of prairie-dogs primarily in Cimarron County, providing an additional 74 birds; 2) Manage 302,863 acres of shortgrass prairie for few shrubs and a heterogeneous mix of grass heights so that it contributes to large blocks of habitat (see Long-billed Curlew model), providing an additional 268 birds. Currently the PLJV estimates that 154,877 acres of shortgrass prairie contributes to large blocks of habitat. This will bring the species to goal.

To support Long-billed Curlews, research in other portions of the country suggests that large blocks of prairie with few shrubs needs to be within approximately 1 mile of a water source. The current PLJV model for Curlew habitat requires 1,650 acres of prairie with no more than 220 acres of shrubs or woodland and less than 51 acres of road. The PLJV can help to determine where shortgrass prairie management will be of most benefit to Long-billed Curlew.

Grassland birds which utilize prairie-dog colonies (Burrowing Owl and Mountain Plover), have either non-statistically declining trends (Burrowing Owl) or have habitat preferences that can also be replicated through appropriate management of shortgrass prairie near where they occur (Mountain Plover).

Mountain Plover has declined in the last 30 years at an average rate of 3.0% per year in BCR 18, meaning more than 50% of the population has been lost. We assume that the decline is due to loss of habitat and that a more than doubling of habitat is needed to meet the population goal which is consistent with the PIF goal of doubling the population. To bring the species to goal one will have to balance the higher densities of birds shown on prairie-dog colonies (from Montana studies) versus lower densities on shortgrass managed for few shrubs and low grass. Recommended actions are: 1) Add 38,671 acres of prairie dog colonies in Cimarron County, providing an additional 495 birds; 2) Maintain 56,149 acres of shortgrass prairie within Cimarron County with few shrubs and low grass. These actions will bring the species up to goal.

Alternatively, one could add 73,880 acres of shortgrass prairie with few shrubs and low grass in Cimarron County. This, however, would necessitate lowering goals that could be achieved by other birds that require relatively taller grass (i.e. Grasshopper Sparrow). Another alternative would be to increase the average size of prairie-dog colonies. In the Colorado Grasslands plan (CDOW 2003) it is suggested that Mountain Plover densities are greater on prairie-dog colonies

covering about 14 – 123 acres than on smaller colonies. Therefore, increasing the size of average prairie-dog colonies would increase densities of plovers on those colonies and the number of birds, and decrease the number overall acres needed.

Riparian Guild

Riparian areas comprise just over 1% of the landscape. Riparian forest and shrublands are important to priority species such as Northern Bobwhite, Swainson's Hawk, Red-headed Woodpecker, and Bullock's Oriole. No breeding riparian forest or shrubland-associated landbirds have statistically significant declining trends in BCR 18, though some, such as Red-headed Woodpecker, show significant declining national trends. Therefore the abundance goals are to maintain the current estimated carrying capacity for these species. However, current PLJV GIS has not evaluated exotic versus native riparian shrubland in Oklahoma. We know that exotic riparian shrubland, consisting primarily of salt cedar (tamarisk) and Russian olive comprises a portion of much riparian shrubland in the Area. In order to maintain a species such as Bullock's Oriole, the exotic riparian shrubland should be converted to native riparian shrubland. No habitat acreage increases are recommended.

Shrubland Guild

Sand sage shrublands comprise just over 9% of the landscape in the Area. These shrublands are important to a number of priority species including Lesser Prairie-Chicken, Scaled Quail, Loggerhead Shrike, Chihuahuan Raven, and Cassin's and Lark Sparrow. Most of these, however, maintain larger numbers in shortgrass prairie and could equally be dealt with in a grassland context. Shrub-associated priority species with a statistically significant declining BBS trends in BCR 18 include Cassin's Sparrow. There is high concern about past Lesser Prairie-Chicken declines (Davis et al. 2007). Others, such as Loggerhead Shrike and Lark Sparrow, show significant declining national trends.

There is no BBS trend for Lesser Prairie-Chicken. In Oklahoma, a goal of increasing the population by 150% over the next 30 years was set by R. Horton (*pers. comm.*). Recommended actions are: 1) Convert 204,304 acres of CRP from non-native grass mixes to native grass-mixes, providing an additional 122 birds. Currently PLJV estimates that there are 51,075 acres of native grass-mix CRP in the Area. This would add 122 birds; 2) Reconfigure 192,556 acres of CRP so that it contributes to large blocks of habitat (see Lesser Prairie-Chicken model), providing an additional 1,320 birds. Currently the PLJV estimates that 27,070 acres do so; and 3) Reconfigure 22,659 acres of sand sage so that it contributes to large blocks of habitat, providing 353 birds. Currently the PLJV estimates that 52,038 acres do so. This will bring the species to goal. This is not the only method for achieving goal, but sand sage and CRP are very important to the species in this Area. Interseeding native-grass mix CRP with forbs and/or alfalfa may well increase the densities of Lesser Prairie-Chickens thereby reducing the need for the reseeded of CRP. However, it is unknown to what extent densities change when this manipulation is implemented. Regardless, researchers in Kansas have noted increases in Lesser Prairie-Chicken activity when those fields have been modified as above.

The current PLJV Lesser Prairie-Chicken model requires areas with native mixed grasses and at least 1,000 acres of sand sage within a 5,000 acre block that also contains no more than 1) 3,000 acres of cropland or CRP, 2) 50 acres of roads (and no 4-lane roads), and 3) 50 acres of woodland types. The current model has a moderately good fit with the known distribution of Lesser Prairie-Chicken in Oklahoma, though it has tended to overemphasize some areas. The PLJV can recommend locations that may benefit from an increase in CRP within or near Lesser Prairie-Chicken range. Efforts to increase populations of this bird should focus on increasing the amount of sand sage that can support Lesser Prairie-Chicken through focused placement of CRP, and research to assess how CRP may become more valuable to the bird in Oklahoma, as CRP has been demonstrated to be in Kansas. The PLJV will work in concert with ODWC and other partners to further refine the Lesser Prairie-Chicken model for the state.

Cassin's Sparrow has declined in the last 30 years at an average rate of 0.9% per year in BCR 18. Recommended actions are: 1) Restore 326,432 acres of sand sage, and managed the resulting 575,422 acres for relatively taller grass, providing 53,045 birds. Currently the PLJV estimates that 12,450 acres are managed for this condition. This recommendation, if implemented, is modeled to meet only 98% of the goal. However, we recommend implementing toward these acreage goals while partners determine what further habitat work is possible and the models and assumptions are further evaluated.

Woodland/Forest Guild

Woodlands within the Area are at the western fringes of the Great Plains in Oklahoma and comprise less than 1% of the landscape. There are very few acres of pinyon-juniper habitat. However, they are critical to a few priority species which are on the eastern edge of the range in the United States (Lewis's Woodpecker and Pinyon Jay). Neither of the two primary woodland species have statistically significant declining trends in BCR 18, though Pinyon Jay displays a significant national decline. Therefore the abundance goals are to maintain the current estimated carrying capacity, and habitat goals are to maintain current acreages.

INTEGRATED BIRD HABITAT RECOMMENDATIONS

(By Association)

Badlands/Cliffs/Outcrops

Currently there are no PLJV priority species utilizing this habitat type. However, these can be important for some prairie breeding raptors. Maintain all acres of this habitat type.

Cropland

Convert 326,432 acres of agricultural lands to sand sage for Cassin's Sparrow. Avoid converting cropland near wetlands that receive high use as waterfowl roosting areas. Encourage dryland rather than irrigated crop production when possible.

CRP

Convert 204,304 acres of CRP from non-native grass mixes to native grass-mixes to support Lesser Prairie-Chicken. Currently PLJV estimates that there are 51,075 acres of native grass-mix CRP in the Area.

Reconfigure 192,556 acres of CRP so that it contributes to large blocks of habitat (see Lesser Prairie-Chicken model). Currently the PLJV estimates that 27,070 acres do so.

Wherever possible, interseed native-grass mix CRP with forbs, native legumes and/or alfalfa to increase densities of Lesser Prairie-Chickens.

Mixed Grass

This habitat supports a variety of priority species. With such a small acreage however, the PLJV recommends only retaining all mixed grass habitat in this Area.

Other

Trees within town limits, preferably cottonwoods, support populations of Mississippi Kite, Western Kingbird, Bullock's Oriole and, occasionally Red-headed Woodpecker. Maintain trees in towns and when possible, replant with native species. Note that this habitat, and possibly in Riverine systems, is the only places that the PLJV recommends planting trees in the Area.

Other Wetlands

Manage 468 acres of playas by manipulating water levels as needed. These acres should be managed for dense stands of seed-producing plants attractive to waterfowl. Provide supplemental water as needed if rainfall is insufficient to flood these areas. Playas are important waterfowl habitat, but foraging potential can be increased through management. These actions will provide approximately 1.9 million additional foraging use-days for waterfowl, and will increase the foraging carrying capacity of the Area to desired levels.

Protect known colonial waterbird colonies and areas where marsh birds breed.

Pinyon/Juniper

Lewis's Woodpecker and Pinyon Jay require this habitat within Oklahoma. Maintain all acres of pinyon-juniper habitat in Cimarron County.

Playa

Protect playas (estimated 7,359 acres) from further sedimentation by installing grass buffers around playas located in cropland. Buffer width, species composition, and management should be carefully considered to protect playas from sedimentation yet allow overland water flow to reach the basin. Restore natural hydrology by filling pits and removing excessive accumulated sediments. Install fences around playa basins to manage livestock grazing. Consider double-fencing (a fence around the playa basin and another around the upland buffer) to allow grazing in the uplands while protecting moist-soil plants for waterfowl. Avoid fencing playas in areas known to be occupied by Lesser Prairie-Chickens to reduce collision risks.

Reservoirs, Lakes, and Ponds

Maintain/improve stock pond (estimated 2,071 acres) foraging habitat for waterfowl by fencing cattle from the shallow upper ends. Stock ponds provide important waterfowl foraging habitat, and the Area is below desired foraging carrying capacity.

Protect known colonial waterbird colonies and areas where marsh birds breed such as at Optima NWR.

Riverine Systems

Restore and enhance river channel (estimated 13,719 acres) flows and wet meadows (estimated 16,084 acres) by controlling hydrophytes (exotic and native), increasing in-stream flows (e.g., through water use and management policies) where possible.

