

PLAYA LAKES JOINT VENTURE

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



PLAYA LAKES
JOINT VENTURE


April 2008

APPROVALS


By adopting this plan, PLJV Kansas 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 Kansas partners.

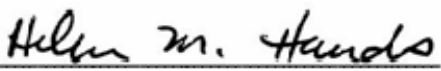
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EXECUTIVE SUMMARY

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 Kansas. The goal of this plan is to *“Determine the quantity, quality, and distribution of habitat needed to maintain 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 audience for this plan is habitat program managers and field delivery staff.

The following recommendations represent the major habitat actions (i.e., conversion, restoration, management) needed to bring priority birds to desired levels. Priority bird species that are expected to increase to goal levels as a result of the actions are shown in parentheses, with the primary “driver” species in bold.

- 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 (**wetland birds**).
- Restore and/or enhance 15,000 acres of wetlands, primarily playas and floodplain marshes (**wetland birds**).
- Convert 1.8 million acres of other cropland to wheat (**Ring-necked Pheasant, Lark Bunting**)
- Convert 200,000 acres of cropland to Conservation Reserve Program (CRP) grass (**Lesser Prairie-Chicken**)
- Increase CRP acreage that contributes to large blocks of habitat by 800,000 acres (**Lesser Prairie-Chicken**)
- Manage 90,000 acres of mixed grass for relatively taller grass heights (**Grasshopper Sparrow**)
- Restore 170,000 acres of sand sage from cropland (**Cassin’s Sparrow**)
- Increase sand sage acreage that contributes to large blocks of habitat by 500,000 acres (**Lesser Prairie-Chicken**)
- Convert 125,000 acres of cropland to shortgrass (**Grasshopper Sparrow**)
- Manage 500,000 acres of shortgrass for relatively taller grass heights (**Grasshopper Sparrow**)
- Manage 200,000 additional acres of shortgrass to contribute to large blocks of habitat (**Long-billed Curlew**)
- Manage 50,000 acres of shortgrass for few shrubs and short grass in the west (**Mountain Plover**)

Other important actions to preserve the function of existing habitats also are needed, and are recommended in this Plan. 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. By adopting these objectives, we hope and expect that PLJV partners are inspired to redouble their efforts towards bird habitat conservation and management.

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: ***“Determine the quantity, quality, and distribution of habitat needed to maintain 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 audience for this plan is habitat program managers and field delivery staff.

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 2007b), *Shorebirds* (PLJV 2007c), *Waterbirds* (PLJV 2006b), and *Landbirds* (PLJV 2007d). 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 and wintering waterfowl. 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. Waterfowl can best meet energetic and nutritional needs through native foods provided in wetland habitats. Agricultural habitats are the primary foraging habitats for geese and also are used by ducks for supplementing native foods and when wetlands

are unavailable due to drought, ice cover, etc. However, the PLJV Waterfowl Team decided to exclude agricultural habitats from spring and fall bioenergetic models. Agricultural habitats will be included in spring and fall in future iterations of waterfowl planning in the PLJV.

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 92,000 ducks and 1,000 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. – Feb.), and spring (Mar – Apr.) Use-day targets are approximately 3.8 million for fall, 8.6 million for winter, and 6.4 million for spring.

Based on the PLJV GIS, the top three wetland foraging habitats are floodplain marshes (estimated 46,098 acres), emergent marshes (estimated 9,700 acres), and saline wetlands (estimated 3,257 acres) (Table 1). Habitat assessments and bioenergetics modeling suggested that existing foraging habitats in this Area can support the abundance targets in all seasons (Table 1).

However, there are reasons to believe that foraging habitat actually may be insufficient in this Area. First, GIS data may have overestimated acreages of important wetlands. Acreages of floodplain, emergent marshes, and saline wetlands (Tables 1 and 3) seem unrealistically high based on knowledge of local field staff. This should be addressed for future iterations of this plan through an accuracy assessment of GIS data. Second, midwinter survey data show that the highest duck numbers during the past 10 years have been 86% below the abundance targets for this Area (KDWP unpubl. data).