Protect known colonial waterbird colonies and areas where marsh birds breed.

Sand Sage

Restore 326,432 acres of sand sage for Lark Bunting. Manage all resultant sand sage acres (575,422 acres) for relatively taller grass. Currently the PLJV estimates that 12,450 acres are managed for this condition.

Reconfigure 22,659 acres of sand sage so that it contributes to large blocks of habitat for Lesser Prairie-Chicken. Currently the PLJV estimates that 52,038 acres do so.

Shortgrass

Manage 632,490 acres of shortgrass prairie for relatively taller grass for Grasshopper Sparrow and Lark Bunting. Currently the PLJV estimates that 374,330 acres are maintained in this condition.

Add 38,671 acres of prairie dogs for Mountain Plover, primarily in Cimarron County. Currently the PLJV estimates that there are 31,157 acres of prairie-dog colonies in this Area.

To support Long-billed Curlew, manage 302,863 acres of shortgrass prairie for few shrubs and a heterogeneous mix of grass heights so that it contributes to large blocks of habitat (see Long-billed Curlew model). Currently the PLJV estimates that 154,877 acres of shortgrass contributes to large blocks of habitat.

NEXT STEPS

This plan identifies broad-scale, long-term habitat goals that are expected to provide significant benefits to priority bird species in the planning Area. To make significant progress toward these goals, shorter-term objectives need to be identified with specific actions outlined. This will require more significant interaction with local partners to identify specific processes which can be implemented to reach plan goals. The next steps envisioned for successful implementation of this Plan include:

- Work with local land managers and land owners to implement on-the-ground habitat actions that forward the goals stated in this Plan.
- Serious consideration should be given to stepping down objectives to a 10-year time frame that coincides with Farm Bill time frame. Farm Bill conservation provisions and programs (CRP, WRP etc.) are the most likely primary vehicles for attaining habitat conservation objectives.
- Coordinate with resource management agencies, conservation organizations, and local working groups to use existing programs to direct programmatic resources to forward the goals stated in this plan. Develop new programs to fill gaps as needed.
- Address policy-level issues at local, state, and national levels to ensure that beneficial conservation opportunities continue or are improved (e.g., CRP, NAWCA, etc.)
- Develop spatially-explicit models and other decision support tools to provide better direction regarding the type and location of habitat actions that will provide the greatest benefit for priority bird populations.
- Evaluate the importance of certain wetland types, especially river channels and wet meadows, for waterfowl, shorebirds, and waterbirds. Evaluate the foraging value of these habitats, and the accuracy of current acreage estimates from GIS.
- Consider alternative approaches to waterfowl carrying capacity modeling, e.g., under the assumption that roosting habitat adjacent to agricultural feeding areas (rather than just wetland foraging habitat) is also a significant contributing factor to limiting carrying capacity of the Area.

- Consider developing new (lower) population targets for some species. Most population targets are based on recovering birds lost during the past 30 years, but for some species this requires habitat conversion and restoration at levels that may be difficult to achieve. However, population targets for some species/guilds seem unreasonably low due to data limitations (e.g., nonbreeding wetland shorebirds) and should be reexamined.
- Conduct pilot studies and evaluation of the efficacy of habitat management actions recommended in this plan, especially those involving large areas of upland habitat.

RECOMMENDED READING

- Colorado Division of Wildlife (CDOW). 2003. Conservation Plan for Grassland Species in Colorado. 205 pp. <http://wildlife.state.co.us/WildlifeSpecies/GrasslandSpecies/>
- Davis, D. M., R. Horton, E. A. Odell, R. D. Rodgers and, H. Whitlaw. 2007. Draft Lesser Prairie-Chicken Conservation Initiative. Lesser Prairie Chicken Interstate Working Group. Unpublished Report. New Mexico Department of Game and Fish, Santa Fe, New Mexico, USA.
- PLJV. 2005. Waterfowl team report. Technical companion document to the PLJV Implementation Planning Guide. 34pp.
- PLJV. 2006a. PLJV master plan, v. 2.4. 31pp.
- PLJV. 2006b. Waterbird team report, v. 1.0. Technical companion document to the PLJV Implementation Planning Guide. 17pp.
- PLJV. 2006c. Habitat assessment procedures, v. 2.0. Technical companion document to the PLJV Implementation Planning Guide. 37pp.
- PLJV. 2007a. PLJV implementation planning guide, v. 2.0. 38pp.
- PLJV. 2007b. Shorebird team report, v. 2.0. Technical companion document to the PLJV Implementation Planning Guide. 52pp.
- PLJV. 2007c. Landbird team report, v.1.0. Technical companion document to the PLJV Implementation Planning Guide.
- Sauer, J. R., J. E. Hines, and J. Fallon. 2005. The North American Breeding Bird Survey, Results and Analysis 1966 - 2005. Version 6.2.2006. [USGS Patuxent Wildlife Research Center](http://www.fws.gov/patuxent/), Laurel, MD.
- USFWS and USGS. 2006. Strategic habitat conservation. Final report of the National Ecological Assessment Team. 45pp.

GUIDELINES FOR INTERPRETING THE TABLES

Tables 1 and 2

These tables show the carrying capacity models for each priority bird species/guild and are intended to show the details of the model parameters. Carrying capacity is shown for each Association/Condition (i.e., habitat type); under each, the top line shows estimated current habitat conditions and the bottom line shows desired future habitat conditions per recommendations in this Plan (note any acreage changes). The population goal is shown and carrying capacity is expressed as percent of goal. Some nonbreeding birds have separate goals and carrying capacities for multiple seasons (e.g., fall, winter, spring). The post-planning sum over all habitats should show each priority species/guild at or above 100% of goal unless otherwise noted.

Carrying capacity for each Association/Condition is estimated as (also see General Planning Approach section in this Plan, and the PLJV Implementation Planning Guide):

$$\text{Carrying Capacity} = \text{Condition Acres} * \text{Availability} * \text{Suitability} * \text{Large Block} * \text{Units}$$

Note: Decimal places for some parameters (e.g., Condition Acres) are carried further in the HABS database than shown in this table. So, some rounding errors will occur when multiplying these parameters manually.

Explanation of Column Headings

Assoc Name: “Association Name”; broad level PLJV habitat classification.

Condition Name: Finest level PLJV habitat classification.

Condition Acres: Acreage estimate of this habitat using GIS and other data sources.

Avail.: “Availability Factor”; estimated proportion of Condition Acres that are available to a priority bird/guild (e.g., proportion of acreage within bird’s breeding range, proportion not frozen in winter, etc.).

Suit.: “Suitability Factor”; estimated proportion of Condition Acres that are suitable for a priority bird/guild (e.g., proportion of acreage shallow enough for efficient foraging by wetland birds, etc.).

Large Block: “Large Block Factor”; estimated proportion of Condition Acres that are in block sizes sufficient to support priority species that require large blocks of habitat (e.g., Lesser Prairie-Chicken, Long-billed Curlew). See definitions of large block models in text.

Units: Bird densities in habitats that support them, expressed as breeding birds per acre for breeding species, or “use-days” per acre for nonbreeding birds (bioenergetics approach to

planning; see planning team reports for details). These estimates were derived from the literature or expert opinion.

CC: “Carrying Capacity”; estimated number of birds (or use-days) that can be supported on a specific habitat type; also summed over all habitats used by a priority species to estimate carrying capacity for a planning Area.

Goal: Bird abundance target (breeding birds or use-days) for an Area; stepped-down from the continental bird initiatives (see planning team reports for details).

% of Goal: Carrying capacity of a priority species/guild expressed as a percent of goal; shown for each habitat and also summed for the planning Area. This number should be at least 100% for all priority species/guilds in the planning Area after habitat recommendations are implemented. However, due to habitat actions need for other species, this number could be well over 100%.

Table 3

This table shows the estimated current habitat acreages, and desired future acreages based on habitat recommendations in this plan. Sums should equal the total area of the planning unit. Pre- and post-planning acreage sums should be approximately equal (not exactly equal due to rounding errors in database calculations).

Explanation of Column Headings

Association Name: Broad level PLJV habitat classification.

Condition Name: Finest level PLJV habitat classification.

Pre-Condition Acres: Current acreage estimate of this habitat (using GIS and other data sources).

Post Condition Acres: Desired future acreage of this habitat, after recommendations in this Plan are implemented.

Net Change: Difference between pre- and post Condition acres, representing the change in acreage of a habitat type after recommendations in this plan are implemented.

Table 1. Carrying capacity models for priority **nonbreeding birds**. Under each Condition Name, the top row represents estimated current habitat conditions, and the bottom row is the desired future habitat conditions.

Species/Guild Name: Cranes

Season: Fall

Assoc Name	Condition Name	Condition			Large		CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Units			
Other Wetlands	Moist-soil unit	11	1.0000	1.0000	1.00000	1,253.0000	13,783	24,944	55.26%
		468	1.0000	1.0000	1.00000	1,253.0000	568,404	24,944	2350.88%
Other Wetlands	Saline	0	1.0000	1.0000	1.00000	396.0000	0	24,944	0.00%
		0	1.0000	1.0000	1.00000	396.0000	0	24,944	0.00%
Other Wetlands	Emergent marsh	0	1.0000	1.0000	1.00000	396.0000	0	24,944	0.00%
		0	1.0000	1.0000	1.00000	396.0000	0	24,944	0.00%
Playa	Wet	1,472	1.0000	1.0000	1.00000	127.0000	186,919	24,944	749.35%
		1,169	1.0000	1.0000	1.00000	127.0000	148,486	24,944	595.20%
Riverine Systems	Wet meadow	16,084	1.0000	1.0000	1.00000	396.0000	6,369,426	24,944	25534.90
		16,140	1.0000	1.0000	1.00000	396.0000	6,391,551	24,944	25623.60
Riverine Systems	Floodplain marsh	0	1.0000	1.0000	1.00000	396.0000	0	24,944	0.00%
		0	1.0000	1.0000	1.00000	396.0000	0	24,944	0.00%
Summary for Fall (6 records)					Pre-planning Sum		6,570,128	26339.51%	
					Post-planning Sum		7,126,441	28569.68%	

Species/Guild Name: Shorebirds-Nonbreeding-Wetland

Season: Nonbreeding

Assoc Name	Condition Name	Condition			Large		CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Units			
Other Wetlands	Emergent marsh	0	1.0000	0.1000	1.00000	75.0000	0	156	0.00%
		0	1.0000	0.1000	1.00000	75.0000	0	156	0.00%
Other Wetlands	Saline	0	1.0000	0.1500	1.00000	75.0000	0	156	0.00%
		0	1.0000	0.1500	1.00000	75.0000	0	156	0.00%
Other Wetlands	Moist-soil unit	11	1.0000	0.1500	1.00000	75.0000	124	156	79.49%
		468	1.0000	0.1500	1.00000	75.0000	5,265	156	3375.00%
Playa	Wet pit only	368	1.0000	0.0010	1.00000	75.0000	28	156	17.95%
		368	1.0000	0.0010	1.00000	75.0000	28	156	17.90%
Playa	Wet	1,472	1.0000	0.1000	1.00000	75.0000	11,038	156	7076.28%
		1,169	1.0000	0.1000	1.00000	75.0000	8,769	156	5621.10%
Reservoirs Lakes Ponds	Lagoon	52	1.0000	0.0050	1.00000	75.0000	20	156	12.82%
		52	1.0000	0.0050	1.00000	75.0000	20	156	12.80%
Reservoirs Lakes Ponds	Stock pond	2,071	1.0000	0.0050	1.00000	75.0000	777	156	498.08%
		2,071	1.0000	0.0050	1.00000	75.0000	777	156	498.00%
Reservoirs Lakes Ponds	Freshwater lake	0	1.0000	0.0050	1.00000	75.0000	0	156	0.00%
		0	1.0000	0.0050	1.00000	75.0000	0	156	0.00%
Reservoirs Lakes Ponds	Reservoir	548	1.0000	0.0050	1.00000	75.0000	205	156	131.41%
		548	1.0000	0.0050	1.00000	75.0000	205	156	131.40%
Riverine Systems	Floodplain marsh	0	1.0000	0.0130	1.00000	75.0000	0	156	0.00%
		0	1.0000	0.0130	1.00000	75.0000	0	156	0.00%
Summary for Nonbreeding (11 records)					Pre-planning Sum		12,192	7816.03%	
					Post-planning Sum		15,064	9656.20%	

Species/Guild Name: Waterfowl-Nonbreeding

Season: Fall

Assoc Name	Condition Name	Condition			Large		CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Units			
Cropland	Wheat	544,978	1.0000	0.0000	1.00000	1,336.0000	0	1,710,551	0.00%
		544,972	1.0000	0.0000	1.00000	1,336.0000	0	1,710,551	0.00%
Cropland	Corn	121,033	1.0000	0.0000	1.00000	668.0000	0	1,710,551	0.00%
		46,535	1.0000	0.0000	1.00000	668.0000	0	1,710,551	0.00%
Cropland	Sorghum	239,331	1.0000	0.0000	1.00000	849.0000	0	1,710,551	0.00%
		113,788	1.0000	0.0000	1.00000	849.0000	0	1,710,551	0.00%
Other Wetlands	Emergent marsh	0	1.0000	1.0000	1.00000	1,336.0000	0	1,710,551	0.00%
		0	1.0000	1.0000	1.00000	1,336.0000	0	1,710,551	0.00%
Other Wetlands	Saline	0	1.0000	1.0000	1.00000	1,336.0000	0	1,710,551	0.00%
		0	1.0000	1.0000	1.00000	1,336.0000	0	1,710,551	0.00%
Other Wetlands	Moist-soil unit	11	1.0000	1.0000	1.00000	4,223.0000	46,453	1,710,551	2.72%
		468	1.0000	1.0000	1.00000	4,223.0000	1,976,364	1,710,551	115.54%
Playa	Wet	1,472	1.0000	1.0000	1.00000	428.0000	629,930	1,710,551	36.83%
		1,169	1.0000	1.0000	1.00000	428.0000	500,409	1,710,551	29.20%

Reservoirs Lakes Ponds	Freshwater lake	0	1.0000	0.0500	1.00000	225.0000	0	1,710,551	0.00%
		0	1.0000	0.0500	1.00000	225.0000	0	1,710,551	0.00%
Reservoirs Lakes Ponds	Stock pond	2,071	1.0000	0.4000	1.00000	225.0000	186,374	1,710,551	10.90%
		2,071	1.0000	0.4000	1.00000	225.0000	186,374	1,710,551	10.80%
Reservoirs Lakes Ponds	Reservoir	548	1.0000	0.0500	1.00000	225.0000	6,163	1,710,551	0.36%
		548	1.0000	0.0500	1.00000	225.0000	6,163	1,710,551	0.30%
Reservoirs Lakes Ponds	Lagoon	52	1.0000	0.4000	1.00000	428.0000	8,963	1,710,551	0.52%
		52	1.0000	0.4000	1.00000	428.0000	8,963	1,710,551	0.50%
Riverine Systems	Floodplain marsh	0	1.0000	1.0000	1.00000	1,336.0000	0	1,710,551	0.00%
		0	1.0000	1.0000	1.00000	1,336.0000	0	1,710,551	0.00%
Summary for Fall (13 records)					<i>Pre-planning Sum</i>		877,883		51.32%
					<i>Post-planning Sum</i>		2,678,273		156.34%

Species/Guild Name: Waterfowl-Nonbreeding

Season: Spring

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Sorghum	239,331	1.0000	0.0000	1.00000	849.0000	0	2,724,983	0.00%
		113,788	1.0000	0.0000	1.00000	849.0000	0	2,724,983	0.00%
Cropland	Wheat	544,978	1.0000	0.0000	1.00000	1,336.0000	0	2,724,983	0.00%
		544,972	1.0000	0.0000	1.00000	1,336.0000	0	2,724,983	0.00%
Cropland	Corn	121,033	1.0000	0.0000	1.00000	668.0000	0	2,724,983	0.00%
		46,535	1.0000	0.0000	1.00000	668.0000	0	2,724,983	0.00%
Other Wetlands	Moist-soil unit	11	1.0000	1.0000	1.00000	4,223.0000	46,453	2,724,983	1.70%
		468	1.0000	1.0000	1.00000	4,223.0000	1,976,364	2,724,983	75.52%
Other Wetlands	Saline	0	1.0000	1.0000	1.00000	1,336.0000	0	2,724,983	0.00%
		0	1.0000	1.0000	1.00000	1,336.0000	0	2,724,983	0.00%
Other Wetlands	Emergent marsh	0	1.0000	1.0000	1.00000	1,336.0000	0	2,724,983	0.00%
		0	1.0000	1.0000	1.00000	1,336.0000	0	2,724,983	0.00%
Playa	Wet	1,472	1.0000	1.0000	1.00000	428.0000	629,930	2,724,983	23.12%
		1,169	1.0000	1.0000	1.00000	428.0000	500,409	2,724,983	18.30%
Reservoirs Lakes Ponds	Freshwater lake	0	1.0000	0.0500	1.00000	225.0000	0	2,724,983	0.00%
		0	1.0000	0.0500	1.00000	225.0000	0	2,724,983	0.00%
Reservoirs Lakes Ponds	Lagoon	52	1.0000	0.4000	1.00000	428.0000	8,963	2,724,983	0.33%
		52	1.0000	0.4000	1.00000	428.0000	8,963	2,724,983	0.30%
Reservoirs Lakes Ponds	Reservoir	548	1.0000	0.0500	1.00000	225.0000	6,163	2,724,983	0.23%
		548	1.0000	0.0500	1.00000	225.0000	6,163	2,724,983	0.20%
Reservoirs Lakes Ponds	Stock pond	2,071	1.0000	0.4000	1.00000	225.0000	186,374	2,724,983	6.84%
		2,071	1.0000	0.4000	1.00000	225.0000	186,374	2,724,983	6.80%
Riverine Systems	Floodplain marsh	0	1.0000	1.0000	1.00000	1,336.0000	0	2,724,983	0.00%
		0	1.0000	1.0000	1.00000	1,336.0000	0	2,724,983	0.00%
Summary for Spring (13 records)					<i>Pre-planning Sum</i>		877,883		32.22%
					<i>Post-planning Sum</i>		2,678,273		98.29%

Species/Guild Name: Waterfowl-Nonbreeding

Season: Winter

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Corn	121,033	1.0000	1.0000	1.00000	668.0000	80,850,198	825,641	9792.42%
		46,535	1.0000	1.0000	1.00000	668.0000	31,085,247	825,641	3764.90%
Cropland	Wheat	544,978	1.0000	1.0000	1.00000	1,336.0000	728,090,386	825,641	88184.86
		544,972	1.0000	1.0000	1.00000	1,336.0000	728,082,139	825,641	88183.80
Cropland	Sorghum	239,331	1.0000	1.0000	1.00000	849.0000	203,191,702	825,641	24610.18
		113,788	1.0000	1.0000	1.00000	849.0000	96,605,647	825,641	11700.60
Other Wetlands	Moist-soil unit	11	0.0000	1.0000	1.00000	4,223.0000	0	825,641	0.00%
		468	0.0000	1.0000	1.00000	4,223.0000	0	825,641	0.00%
Other Wetlands	Saline	0	0.0000	1.0000	1.00000	1,336.0000	0	825,641	0.00%
		0	0.0000	1.0000	1.00000	1,336.0000	0	825,641	0.00%
Other Wetlands	Emergent marsh	0	0.0000	1.0000	1.00000	1,336.0000	0	825,641	0.00%
		0	0.0000	1.0000	1.00000	1,336.0000	0	825,641	0.00%
Playa	Wet	1,472	0.0000	1.0000	1.00000	428.0000	0	825,641	0.00%
		1,169	0.0000	1.0000	1.00000	428.0000	0	825,641	0.00%
Reservoirs Lakes Ponds	Stock pond	2,071	0.0000	0.4000	1.00000	225.0000	0	825,641	0.00%
		2,071	0.0000	0.4000	1.00000	225.0000	0	825,641	0.00%
Reservoirs Lakes Ponds	Reservoir	548	0.0000	0.0500	1.00000	225.0000	0	825,641	0.00%
		548	0.0000	0.0500	1.00000	225.0000	0	825,641	0.00%
Reservoirs Lakes Ponds	Freshwater lake	0	0.0000	0.0500	1.00000	225.0000	0	825,641	0.00%
		0	0.0000	0.0500	1.00000	225.0000	0	825,641	0.00%

Reservoirs Lakes	Lagoon	52	0.0000	0.4000	1.00000	428.0000	0	825,641	0.00%
Ponds		52	0.0000	0.4000	1.00000	428.0000	0	825,641	0.00%
Riverine Systems	Floodplain marsh	0	0.0000	1.0000	1.00000	1,336.0000	0	825,641	0.00%
		0	0.0000	1.0000	1.00000	1,336.0000	0	825,641	0.00%
Summary for Winter (13 records)									
					<i>Pre-planning Sum</i>		1,012,132,286		122587.45%
					<i>Post-planning Sum</i>		855,773,033		103649.30%

Table 2. Carrying capacity models for priority **breeding birds**. Under Condition Name, the top row represents estimated current habitat conditions, and the bottom row is the desired future habitat conditions.