Therefore, as a provisional goal we recommend increasing suitable wetland habitat by 90% to ensure that waterfowl are not limited by foraging habitat in this Area. Considering the foraging value of various wetland types (see Table 1), this could be accomplished by restoring or enhancing 30,965 acres of playas, 9,920 acres of floodplain marsh, or some combination. As an interim target we recommend restoring or enhancing 15,026 acres of these wetlands in combination.

Shorebirds – Wetland Guild

Migratory shorebirds use this Area primarily from July through October for summer-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, which are limited especially compared to KS-19, were used to develop an abundance target of approximately 287,000 use-days, which includes abundance increases recommended in the U.S. Shorebird Conservation Plan. The top three shorebird foraging habitats are emergent marsh (estimated 9,700 acres), floodplain marsh (estimated 46,098 acres), and wet playas (estimated 5,702 acres) (Table 1). Habitat assessments and bioenergetics modeling suggested there is sufficient habitat to support the use-day objective (Table 1). Therefore, this Plan contains no specific habitat recommendations for this guild.

However, there are reasons to believe that foraging habitat actually may be insufficient in this Area. First, GIS data may have overestimated acreages of important wetlands. Acreages of floodplain and emergent marshes (Tables 1 and 3) seem unrealistically high based on knowledge of local field staff. This should be addressed for future iterations of this plan through an accuracy assessment of GIS data. Second, existing survey data are so sparse that abundance targets were set too low. Therefore, as a provisional goal we recommend increasing suitable wetland habitat by 90%, the same provisional goal as for waterfowl, to ensure that shorebirds and other wetland birds are not limited by foraging habitat in this Area. We assume wetland habitat recommendations for waterfowl will also meet the foraging habitat needs for shorebirds (see Waterfowl section).

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 approx. 124,000 use-days in fall and 102,000 in spring,

however, survey data show that crane used-days are approximately three times higher in fall than spring (KDWP unpubl. data).

In this Area, the most important wetland types for roosting cranes are wet meadows, floodplain marshes, and emergent marshes (Table 1). Wet meadows (estimated 87,356 acres) provide important crane roosting habitat. However, the quality of existing wet meadows is suspect due to reductions in hydroperiod (reduced stream flows caused by water impoundments and diversions, irrigation, infestations of exotic hydrophytes, etc.). Floodplain and emergent marshes (estimated 46,098 and 9,700 acres, respectively) also provide important roosting sites. Most important foraging habitats are harvested corn and green wheat fields.

PLJV habitat assessments and bioenergetics modeling suggested that this Area can support the use-day objectives for cranes (Table 1). However, GIS acreage estimates of important wetland habitats and use-day targets need to be revised. The degraded and declining state of many wetlands important to cranes calls for restoration and protection efforts. Wet meadows should be restored by controlling hydrophytes (exotic and native), increasing in-stream flows (e.g., through water use and management policies) where possible, and actively managing water levels (e.g., developing impoundments with water management capabilities) if necessary. For other wetland types, restoration and protection actions should be considered.

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 addressing the needs of priority landbirds for this Area, the PLJV assumed that providing the habitat needs for breeding landbirds would also provide the habitat needs for migrant and wintering landbirds. 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 the 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 goal of doubling was utilized, following recommendations in the Partners in Flight Continental Plan (PIF). For this Area, the species with trends greater than -2.3% per year are Short-eared Owl, Mountain Plover, Long-billed Curlew, Brewer's Sparrow, and Grasshopper Sparrow. Lesser Prairie-Chicken is also declining. The goal for that species was set by the KDWP representative to the Lesser Prairie-Chicken Interstate Working Group (*R. Rodgers, pers. comm.*)

Grassland Guild

Grasslands are the largest single native habitat type found in this Area and support priority species such as Greater and Lesser Prairie-Chicken, Swainson's Hawk, Mountain Plover, Long-billed Curlew, Burrowing Owl, Western Kingbird, Loggerhead Shrike, Lark Sparrow, Lark Bunting, Grasshopper Sparrow, and McCown's and Chestnut-collared Longspur. 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 taller grass and few shrubs on the landscape; Grasshopper Sparrow, Lark Bunting, and Long-billed Curlew (the latter requires models to evaluate landscape context).