<i>Species/Guild Name: Bullock's Oriole</i>			<i>Season: Breeding</i>						
Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Other	Urban/Suburban	2,512	1.0000	1.0000	1.00000	0.3778	949	1,451	65.40%
		2,512	1.0000	1.0000	1.00000	0.3778	949	1,451	65.40%
Riverine Systems	Riparian canopy - late successional w/ understory	248	1.0000	1.0000	1.00000	0.1728	43	1,451	2.96%
		248	1.0000	1.0000	1.00000	0.1728	43	1,451	2.96%
Riverine Systems	Riparian canopy - early successional w/ understory	369	1.0000	1.0000	1.00000	0.0528	20	1,451	1.38%
		369	1.0000	1.0000	1.00000	0.0528	20	1,451	1.38%
Riverine Systems	Riparian canopy - early successional w/o understor	369	1.0000	1.0000	1.00000	0.0528	20	1,451	1.38%
		369	1.0000	1.0000	1.00000	0.0528	20	1,451	1.38%
Riverine Systems	Riparian canopy - late successional w/o understory	248	1.0000	1.0000	1.00000	0.1728	43	1,451	2.96%
		248	1.0000	1.0000	1.00000	0.1728	43	1,451	2.96%
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0005	94	1,451	6.48%
		316,245	1.0000	1.0000	1.00000	0.0005	158	1,451	10.89%
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.0005	94	1,451	6.48%
		19,414	1.0000	1.0000	1.00000	0.0005	10	1,451	0.69%
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0005	94	1,451	6.48%
		316,245	1.0000	1.0000	1.00000	0.0005	158	1,451	10.89%
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.0005	94	1,451	6.48%
		58,086	1.0000	1.0000	1.00000	0.0005	29	1,451	2.00%
Summary for Breeding (9 records)					<i>Pre-planning Sum</i>		1,451		100.00%
					<i>Post-planning Sum</i>		1,430		98.55%

<i>Species/Guild Name: Burrowing Owl</i>			<i>Season: Breeding</i>						
Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.0031	580	7,792	7.44%
		19,414	1.0000	1.0000	1.00000	0.0031	60	7,792	0.77%
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.0031	580	7,792	7.44%
		58,086	1.0000	1.0000	1.00000	0.0031	180	7,792	2.31%
Shortgrass	PD town	31,108	1.0000	1.0000	1.00000	0.2132	6,632	7,792	85.11%
		69,780	1.0000	1.0000	1.00000	0.2132	14,877	7,792	190.93%
Summary for Breeding (3 records)					<i>Pre-planning Sum</i>		7,792		100.00%
					<i>Post-planning Sum</i>		15,117		194.01%

<i>Species/Guild Name: Cassin's Sparrow</i>			<i>Season: Breeding</i>						
Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
CRP	Non-native	459,683	1.0000	1.0000	1.00000	0.1196	54,978	229,185	23.99%
		255,380	1.0000	1.0000	1.00000	0.1196	30,543	229,185	13.33%
CRP	Native	51,076	1.0000	1.0000	1.00000	0.1196	6,109	229,185	2.67%
		255,380	1.0000	1.0000	1.00000	0.1196	30,543	229,185	13.33%
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.1494	86	229,185	0.04%
		576	1.0000	1.0000	1.00000	0.1494	86	229,185	0.04%
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.1494	86	229,185	0.04%
		576	1.0000	1.0000	1.00000	0.1494	86	229,185	0.04%
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.0497	29	229,185	0.01%
		576	1.0000	1.0000	1.00000	0.0497	29	229,185	0.01%
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.0497	29	229,185	0.01%
		576	1.0000	1.0000	1.00000	0.0497	29	229,185	0.01%
Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.1625	2,023	229,185	0.88%
		575,422	1.0000	1.0000	1.00000	0.1625	93,506	229,185	40.80%
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.1625	38,438	229,185	16.77%
		0	1.0000	1.0000	1.00000	0.1625	0	229,185	0.00%
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.0497	9,302	229,185	4.06%
		58,086	1.0000	1.0000	1.00000	0.0497	2,887	229,185	1.26%
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0497	9,302	229,185	4.06%
		316,245	1.0000	1.0000	1.00000	0.0497	15,717	229,185	6.86%
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.1494	27,962	229,185	12.20%

		316,245	1.0000	1.0000	1.00000	0.1494	47,247	229,185	20.62%
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.1494	27,962	229,185	12.20%
		19,414	1.0000	1.0000	1.00000	0.1494	2,900	229,185	1.27%
Summary for Breeding (12 records)					<i>Pre-planning Sum</i>		176,306		76.92%
					<i>Post-planning Sum</i>		223,573		97.55%

Species/Guild Name: Chihuahuan Raven

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.0002	0	511	0.00%
		576	1.0000	1.0000	1.00000	0.0002	0	511	0.00%
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.0007	0	511	0.00%
		576	1.0000	1.0000	1.00000	0.0007	0	511	0.00%
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.0002	0	511	0.00%
		576	1.0000	1.0000	1.00000	0.0002	0	511	0.00%
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.0007	0	511	0.00%
		576	1.0000	1.0000	1.00000	0.0007	0	511	0.00%
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.0007	166	511	32.49%
		0	1.0000	1.0000	1.00000	0.0007	0	511	0.00%
Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.0007	9	511	1.76%
		575,422	1.0000	1.0000	1.00000	0.0007	403	511	78.86%
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.0007	131	511	25.64%
		19,414	1.0000	1.0000	1.00000	0.0007	14	511	2.74%
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.0002	37	511	7.24%
		58,086	1.0000	1.0000	1.00000	0.0002	12	511	2.35%
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0007	131	511	25.64%
		316,245	1.0000	1.0000	1.00000	0.0007	221	511	43.25%
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0002	37	511	7.24%
		316,245	1.0000	1.0000	1.00000	0.0002	63	511	12.33%
Summary for Breeding (10 records)					<i>Pre-planning Sum</i>		511		100.00%
					<i>Post-planning Sum</i>		713		139.53%

Species/Guild Name: Dickcissel

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Sorghum	239,331	1.0000	1.0000	1.00000	0.0009	215	49,240	0.44%
		113,788	1.0000	1.0000	1.00000	0.0009	102	49,240	0.21%
Cropland	Corn	121,033	1.0000	1.0000	1.00000	0.0009	109	49,240	0.22%
		46,535	1.0000	1.0000	1.00000	0.0009	42	49,240	0.09%
Cropland	Hay	46,947	1.0000	1.0000	1.00000	0.0130	610	49,240	1.24%
		46,942	1.0000	1.0000	1.00000	0.0130	610	49,240	1.24%
Cropland	Wheat	544,978	1.0000	1.0000	1.00000	0.0238	12,970	49,240	26.34%
		544,972	1.0000	1.0000	1.00000	0.0238	12,970	49,240	26.34%
Cropland	Pasture	5,800	1.0000	1.0000	1.00000	0.0130	75	49,240	0.15%
		4,070	1.0000	1.0000	1.00000	0.0130	53	49,240	0.11%
Cropland	Alfalfa	11,490	1.0000	1.0000	1.00000	0.0238	273	49,240	0.55%
		8,063	1.0000	1.0000	1.00000	0.0238	192	49,240	0.39%
CRP	Native	51,076	1.0000	1.0000	1.00000	0.0680	3,473	49,240	7.05%
		255,380	1.0000	1.0000	1.00000	0.0680	17,366	49,240	35.27%
CRP	Non-native	459,683	1.0000	1.0000	1.00000	0.0680	31,258	49,240	63.48%
		255,380	1.0000	1.0000	1.00000	0.0680	17,366	49,240	35.27%
Riverine Systems	Wet meadow	16,084	1.0000	1.0000	1.00000	0.0160	257	49,240	0.52%
		16,140	1.0000	1.0000	1.00000	0.0160	258	49,240	0.52%
Riverine Systems	Native riparian shrubland	0	1.0000	1.0000	1.00000	0.0160	0	49,240	0.00%
		0	1.0000	1.0000	1.00000	0.0160	0	49,240	0.00%
Summary for Breeding (10 records)					<i>Pre-planning Sum</i>		49,240		100.00%
					<i>Post-planning Sum</i>		48,959		99.43%

Species/Guild Name: Eastern Meadowlark

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Sand Sage	Low grass	236,540	0.2000	1.0000	1.00000	0.0025	118	126	93.65%
		0	0.2000	1.0000	1.00000	0.0025	0	126	0.00%
Sand Sage	High grass	12,450	0.2000	1.0000	1.00000	0.0034	8	126	6.35%

		575,422	0.2000	1.0000	1.00000	0.0034	391	126	310.32%
Summary for Breeding (2 records)							126		100.00%
							391		310.32%