Threats to grassland habitats include fire suppression and grazing regimes which lead to lack of diversity in grass heights. 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. Other threats include conversion to agriculture. Although many agricultural fields are utilized by some priority landbirds to some extent, their utilization tends to be at lower densities. Additionally, the extent to which crop maintenance and harvesting 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 Greater and Lesser Prairie-Chickens across most of their range. These species 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 maintained 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 Kansas.

The advent of CRP in the 1985 Farm Bill has helped to increase numbers of many grassland birds. CRP in Kansas, because only native grass seed mixes were used, has been noticeably helpful in maintaining Lesser Prairie-Chicken. 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 interseeding with forbs and legumes, may increase use by priority grassland birds.

Grassland birds which utilize prairie-dog colonies (Burrowing Owl and Mountain Plover) have either non-statistically significant 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).

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) Convert 213,664 acres of cropland to CRP (or CRP-like habitat), providing 160,205 birds;
- 2) Convert 165,765 acres of cropland to sand sage and ensure that 509,106 acres are managed for relatively taller grass heights (approx. at least mid-shin height) during the breeding season, providing an additional 87,826 birds. Currently the PLJV estimates that 20,000 acres are managed in such a way;
- 3) Convert 124,000 acres of cropland to shortgrass and manage 585,534 acres of those acres for relatively taller grass during the breeding season to add 39,111 birds. Currently the PLJV estimates that 337,828 are managed in such a way;
- 4) Manage 90,532 acres of mixed grass prairie for relatively taller grass (approx. at least mid-shin height) during the breeding season, providing 6,682 birds. Currently the PLJV estimates that 64,664 acres are managed in this way;
- 5) Convert 1,747,247 acres of other cropland to wheat, providing an additional 240,596 birds. Currently the PLJV estimates that there are 2,258,794 acres of wheat.

These recommendations, fully implemented, are modeled to meet only 77% of the population 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 according to the 2005 BBS. Recommended actions are:

- 1) Convert 213,664 acres of cropland to CRP (or CRP-like habitat), providing 43,673 birds;
- 2) Restore 165,765 acres of sand sage and ensure that 509,106 acres are managed for relatively taller grass heights (approx. at least mid-shin height) during the breeding season, providing an additional 59,452 birds. Currently the PLJV estimates that 20,000 acres are managed in such a way;
- 3) Convert 124,000 acres of cropland to shortgrass and manage 585,534 acres of those acres for relatively taller grass heights (approx. at least mid-shin height) during the breeding season providing 13,751 additional birds. Currently the PLJV estimates that 337,828 acres of shortgrass are managed in such a way;

4) Manage 90,532 acres of mixed grass prairie for relatively taller grass heights (approx. at least mid-shin height) during the breeding season, providing 16,194 birds. Currently the PLJV estimates that 64,664 acres are managed in this way;

5) Convert 1,747,247 acre of other cropland to wheat, providing an additional 313,981 birds. Currently the PLJV estimates that there are 2,258,794 acres of wheat.

These recommendations, fully implemented, are modeled to meet only 78% of the population 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.

There is high concern about past Lesser Prairie-Chicken declines (Davis et. al 2006). The current PLJV Lesser Prairie-Chicken model requires areas with native mixed grasses (including CRP) of at least 2,000 acres within a 5,000-acre block that also contains no more than 1) 3,000 acres of cropland, 2) 50 acres of roads (and no 4-lane roads), and 3) 50 acres of woodland types. The current model has a good fit with the known distribution of Lesser Prairie-Chicken in Kansas. The PLJV can recommend locations that may benefit from an increase in sand sage or CRP within or near Lesser Prairie-Chicken range. Recommended actions are:

1) Convert 213,664 acres of cropland to CRP (or CRP-like habitat) within the range of the Lesser Prairie-Chicken, providing 1,869 birds;

2) With current or changing field enrollment, ensure that 755,458 acres of all future CRP contributes to large blocks of habitat (see Lesser Prairie-Chicken model), providing 2,399 additional birds. Currently PLJV estimates that only 267,663 CRP acres do so;

3) Convert 165,675 acres cropland to sand sage prairie within Lesser Prairie-Chicken range. Ensure that 509,106 of the total acreage is placed in such a manner to contribute to large blocks of habitat (through use of CRP and placement of restoration), providing an additional 3,075 birds.