Pre-planning Sum
Post-planning Sum

Species/Guild Name: Grasshopper Sparrow

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Wheat	544,978	1.0000	1.0000	1.00000	0.1377	75,043	1,210,949	6.20%
		544,972	1.0000	1.0000	1.00000	0.1377	75,043	1,210,949	6.20%
Cropland	Hay	46,947	1.0000	1.0000	1.00000	0.3583	16,821	1,210,949	1.39%
		46,942	1.0000	1.0000	1.00000	0.3583	16,819	1,210,949	1.39%
Cropland	Pasture	5,800	1.0000	1.0000	1.00000	0.3583	2,078	1,210,949	0.17%
		4,070	1.0000	1.0000	1.00000	0.3583	1,458	1,210,949	0.12%
CRP	Non-native	459,683	1.0000	1.0000	1.00000	0.3460	159,050	1,210,949	13.13%
		255,380	1.0000	1.0000	1.00000	0.3460	88,361	1,210,949	7.30%
CRP	Native	51,076	1.0000	1.0000	1.00000	0.3460	17,672	1,210,949	1.46%
		255,380	1.0000	1.0000	1.00000	0.3460	88,361	1,210,949	7.30%
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.1529	88	1,210,949	0.01%
		576	1.0000	1.0000	1.00000	0.1529	88	1,210,949	0.01%
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.7390	425	1,210,949	0.04%
		576	1.0000	1.0000	1.00000	0.7390	425	1,210,949	0.04%
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.1529	88	1,210,949	0.01%
		576	1.0000	1.0000	1.00000	0.1529	88	1,210,949	0.01%
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.7390	425	1,210,949	0.04%
		576	1.0000	1.0000	1.00000	0.7390	425	1,210,949	0.04%
Riverine Systems	Wet meadow	16,084	1.0000	1.0000	1.00000	0.0393	632	1,210,949	0.05%
		16,140	1.0000	1.0000	1.00000	0.0393	634	1,210,949	0.05%
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.0354	8,374	1,210,949	0.69%
		0	1.0000	1.0000	1.00000	0.0354	0	1,210,949	0.00%
Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.1711	2,130	1,210,949	0.18%
		575,422	1.0000	1.0000	1.00000	0.1711	98,455	1,210,949	8.13%
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.1529	28,618	1,210,949	2.36%
		58,086	1.0000	1.0000	1.00000	0.1529	8,881	1,210,949	0.73%
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.7390	138,315	1,210,949	11.42%
		316,245	1.0000	1.0000	1.00000	0.7390	233,705	1,210,949	19.30%
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.1529	28,618	1,210,949	2.36%
		19,414	1.0000	1.0000	1.00000	0.1529	2,968	1,210,949	0.25%
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.7390	138,315	1,210,949	11.42%
		316,245	1.0000	1.0000	1.00000	0.7390	233,705	1,210,949	19.30%

Summary for Breeding (16 records)

Pre-planning Sum
Post-planning Sum

616,692
849,416

50.92%
70.14%

Species/Guild Name: Lark Bunting

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Wheat	544,978	1.0000	1.0000	1.00000	0.0975	53,135	668,868	7.94%
		544,972	1.0000	1.0000	1.00000	0.0975	53,135	668,868	7.94%
Cropland	Pasture	5,800	1.0000	1.0000	1.00000	0.0975	565	668,868	0.08%
		4,070	1.0000	1.0000	1.00000	0.0975	397	668,868	0.06%
Cropland	Hay	46,947	1.0000	1.0000	1.00000	0.0975	4,577	668,868	0.68%
		46,942	1.0000	1.0000	1.00000	0.0975	4,577	668,868	0.68%
CRP	Non-native	459,683	1.0000	1.0000	1.00000	0.2044	93,959	668,868	14.05%
		255,380	1.0000	1.0000	1.00000	0.2044	52,200	668,868	7.80%
CRP	Native	51,076	1.0000	1.0000	1.00000	0.2044	10,440	668,868	1.56%
		255,380	1.0000	1.0000	1.00000	0.2044	52,200	668,868	7.80%
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.1880	108	668,868	0.02%
		576	1.0000	1.0000	1.00000	0.1880	108	668,868	0.02%
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.1696	98	668,868	0.01%
		576	1.0000	1.0000	1.00000	0.1696	98	668,868	0.01%
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.2047	118	668,868	0.02%
		576	1.0000	1.0000	1.00000	0.2047	118	668,868	0.02%
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.2227	128	668,868	0.02%
		576	1.0000	1.0000	1.00000	0.2227	128	668,868	0.02%
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.0983	23,252	668,868	3.48%
		0	1.0000	1.0000	1.00000	0.0983	0	668,868	0.00%

Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.1186	1,477	668,868	0.22%
		575,422	1.0000	1.0000	1.00000	0.1186	68,245	668,868	10.20%
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.2227	41,682	668,868	6.23%
		316,245	1.0000	1.0000	1.00000	0.2227	70,428	668,868	10.53%
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.2047	38,313	668,868	5.73%
		316,245	1.0000	1.0000	1.00000	0.2047	64,735	668,868	9.68%
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.1880	35,187	668,868	5.26%
		58,086	1.0000	1.0000	1.00000	0.1880	10,920	668,868	1.63%
Shortgrass	PD town	31,108	1.0000	1.0000	1.00000	0.1880	5,848	668,868	0.87%
		69,780	1.0000	1.0000	1.00000	0.1880	13,119	668,868	1.96%
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.1696	31,743	668,868	4.75%
		19,414	1.0000	1.0000	1.00000	0.1696	3,293	668,868	0.49%
Summary for Breeding (16 records)					<i>Pre-planning Sum</i>		340,630		50.92%
					<i>Post-planning Sum</i>		393,701		58.86%

Species/Guild Name: Lark Sparrow

Season: Breeding

Assoc Name	Condition Name	Condition			Large		Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block					
Cropland	Pasture	5,800	1.0000	1.0000	1.00000	0.1288	747	139,706	0.53%	
		4,070	1.0000	1.0000	1.00000	0.1288	524	139,706	0.38%	
Cropland	Hay	46,947	1.0000	1.0000	1.00000	0.1288	6,047	139,706	4.33%	
		46,942	1.0000	1.0000	1.00000	0.1288	6,046	139,706	4.33%	
Cropland	Alfalfa	11,490	1.0000	1.0000	1.00000	0.1288	1,480	139,706	1.06%	
		8,063	1.0000	1.0000	1.00000	0.1288	1,039	139,706	0.74%	
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.1288	74	139,706	0.05%	
		576	1.0000	1.0000	1.00000	0.1288	74	139,706	0.05%	
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.1288	74	139,706	0.05%	
		576	1.0000	1.0000	1.00000	0.1288	74	139,706	0.05%	
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.1288	74	139,706	0.05%	
		576	1.0000	1.0000	1.00000	0.1288	74	139,706	0.05%	
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.1288	74	139,706	0.05%	
		576	1.0000	1.0000	1.00000	0.1288	74	139,706	0.05%	
Pinyon/Juniper	NA	16,141	1.0000	1.0000	1.00000	0.0033	53	139,706	0.04%	
		16,141	1.0000	1.0000	1.00000	0.0033	53	139,706	0.04%	
Riverine Systems	Native riparian shrubland	0	1.0000	1.0000	1.00000	0.0016	0	139,706	0.00%	
		0	1.0000	1.0000	1.00000	0.0016	0	139,706	0.00%	
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.1420	33,589	139,706	24.04%	
		0	1.0000	1.0000	1.00000	0.1420	0	139,706	0.00%	
Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.1420	1,768	139,706	1.27%	
		575,422	1.0000	1.0000	1.00000	0.1420	81,710	139,706	58.49%	
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.1288	24,107	139,706	17.26%	
		316,245	1.0000	1.0000	1.00000	0.1288	40,732	139,706	29.16%	
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.1288	24,107	139,706	17.26%	
		316,245	1.0000	1.0000	1.00000	0.1288	40,732	139,706	29.16%	
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.1288	24,107	139,706	17.26%	
		58,086	1.0000	1.0000	1.00000	0.1288	7,481	139,706	5.35%	
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.1288	24,107	139,706	17.26%	
		19,414	1.0000	1.0000	1.00000	0.1288	2,500	139,706	1.79%	
Summary for Breeding (15 records)					<i>Pre-planning Sum</i>		140,408		100.49%	
					<i>Post-planning Sum</i>		181,113		129.63%	

Species/Guild Name: Lesser Prairie-Chicken

Season: Resident

Assoc Name	Condition Name	Condition			Large		Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block					
CRP	Native	51,076	1.0000	1.0000	0.05300	0.0125	34	2,691	1.26%	
		255,380	1.0000	1.0000	0.43000	0.0125	1,373	2,691	51.02%	
CRP	Non-native	459,683	1.0000	1.0000	0.05300	0.0012	29	2,691	1.08%	
		255,380	1.0000	1.0000	0.43000	0.0012	132	2,691	4.91%	
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.0125	7	2,691	0.26%	
		576	1.0000	1.0000	1.00000	0.0125	7	2,691	0.26%	
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.0125	7	2,691	0.26%	
		576	1.0000	1.0000	1.00000	0.0125	7	2,691	0.26%	
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.0125	7	2,691	0.26%	
		576	1.0000	1.0000	1.00000	0.0125	7	2,691	0.26%	
Sand Sage	High grass	12,450	1.0000	1.0000	0.20900	0.0156	41	2,691	1.52%	

		575,422	1.0000	1.0000	0.30000	0.0156	2,693	2,691	100.07%
Sand Sage	Low grass	236,540	1.0000	1.0000	0.20900	0.0156	771	2,691	28.65%
		0	1.0000	1.0000	0.30000	0.0156	0	2,691	0.00%
Summary for Resident (7 records)								896	33.29%
								4,219	156.78%

Species/Guild Name: Lewis's Woodpecker

Season: Resident

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Pinyon/Juniper	NA	16,141	1.0000	1.0000	1.00000	0.0004	6	8	75.00%
		16,141	1.0000	1.0000	1.00000	0.0004	6	8	75.00%
Riverine Systems	Riparian canopy - late successional w/o understory	248	1.0000	1.0000	1.00000	0.0040	1	8	12.50%
		248	1.0000	1.0000	1.00000	0.0040	1	8	12.50%
Riverine Systems	Riparian canopy - late successional w/ understory	248	1.0000	1.0000	1.00000	0.0040	1	8	12.50%
		248	1.0000	1.0000	1.00000	0.0040	1	8	12.50%
Summary for Resident (3 records)								8	100.00%
								8	100.00%