Long-billed Curlew has declined in the last 30 years at an average rate of 4.3%/yr 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 support Long-billed Curlews, research in other portions of the country suggests that large blocks of prairie (with few shrubs and heterogeneous grass heights) need 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 roads. Recommended actions are:

1) Convert 124,000 acres of agricultural lands to shortgrass prairie, providing 9 additional birds;

2) Manage 214,621 additional acres of shortgrass prairie so that it contributes to large blocks of habitat for Long-billed Curlew, providing 51 additional birds. This will bring the species to goal.

Mountain Plover has declined in the last 30 years at an average rate of 3.0%/yr 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) Allow prairie-dogs to establish 25,641 acres of new colonies in existing shortgrass prairie, providing 300 additional birds, and/or
- 2) Convert 45,761 acres of cropland to shortgrass prairie with few shrubs and short grass in the western counties of the Area, bringing the species to goal. Note that either or any combination of the two may well work for the species. For the purposes of this exercise we have added acres to shortgrass prairie.

Another alternative would be to make current occupied acres more suitable for Mountain Plover. The Colorado Grasslands plan (CDOW 2003) suggests that Mountain Plover densities are greater on prairie dog towns covering about 14 – 123 acres than on smaller colonies. The assumption being that increasing the size of average prairie-dog colonies would increase densities of plovers on those colonies and the number of birds. The PLJV is currently unable to evaluate this information in its modeling process.

Short-eared Owl has declined in the last 30 years at an average rate of 4.6%/yr across the survey area of the 2005 BBS, 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 action is to convert 213,664 acres of cropland to CRP (or CRP-like habitat), providing 154 birds.

These recommendations, fully implemented, are modeled to meet only 80% of the population goal. However, we recommend working toward these acreage goals while partners determine what further habitat work is possible and the models and assumptions are further evaluated.

Riparian Guild

Riparian areas comprise less than 2% of the landscape. Riparian forest and shrublands are important to support priority species such as Northern Bobwhite, Swainson's Hawk, Red-headed Woodpecker, Bell's Vireo and Bullock's Oriole. Wet meadow supports priority species such as Ring-necked Pheasant. There are no breeding riparian forest or shrubland-associated landbirds with statistically significant declining trends in BCR 18, though some, such as Red-headed Woodpecker and Bell's Vireo, show strong 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 Kansas. We know that exotic riparian shrubland, consisting primarily of salt cedar (tamarisk) and Russian olive, comprises a portion of some riparian shrubland in the Area. In order to maintain species such as Bell's Vireo or Bullock's Oriole, the exotic riparian shrubland should be converted to native riparian shrubland. There are no habitat acreage increases recommended but it is assumed that converting exotic riparian shrubland will become either wet meadow or native riparian shrubland. Habitat recommendations in the integrated sections provide general management recommendations which are appropriate for maintaining other riparian breeding birds in this Area. Converting these acres will help to support most riparian species as well as improve overall riparian health.

Shrubland Guild

Sand sage shrublands comprises a little over 4% of the landscape in BCR 18-KS. Shrublands are important to a number of priority species including Greater Prairie-Chicken, Scaled Quail, Loggerhead Shrike, and Lark Sparrow. They are critical for Lesser Prairie-Chicken and Cassin's Sparrow. Many, if not most of these species maintain larger numbers in prairie categorized as grassland 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. Others, such as Loggerhead Shrike and Lark Sparrow, show strongly declining national trends.

Cassin's Sparrow has declined in the last 30 years at an average rate of 0.9% per year in BCR 18 (Sauer et al. 2005). Recommended action is to restore 165,765 acres of sand sage within range of the Cassin's Sparrow in western Kansas, providing 8,884 birds and bringing the species up to goal. Note that this is not the only method for accomplishing the goal. One could restore shortgrass with shrubs or even ensure that CRP is appropriate breeding habitat for Cassin's Sparrow in Kansas. However, note that Sparks et al. (2005) did not find enough Cassin's Sparrows in CRP in BCR 18 – Kansas to determine a density for the species in that habitat type, though it was determined for CRP in Colorado and Oklahoma. A density for native prairie and sand sage was determined for Kansas. We are unsure why CRP is apparently inappropriate for Cassin's Sparrow in Kansas but making CRP appropriate for Cassin's Sparrow could well reduce the needs in other habitat types.