Species/Guild Name: Loggerhead Shrike

Season: Resident

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Hay	46,947	1.0000	1.0000	1.00000	0.0089	418	2,867	14.58%
		46,942	1.0000	1.0000	1.00000	0.0089	418	2,867	14.58%
Cropland	Alfalfa	11,490	1.0000	1.0000	1.00000	0.0089	102	2,867	3.56%
		8,063	1.0000	1.0000	1.00000	0.0089	72	2,867	2.51%
Cropland	Pasture	5,800	1.0000	1.0000	1.00000	0.0089	52	2,867	1.81%
		4,070	1.0000	1.0000	1.00000	0.0089	36	2,867	1.26%
CRP	Non-native	459,683	1.0000	1.0000	1.00000	0.0011	506	2,867	17.65%
		255,380	1.0000	1.0000	1.00000	0.0011	281	2,867	9.80%
CRP	Native	51,076	1.0000	1.0000	1.00000	0.0011	56	2,867	1.95%
		255,380	1.0000	1.0000	1.00000	0.0011	281	2,867	9.80%
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.0017	1	2,867	0.03%
		576	1.0000	1.0000	1.00000	0.0017	1	2,867	0.03%
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.0017	1	2,867	0.03%
		576	1.0000	1.0000	1.00000	0.0017	1	2,867	0.03%
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.0017	1	2,867	0.03%
		576	1.0000	1.0000	1.00000	0.0017	1	2,867	0.03%
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.0017	1	2,867	0.03%
		576	1.0000	1.0000	1.00000	0.0017	1	2,867	0.03%
Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.0017	21	2,867	0.73%
		575,422	1.0000	1.0000	1.00000	0.0017	978	2,867	34.11%
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.0017	402	2,867	14.02%
		0	1.0000	1.0000	1.00000	0.0017	0	2,867	0.00%
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0017	318	2,867	11.09%
		316,245	1.0000	1.0000	1.00000	0.0017	538	2,867	18.77%
Shortgrass	PD town	31,108	1.0000	1.0000	1.00000	0.0011	34	2,867	1.19%
		69,780	1.0000	1.0000	1.00000	0.0011	77	2,867	2.69%
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.0017	318	2,867	11.09%
		19,414	1.0000	1.0000	1.00000	0.0017	33	2,867	1.15%
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0017	318	2,867	11.09%
		316,245	1.0000	1.0000	1.00000	0.0017	538	2,867	18.77%
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.0017	318	2,867	11.09%
		58,086	1.0000	1.0000	1.00000	0.0017	99	2,867	3.45%
Summary for Resident (16 records)								2,867	99.99%
								3,355	117.01%

Species/Guild Name: Long-billed Curlew

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	0.00000	0.0023	0	699	0.00%
		576	1.0000	1.0000	0.00000	0.0023	0	699	0.00%
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	0.00000	0.0023	0	699	0.00%
		576	1.0000	1.0000	0.00000	0.0023	0	699	0.00%
Playa	Dry	5,519	1.0000	1.0000	0.04100	0.0023	1	699	0.14%

		5,519	1.0000	1.0000	0.04100	0.0023	1	699	0.14%
Shortgrass	PD town	31,108	1.0000	1.0000	0.38200	0.0023	27	699	3.86%
		69,780	1.0000	1.0000	0.63000	0.0023	101	699	14.45%
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	0.38200	0.0023	164	699	23.46%
		58,086	1.0000	1.0000	1.00000	0.0023	134	699	19.17%
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	0.38200	0.0023	164	699	23.46%
		316,245	1.0000	1.0000	0.63500	0.0023	462	699	66.09%
Summary for Breeding (6 records)							Pre-planning Sum	356	50.93%
							Post-planning Sum	698	99.86%

Species/Guild Name: Mississippi Kite

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Other	Urban/Suburban	2,512	0.6000	1.0000	1.00000	0.2312	348	418	83.25%
		2,512	0.6000	1.0000	1.00000	0.2312	348	418	83.25%
Riverine Systems	Riparian canopy - late successional w/ understory	248	1.0000	0.2500	1.00000	0.2289	14	418	3.35%
		248	1.0000	0.2500	1.00000	0.2289	14	418	3.35%
Riverine Systems	Riparian canopy - early successional w/o understor	369	1.0000	0.2500	1.00000	0.2289	21	418	5.02%
		369	1.0000	0.2500	1.00000	0.2289	21	418	5.02%
Riverine Systems	Riparian canopy - early successional w/ understory	369	1.0000	0.2500	1.00000	0.2289	21	418	5.02%
		369	1.0000	0.2500	1.00000	0.2289	21	418	5.02%
Riverine Systems	Riparian canopy - late successional w/o understory	248	1.0000	0.2500	1.00000	0.2289	14	418	3.35%
		248	1.0000	0.2500	1.00000	0.2289	14	418	3.35%
Summary for Breeding (5 records)							Pre-planning Sum	418	100.00%
							Post-planning Sum	418	100.00%

Species/Guild Name: Mountain Plover

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Shortgrass	Few shrubs/ low grass	187,165	1.0000	0.3000	1.00000	0.0067	376	972	38.68%
		58,086	1.0000	0.9666	1.00000	0.0067	376	972	38.68%
Shortgrass	PD town	31,108	1.0000	0.3000	1.00000	0.0128	119	972	12.24%
		69,780	1.0000	0.6879	1.00000	0.0128	614	972	63.17%
Summary for Breeding (2 records)							Pre-planning Sum	495	50.93%
							Post-planning Sum	990	101.85%

Species/Guild Name: Northern Bobwhite

Season: Resident

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Wheat	544,978	1.0000	1.0000	1.00000	0.0028	1,526	9,424	16.19%
		544,972	1.0000	1.0000	1.00000	0.0028	1,526	9,424	16.19%
Cropland	Soybeans	4,377	1.0000	1.0000	1.00000	0.0028	12	9,424	0.13%
		3,072	1.0000	1.0000	1.00000	0.0028	9	9,424	0.10%
Cropland	Sorghum	239,331	1.0000	1.0000	1.00000	0.0028	670	9,424	7.11%
		113,788	1.0000	1.0000	1.00000	0.0028	319	9,424	3.38%
Cropland	Alfalfa	11,490	1.0000	1.0000	1.00000	0.0110	126	9,424	1.34%
		8,063	1.0000	1.0000	1.00000	0.0110	89	9,424	0.94%
Cropland	Sunflowers	0	1.0000	1.0000	1.00000	0.0028	0	9,424	0.00%
		0	1.0000	1.0000	1.00000	0.0028	0	9,424	0.00%
Cropland	Corn	121,033	1.0000	1.0000	1.00000	0.0028	339	9,424	3.60%
		46,535	1.0000	1.0000	1.00000	0.0028	130	9,424	1.38%
Cropland	Hay	46,947	1.0000	1.0000	1.00000	0.0110	516	9,424	5.48%
		46,942	1.0000	1.0000	1.00000	0.0110	516	9,424	5.48%
Cropland	Peanuts	0	1.0000	1.0000	1.00000	0.0028	0	9,424	0.00%
		0	1.0000	1.0000	1.00000	0.0028	0	9,424	0.00%
Cropland	Pasture	5,800	1.0000	1.0000	1.00000	0.0110	64	9,424	0.68%
		4,070	1.0000	1.0000	1.00000	0.0110	45	9,424	0.48%
CRP	Non-native	459,683	1.0000	1.0000	1.00000	0.0106	4,873	9,424	51.71%
		255,380	1.0000	1.0000	1.00000	0.0106	2,707	9,424	28.72%
CRP	Native	51,076	1.0000	1.0000	1.00000	0.0106	541	9,424	5.74%
		255,380	1.0000	1.0000	1.00000	0.0106	2,707	9,424	28.72%
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.0025	1	9,424	0.01%
		576	1.0000	1.0000	1.00000	0.0025	1	9,424	0.01%
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.0025	1	9,424	0.01%
		576	1.0000	1.0000	1.00000	0.0025	1	9,424	0.01%

Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.0025	1	9,424	0.01%
		576	1.0000	1.0000	1.00000	0.0025	1	9,424	0.01%
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.0025	1	9,424	0.01%
		576	1.0000	1.0000	1.00000	0.0025	1	9,424	0.01%
Riverine Systems	Riparian canopy - early successional w/ understory	369	1.0000	1.0000	1.00000	0.0980	36	9,424	0.38%
		369	1.0000	1.0000	1.00000	0.0980	36	9,424	0.38%
Riverine Systems	Riparian canopy - late successional w/ understory	248	1.0000	1.0000	1.00000	0.0980	24	9,424	0.25%
		248	1.0000	1.0000	1.00000	0.0980	24	9,424	0.25%
Riverine Systems	Wet meadow	16,084	1.0000	1.0000	1.00000	0.0121	195	9,424	2.07%
		16,140	1.0000	1.0000	1.00000	0.0121	195	9,424	2.07%
Riverine Systems	Native riparian shrubland	0	1.0000	1.0000	1.00000	0.0124	0	9,424	0.00%
		0	1.0000	1.0000	1.00000	0.0124	0	9,424	0.00%
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.0002	47	9,424	5.02%
		0	1.0000	1.0000	1.00000	0.0002	0	9,424	0.00%
Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.0002	2	9,424	0.27%
		575,422	1.0000	1.0000	1.00000	0.0002	115	9,424	12.21%
Summary for Resident (21 records)					Pre-planning Sum		9,424	99.99%	
					Post-planning Sum		9,458	100.35%	

Species/Guild Name: Pinyon Jay

Season: Resident

Assoc Name	Condition Name	Condition	Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Pinyon/Juniper	NA	16,141	1.0000	1.0000	1.00000	0.0010	16	16	100.00%	
		16,141	1.0000	1.0000	1.00000	0.0010	16	16	100.00%	
Summary for Resident (1 record)					Pre-planning Sum		16	100.00%		
					Post-planning Sum		16	100.00%		

Species/Guild Name: Red-headed Woodpecker

Season: Breeding

Assoc Name	Condition Name	Condition	Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Other	Urban/Suburban	2,512	1.0000	1.0000	1.00000	0.0167	42	0	0.00%	
		2,512	1.0000	1.0000	1.00000	0.0167	42	0	0.00%	
Riverine Systems	Riparian canopy - late successional w/ understory	248	1.0000	1.0000	1.00000	0.1142	28	56	50.00%	
		248	1.0000	1.0000	1.00000	0.1142	28	56	50.00%	
Riverine Systems	Riparian canopy - late successional w/o understory	248	1.0000	1.0000	1.00000	0.1142	28	56	50.00%	
		248	1.0000	1.0000	1.00000	0.1142	28	56	50.00%	
Summary for Breeding (3 records)					Pre-planning Sum		98	100.00%		
					Post-planning Sum		98	100.00%		