Habitat Generalists

Ring-necked Pheasant has declined in the last 30 years at an average rate of 1.8% per year in BCR 18. Recommended actions are:

- 1) Convert 213,664 acres of cropland to CRP or a CRP-like habitat (a 27% increase), providing 5,128 birds. Manage existing and new CRP with regular burning and planting/interseeding with forbs for brood habitat;

- 2) Convert 1,747,247 acres of other cropland to wheat, providing an additional 19,570 birds. Currently the PLJV estimates that there are 2,258,794 acres of wheat. Manage wheat habitat by cutting the crop high (15-20 inches), not spraying the stubble, and adding field buffer strips (e.g., CP-33);

- 3) Increase shortgrass prairie acreage by 124,000 by converting agricultural lands. If 412,733 of the total shortgrass prairie acres are maintained so that there are few shrubs, this will add 330 birds.

These recommendations, fully implemented, are modeled to meet only 78% of the population 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.

INTEGRATED BIRD HABITAT RECOMMENDATIONS

(By Association)

Cropland

Convert 1,747,247 acres of other cropland to wheat (a 77% increase) to support Lark Bunting, Ring-necked Pheasant, Grasshopper Sparrow, and others. Currently the PLJV estimates that there are 2,258,794 acres of wheat. Manage wheat habitat for pheasants by cutting the crop high (15-20 inches), not spraying the stubble, and adding field buffer strips (e.g., CP-33).

Convert 165,765 acres of cropland to sand sage to support Cassin's Sparrow and convert 213,664 acres of cropland to CRP to support Lesser Prairie-Chicken and other species.

Conservation Reserve Program (CRP)

Convert 213,664 acres of cropland to CRP (or devise additional programs that would deliver CRP-like habitat) within the southern two-thirds of the Area, to support Lesser Prairie-Chicken and other species. Ensure that 755,458 acres of all future CRP (new or changing enrollments) contributes to large blocks of habitat (see Lesser Prairie-Chicken model). Currently PLJV estimates that only 267,663 CRP acres do so. Manage existing and new CRP with regular burning and planting/interseeding with forbs for brood habitat, for pheasants and other species.

Mixed Grass

Manage 90,532 acres of mixed grass prairie for relatively higher grass (approximately at least mid-shin high) during the breeding season for Grasshopper Sparrow. Currently the PLJV estimates that 64,664 acres are managed in this way.

Other

Towns and cities with trees provide habitat for Mississippi Kite, Red-headed Woodpecker, Bullock's Oriole and Western Kingbird. Encourage tree planting, preferably cottonwoods, within town limits. This does not mean planting many trees per acre, but one to several trees in close proximity should be sufficient. Encourage city planning that incorporates tree belts in interior city parks. Develop programs to ensure that snags are left in place, while answering liability issues, especially for Red-headed Woodpeckers.

Other Wetlands

Ensure no loss or degradation of these wetlands which include saline wetlands (estimated 3,257

acres) and emergent marshes (estimated 9,700 acres). These wetlands support waterfowl, shorebirds, and waterbirds. Restore and enhance existing emergent wetlands to allow management capabilities and when possible, the capacity for moist-soil management, as part of the overall wetland goal of restoring and enhancing 15,026 acres.

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

Playa

Protect playas (estimated 63,357 acres, but only 5,702 acres are estimated to be wet and unpitted in an average year) 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. Additional acres of playas should be restored and enhanced as part of the overall wetland goal (15,026), which includes floodplain marshes. Restoration and enhancement should include water management so that sufficient wet playas are available to meet wetland bird goals.

Reservoirs, Lakes, and Ponds

Maintain reservoir (estimated 4,314 acres) inflows (exotic brush control, minimizing/restoring water diversions, and protecting/improving groundwater levels) and reduce shoreline woody vegetation encroachment to maintain water levels and provide open sandy or muddy shoreline with little emergent vegetation.