Species/Guild Name: Scaled Quail

Season: Resident

Assoc Name	Condition Name	Condition	Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.0339	20	17,560	0.11%	
		576	1.0000	1.0000	1.00000	0.0339	20	17,560	0.11%	
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.0113	7	17,560	0.04%	
		576	1.0000	1.0000	1.00000	0.0113	7	17,560	0.04%	
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.0339	20	17,560	0.11%	
		576	1.0000	1.0000	1.00000	0.0339	20	17,560	0.11%	
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.0113	7	17,560	0.04%	
		576	1.0000	1.0000	1.00000	0.0113	7	17,560	0.04%	
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.0023	544	17,560	3.10%	
		0	1.0000	1.0000	1.00000	0.0023	0	17,560	0.00%	
Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.0023	29	17,560	0.17%	
		575,422	1.0000	1.0000	1.00000	0.0023	1,323	17,560	7.53%	
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.0113	2,115	17,560	12.04%	
		19,414	1.0000	1.0000	1.00000	0.0113	219	17,560	1.25%	
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0339	6,345	17,560	36.13%	
		316,245	1.0000	1.0000	1.00000	0.0339	10,721	17,560	61.05%	
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0113	2,115	17,560	12.04%	
		316,245	1.0000	1.0000	1.00000	0.0113	3,574	17,560	20.35%	
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.0339	6,345	17,560	36.13%	
		58,086	1.0000	1.0000	1.00000	0.0339	1,969	17,560	11.21%	
Summary for Resident (10 records)					Pre-planning Sum		17,547	99.92%		
					Post-planning Sum		17,860	101.70%		

Species/Guild Name: Scissor-tailed Flycatcher

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Condition			Large Block	Units	CC	Goal	% of Goal
			Avail.	Suit.	Block					
Riverine Systems	Riparian canopy - late	248	1.0000	1.0000	1.00000	0.0166	4	20	20.00%	
	successional w/ understory	248	1.0000	1.0000	1.00000	0.0166	4	20	20.00%	
Riverine Systems	Riparian canopy - early	369	1.0000	1.0000	1.00000	0.0166	6	20	30.00%	
	successional w/o understor	369	1.0000	1.0000	1.00000	0.0166	6	20	30.00%	
Riverine Systems	Riparian canopy - early	369	1.0000	1.0000	1.00000	0.0166	6	20	30.00%	
	successional w/ understory	369	1.0000	1.0000	1.00000	0.0166	6	20	30.00%	
Riverine Systems	Riparian canopy - late	248	1.0000	1.0000	1.00000	0.0166	4	20	20.00%	
	successional w/o understory	248	1.0000	1.0000	1.00000	0.0166	4	20	20.00%	
Summary for Breeding (4 records)					Pre-planning Sum		20	100.00%		
					Post-planning Sum		20	100.00%		

Species/Guild Name: Swainson's Hawk

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Condition			Large Block	Units	CC	Goal	% of Goal
			Avail.	Suit.	Block					
Cropland	Pasture	5,800	1.0000	1.0000	1.00000	0.0014	8	3,239	0.25%	
		4,070	1.0000	1.0000	1.00000	0.0014	6	3,239	0.19%	
Cropland	Alfalfa	11,490	1.0000	1.0000	1.00000	0.0014	16	3,239	0.49%	
		8,063	1.0000	1.0000	1.00000	0.0014	11	3,239	0.34%	
Cropland	Hay	46,947	1.0000	1.0000	1.00000	0.0014	66	3,239	2.04%	
		46,942	1.0000	1.0000	1.00000	0.0014	66	3,239	2.04%	
Cropland	Fallow	0	1.0000	1.0000	1.00000	0.0014	0	3,239	0.00%	
		0	1.0000	1.0000	1.00000	0.0014	0	3,239	0.00%	
Cropland	Wheat	544,978	1.0000	1.0000	1.00000	0.0013	708	3,239	21.86%	
		544,972	1.0000	1.0000	1.00000	0.0013	708	3,239	21.86%	
CRP	Native	51,076	1.0000	1.0000	1.00000	0.0016	82	3,239	2.53%	
		255,380	1.0000	1.0000	1.00000	0.0016	409	3,239	12.63%	
CRP	Non-native	459,683	1.0000	1.0000	1.00000	0.0016	735	3,239	22.69%	
		255,380	1.0000	1.0000	1.00000	0.0016	409	3,239	12.63%	
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.0016	1	3,239	0.03%	
		576	1.0000	1.0000	1.00000	0.0016	1	3,239	0.03%	
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.0016	1	3,239	0.03%	
		576	1.0000	1.0000	1.00000	0.0016	1	3,239	0.03%	
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.0016	1	3,239	0.03%	
		576	1.0000	1.0000	1.00000	0.0016	1	3,239	0.03%	
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.0016	1	3,239	0.03%	
		576	1.0000	1.0000	1.00000	0.0016	1	3,239	0.03%	
Riverine Systems	Wet meadow	16,084	1.0000	1.0000	1.00000	0.0016	26	3,239	0.80%	
		16,140	1.0000	1.0000	1.00000	0.0016	26	3,239	0.80%	
Riverine Systems	Riparian canopy - late	248	1.0000	1.0000	1.00000	0.0016	0	3,239	0.00%	
		248	1.0000	1.0000	1.00000	0.0016	0	3,239	0.00%	
Riverine Systems	Riparian canopy - late	248	1.0000	1.0000	1.00000	0.0016	0	3,239	0.00%	
		248	1.0000	1.0000	1.00000	0.0016	0	3,239	0.00%	
Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.0016	20	3,239	0.62%	
		575,422	1.0000	1.0000	1.00000	0.0016	921	3,239	28.43%	
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.0016	378	3,239	11.67%	
		0	1.0000	1.0000	1.00000	0.0016	0	3,239	0.00%	
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0016	299	3,239	9.23%	
		316,245	1.0000	1.0000	1.00000	0.0016	506	3,239	15.62%	
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.0016	299	3,239	9.23%	
		316,245	1.0000	1.0000	1.00000	0.0016	506	3,239	15.62%	
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.0016	299	3,239	9.23%	
		58,086	1.0000	1.0000	1.00000	0.0016	93	3,239	2.87%	
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.0016	299	3,239	9.23%	
		19,414	1.0000	1.0000	1.00000	0.0016	31	3,239	0.96%	
Summary for Breeding (20 records)					Pre-planning Sum		3,239	99.99%		
					Post-planning Sum		3,696	114.10%		

Species/Guild Name: Upland Sandpiper

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Condition			Large Block	Units	CC	Goal	% of Goal
			Avail.	Suit.	Block					
Cropland	Pasture	5,800	0.1000	1.0000	1.00000	0.0003	0	8	0.00%	
		4,070	0.1000	1.0000	1.00000	0.0003	0	8	0.00%	

CRP	Native	51,076	0.1000	1.0000	1.00000	0.0013	7	8	87.50%
		255,380	0.1000	1.0000	1.00000	0.0013	33	8	412.50%
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.0008	0	8	0.00%
		576	1.0000	1.0000	1.00000	0.0008	0	8	0.00%
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.0008	0	8	0.00%
		576	1.0000	1.0000	1.00000	0.0008	0	8	0.00%
Riverine Systems	Wet meadow	16,084	0.1000	1.0000	1.00000	0.0008	1	8	12.50%
		16,140	0.1000	1.0000	1.00000	0.0008	1	8	12.50%
Summary for Breeding (5 records)						<i>Pre-planning Sum</i>	8		100.00%
						<i>Post-planning Sum</i>	34		425.00%

Species/Guild Name: Western Kingbird

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Wheat	544,978	1.0000	1.0000	1.00000	0.0237	12,916	266,851	4.84%
		544,972	1.0000	1.0000	1.00000	0.0237	12,916	266,851	4.84%
Cropland	Hay	46,947	1.0000	1.0000	1.00000	0.1817	8,530	266,851	3.20%
		46,942	1.0000	1.0000	1.00000	0.1817	8,529	266,851	3.20%
Cropland	Alfalfa	11,490	1.0000	1.0000	1.00000	0.1817	2,088	266,851	0.78%
		8,063	1.0000	1.0000	1.00000	0.1817	1,465	266,851	0.55%
Cropland	Pasture	5,800	1.0000	1.0000	1.00000	0.1817	1,054	266,851	0.39%
		4,070	1.0000	1.0000	1.00000	0.1817	739	266,851	0.28%
CRP	Native	51,076	1.0000	1.0000	1.00000	0.1817	9,280	266,851	3.48%
		255,380	1.0000	1.0000	1.00000	0.1817	46,402	266,851	17.39%
CRP	Non-native	459,683	1.0000	1.0000	1.00000	0.1817	83,524	266,851	31.30%
		255,380	1.0000	1.0000	1.00000	0.1817	46,402	266,851	17.39%
Mixed Grass	Few shrubs/ low grass	576	1.0000	1.0000	1.00000	0.1817	105	266,851	0.04%
		576	1.0000	1.0000	1.00000	0.1817	105	266,851	0.04%
Mixed Grass	Many shrubs/low grass	576	1.0000	1.0000	1.00000	0.1817	105	266,851	0.04%
		576	1.0000	1.0000	1.00000	0.1817	105	266,851	0.04%
Mixed Grass	Many shrubs/high grass	576	1.0000	1.0000	1.00000	0.1817	105	266,851	0.04%
		576	1.0000	1.0000	1.00000	0.1817	105	266,851	0.04%
Mixed Grass	Few shrubs/high grass	576	1.0000	1.0000	1.00000	0.1817	105	266,851	0.04%
		576	1.0000	1.0000	1.00000	0.1817	105	266,851	0.04%
Other	Urban/Suburban	2,512	1.0000	1.0000	1.00000	0.2575	647	266,851	0.24%
		2,512	1.0000	1.0000	1.00000	0.2575	647	266,851	0.24%
Riverine Systems	Wet meadow	16,084	1.0000	1.0000	1.00000	0.1817	2,923	266,851	1.10%
		16,140	1.0000	1.0000	1.00000	0.1817	2,933	266,851	1.10%
Riverine Systems	Native riparian shrubland	0	1.0000	1.0000	1.00000	0.1817	0	266,851	0.00%
		0	1.0000	1.0000	1.00000	0.1817	0	266,851	0.00%
Riverine Systems	Riparian canopy - early successional w/o understory	369	1.0000	1.0000	1.00000	0.1817	67	266,851	0.03%
		369	1.0000	1.0000	1.00000	0.1817	67	266,851	0.03%
Riverine Systems	Riparian canopy - late successional w/ understory	248	1.0000	1.0000	1.00000	0.1817	45	266,851	0.02%
		248	1.0000	1.0000	1.00000	0.1817	45	266,851	0.02%
Riverine Systems	Riparian canopy - late successional w/o understory	248	1.0000	1.0000	1.00000	0.1817	45	266,851	0.02%
		248	1.0000	1.0000	1.00000	0.1817	45	266,851	0.02%
Riverine Systems	Riparian canopy - early successional w/ understory	369	1.0000	1.0000	1.00000	0.1817	67	266,851	0.03%
		369	1.0000	1.0000	1.00000	0.1817	67	266,851	0.03%
Sand Sage	Low grass	236,540	1.0000	1.0000	1.00000	0.0370	8,752	266,851	3.28%
		0	1.0000	1.0000	1.00000	0.0370	0	266,851	0.00%
Sand Sage	High grass	12,450	1.0000	1.0000	1.00000	0.0370	461	266,851	0.17%
		575,422	1.0000	1.0000	1.00000	0.0370	21,291	266,851	7.98%
Shortgrass	Few shrubs/ low grass	187,165	1.0000	1.0000	1.00000	0.1817	34,008	266,851	12.74%
		58,086	1.0000	1.0000	1.00000	0.1817	10,554	266,851	3.96%
Shortgrass	Few shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.1817	34,008	266,851	12.74%
		316,245	1.0000	1.0000	1.00000	0.1817	57,462	266,851	21.53%
Shortgrass	Many shrubs/low grass	187,165	1.0000	1.0000	1.00000	0.1817	34,008	266,851	12.74%
		19,414	1.0000	1.0000	1.00000	0.1817	3,527	266,851	1.32%
Shortgrass	Many shrubs/high grass	187,165	1.0000	1.0000	1.00000	0.1817	34,008	266,851	12.74%
		316,245	1.0000	1.0000	1.00000	0.1817	57,462	266,851	21.53%
Summary for Breeding (23 records)						<i>Pre-planning Sum</i>	266,851		99.99%
						<i>Post-planning Sum</i>	270,973		101.54%