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

Riverine Systems

As part of the overall wetland goal of restoring and enhancing 15,026 of wetlands, restore and enhance river channel flows, wet meadows and floodplain marshes by controlling exotic hydrophytes, increasing in-stream flows (e.g., through water use and management policies) where possible, and actively managing water levels (e.g., developing impoundments with water management capabilities) if necessary. These habitats support waterfowl, shorebirds, and waterbirds.

Protect known colonial waterbird colonies (e.g., active rookeries) and areas where marsh birds breed.

Sand Sage

This habitat type is extremely important in western Kansas for the maintenance of priority birds including Lesser Prairie-Chicken, Scaled Quail, and Cassin's Sparrows.

Restore 165,765 acres of sand sage for Cassin's Sparrow. Ensure that 509,106 of the total acreage of this habitat contributes to large blocks of habitat (through use of CRP for restoration and targeted placement) for Lesser Prairie-Chicken.

Shortgrass

Convert 124,000 acres of cropland to shortgrass and manage 585,534 acres of this habitat for relatively taller grass heights (approx. mid-shin) during the breeding season for Grasshopper Sparrow. Currently the PLJV estimates that 337,828 are managed in such a way.

Manage 206,366 additional acres of shortgrass prairie (a 222% increase) so that it contributes to large blocks of habitat for Long-billed Curlew. Currently the PLJV estimates that 92,901 acres contribute.

Manage 45,761 acres of shortgrass prairie with relatively fewer shrubs and lower grass in the western counties of the Area for Mountain Plover (or alternatively add 25,641 acres of prairie-dog colonies).

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.
- 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 floodplain marshes, emergent marshes, and wet meadows for waterfowl, shorebirds, and waterbirds. Emphasize 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., consider geese as a separate guild from ducks and incorporate spatial crop data into the model when it becomes available in Kansas.
- Consider incorporating local crane migration chronology data into the crane population objectives. Data used for this plan may be overestimating the importance of this Area for cranes during spring and underestimating it for fall.

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., H. Whitlaw, R. Horton, R. D. Rodgers, and E. Odell. 2006. Lesser Prairie-Chicken Conservation Initiative. Lesser Prairie Chicken Interstate Working Group. Unpublished Report. New Mexico Department of Wildlife, Santa Fe, New Mexico, USA.

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. Waterfowl team report, v. 2.0. Technical companion document to the PLJV Implementation Planning Guide. 34pp.

PLJV. 2007c. Shorebird team report, v. 3.0. Technical companion document to the PLJV Implementation Planning Guide. 48pp.

PLJV. 2007d. Landbird team report, v.1.0. Technical companion document to the PLJV Implementation Planning Guide.

Sparks, R.A., D. J. Hanni and M. McLachlan. 2005. Section-based Monitoring of Breeding Birds within the Shortgrass Prairie Bird Conservation Region (BCR 18). Brighton, CO: Rocky Mountain Bird Observatory. 173 pp.

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](#), 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.

<i>Species/Guild Name: Cranes Season: Fall</i>		Condition		Large		Units	CC	Goal	% of Goal
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block				
Other Wetlands	Moist-soil unit	0	1.0000	1.0000	1.00000	1,253.0000	0	123,743	0.00%
		0	1.0000	1.0000	1.00000	1,253.0000	0	123,743	0.00%
Other Wetlands	Emergent marsh	9,700	1.0000	1.0000	1.00000	396.0000	3,841,046	123,743	3104.05%
		9,700	1.0000	1.0000	1.00000	396.0000	3,841,046	123,743	3104.00%
Other Wetlands	Saline	3,257	1.0000	1.0000	1.00000	396.0000	1,289,926	123,743	1042.42%
		3,257	1.0000	1.0000	1.00000	396.0000	1,289,926	123,743	1042.40%
Playa	Wet	5,702	1.0000	1.0000	1.00000	127.0000	724,171	123,743	585.22%
		5,702	1.0000	1.0000	1.00000	127.0000	724,171	123,743	585.20%
Riverine Systems	Floodplain marsh	46,098	1.0000	1.0000	1.00000	396.0000	18,254,830	123,743	14752.21
		46,098	1.0000	1.0000	1.00000	396.0000	18,254,830	123,743	14752.20
Riverine Systems	Wet meadow	87,356	1.0000	1.0000	1.00000	396.0000	34,593,020	123,743	27955.54
		87,356	1.0000	1.0000	1.00000	396.0000	34,593,020	123,743	27955.50
Summary for Fall (6 records)				<i>Pre-planning Sum</i>			58,702,993		47439.44%
				<i>Post-planning Sum</i>			58,702,993		47439.30%