Table 3. Estimated current acreage and desired future acreage of important bird habitats. Sums may not equal due to rounding errors in database calculations (discrepancies <5%).

Association Name	Condition Name	Pre- Condition Acres	Post Condition Acres	Net Change
Badlands/Cliffs/Outcrops	NA	11	11	0
Cropland	Pasture	5,800	4,070	-1,730
Cropland	Fallow	0	0	0
Cropland	Sod farm	0	0	0
Cropland	Sunflowers	0	0	0
Cropland	Peanuts	0	0	0
Cropland	Soybeans	4,377	3,072	-1,305
Cropland	Other	119,720	0	-119,720
Cropland	Hay	46,947	46,942	-5
Cropland	Wheat	544,978	544,972	-6
Cropland	Sorghum	239,331	113,788	-125,543
Cropland	Corn	121,033	46,535	-74,498
Cropland	Alfalfa	11,490	8,063	-3,427
CRP	Native	51,076	255,380	204,304
CRP	Non-native	459,683	255,380	-204,303
Mixed Grass	Many shrubs/low grass	576	576	0
Mixed Grass	Few shrubs/ low grass	576	576	0
Mixed Grass	Few shrubs/high grass	576	576	0
Mixed Grass	Many shrubs/high grass	576	576	0
Other	4-lane roads	248	248	0
Other	small roads	44,017	44,017	0
Other	Other	0	0	0
Other	Urban/Suburban	2,512	2,512	0
Other Wetlands	Emergent marsh	0	0	0
Other Wetlands	Saline	0	0	0
Other Wetlands	Moist-soil unit	11	468	457
Pinyon/Juniper	NA	16,141	16,141	0
Playa	Dry	5,519	5,519	0
Playa	Wet	1,472	1,169	-303
Playa	Wet pit only	368	368	0
Reservoirs Lakes Ponds	Pit			
Reservoirs Lakes Ponds	Lagoon	52	52	0
Reservoirs Lakes Ponds	Freshwater lake	0	0	0
Reservoirs Lakes Ponds	Reservoir	548	548	0
Reservoirs Lakes Ponds	Stock pond	2,071	2,071	0
Riverine Systems	Warmwater slough	0	0	0
Riverine Systems	Floodplain marsh	0	0	0
Riverine Systems	Wet meadow	16,084	16,140	56
Riverine Systems	Riparian canopy - early	369	369	0
Riverine Systems	Exotic riparian shrubland	0	0	0
Riverine Systems	Riparian canopy - early	369	369	0
Riverine Systems	Riparian canopy - late	248	248	0
Riverine Systems	Riparian canopy - late	248	248	0
Riverine Systems	Native riparian shrubland	0	0	0
Riverine Systems	River channel	13,719	13,719	0
Riverine Systems	Unvegetated sandbar	0	0	0
Sand Sage	High grass	12,450	575,422	562,972
Sand Sage	Low grass	236,540	0	-236,540
Shortgrass	Few shrubs/ low grass	187,165	58,086	-129,079
Shortgrass	Few shrubs/high grass	187,165	316,245	129,080
Shortgrass	Many shrubs/low grass	187,165	19,414	-167,751
Shortgrass	Many shrubs/high grass	187,165	316,245	129,080
Shortgrass	PD town	31,108	69,780	38,672
	Sum	2,739,761	2,739,50	

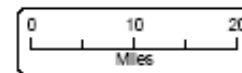
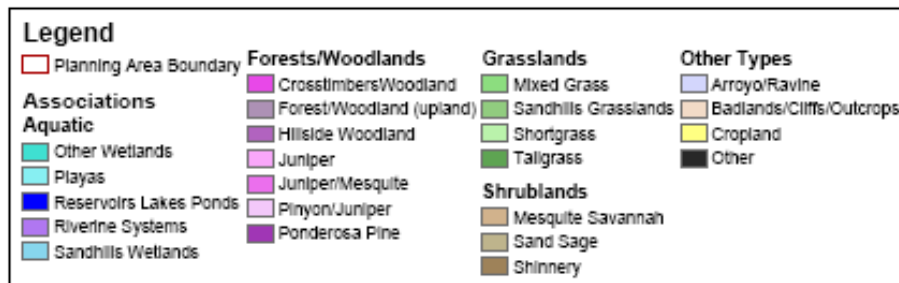
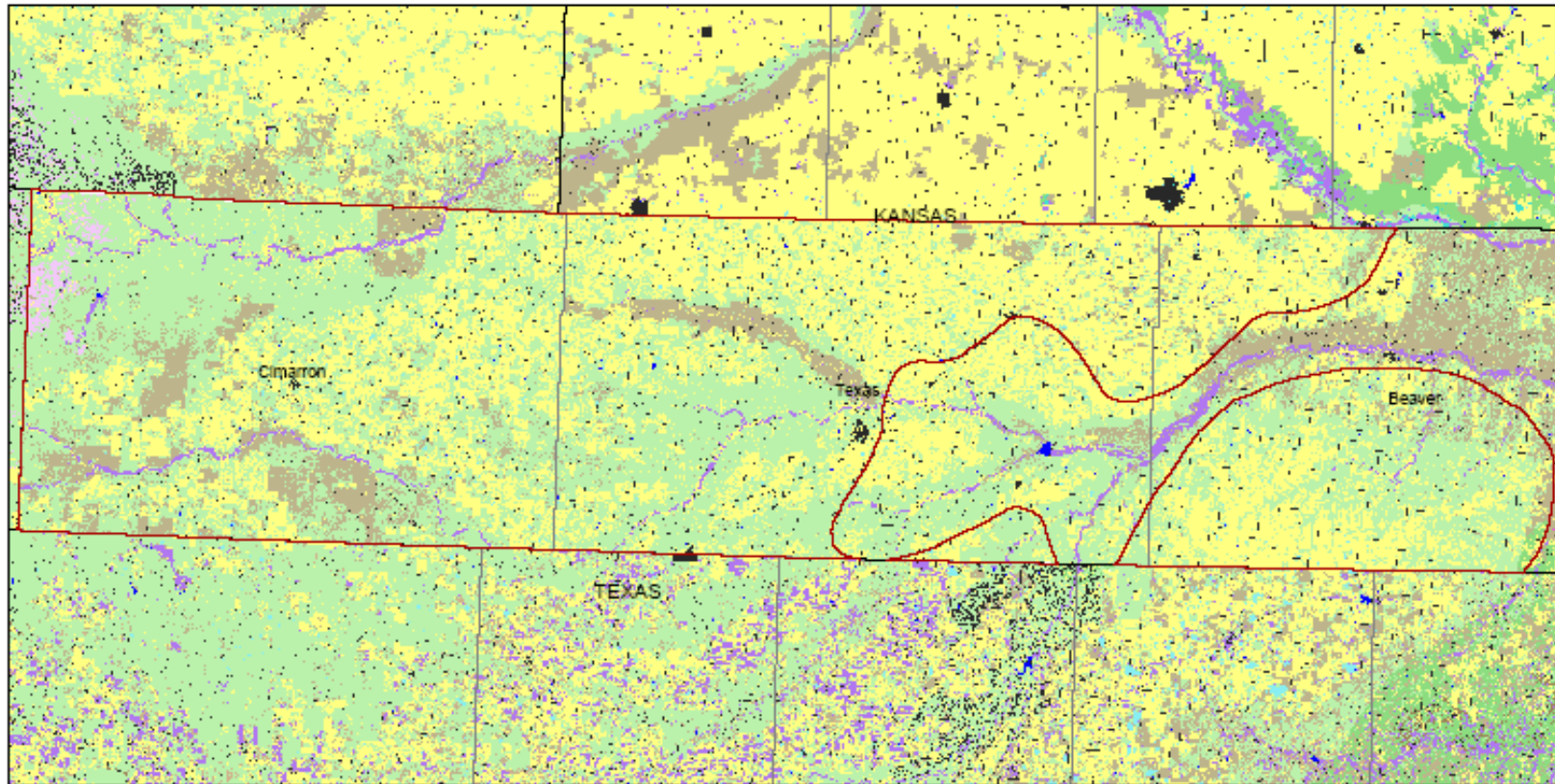


Figure 1. Bird habitat associations for the Shortgrass Prairie Bird Conservation Region of Oklahoma.