<i>Species/Guild Name: Cranes Season: Spring</i>		Condition		Large		Units	CC	Goal	% of Goal
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block				
Other Wetlands	Moist-soil unit	0	1.0000	1.0000	1.00000	1,253.0000	0	101,588	0.00%
		0	1.0000	1.0000	1.00000	1,253.0000	0	101,588	0.00%
Other Wetlands	Emergent marsh	9,700	1.0000	1.0000	1.00000	396.0000	3,841,046	101,588	3781.00%
		9,700	1.0000	1.0000	1.00000	396.0000	3,841,046	101,588	3781.00%
Other Wetlands	Saline	3,257	1.0000	1.0000	1.00000	396.0000	1,289,926	101,588	1269.76%
		3,257	1.0000	1.0000	1.00000	396.0000	1,289,926	101,588	1269.70%
Riverine Systems	Wet meadow	87,356	1.0000	1.0000	1.00000	396.0000	34,593,020	101,588	34052.27
		87,356	1.0000	1.0000	1.00000	396.0000	34,593,020	101,588	34052.20
Riverine Systems	Floodplain marsh	46,098	1.0000	1.0000	1.00000	396.0000	18,254,830	101,588	17969.47
		46,098	1.0000	1.0000	1.00000	396.0000	18,254,830	101,588	17969.40
Summary for Spring (5 records)				<i>Pre-planning Sum</i>			57,978,822		57072.51%
				<i>Post-planning Sum</i>			57,978,822		57072.30%

<i>Species/Guild Name: Shorebirds-Nonbreeding-Wetland Season: Nonbreeding</i>		Condition		Large		Units	CC	Goal	% of Goal
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block				
Other Wetlands	Emergent marsh	9,700	1.0000	0.1000	1.00000	244.0000	236,670	286,863	82.50%
		9,700	1.0000	0.1000	1.00000	244.0000	236,670	286,863	82.50%
Other Wetlands	Moist-soil unit	0	1.0000	0.1500	1.00000	244.0000	0	286,863	0.00%
		0	1.0000	0.1500	1.00000	244.0000	0	286,863	0.00%
Other Wetlands	Saline	3,257	1.0000	0.1500	1.00000	244.0000	119,220	286,863	41.56%
		3,257	1.0000	0.1500	1.00000	244.0000	119,220	286,863	41.50%
Playa	Wet pit only	3,801	1.0000	0.0010	1.00000	244.0000	928	286,863	0.32%
		3,801	1.0000	0.0010	1.00000	244.0000	928	286,863	0.30%
Playa	Wet	5,702	1.0000	0.1000	1.00000	244.0000	139,132	286,863	48.50%
		5,702	1.0000	0.1000	1.00000	244.0000	139,132	286,863	48.50%
Reservoirs Lakes Ponds	Lagoon	176	1.0000	0.0050	1.00000	244.0000	215	286,863	0.07%
		176	1.0000	0.0050	1.00000	244.0000	215	286,863	0.00%
Reservoirs Lakes Ponds	Stock pond	2,394	1.0000	0.0050	1.00000	244.0000	2,920	286,863	1.02%
		2,394	1.0000	0.0050	1.00000	244.0000	2,920	286,863	1.00%
Reservoirs Lakes Ponds	Reservoir	4,314	1.0000	0.0050	1.00000	244.0000	5,264	286,863	1.84%
		4,314	1.0000	0.0050	1.00000	244.0000	5,264	286,863	1.80%
Reservoirs Lakes Ponds	Freshwater lake	0	1.0000	0.0050	1.00000	244.0000	0	286,863	0.00%
		0	1.0000	0.0050	1.00000	244.0000	0	286,863	0.00%
Riverine Systems	River channel	7,216	1.0000	0.0100	1.00000	244.0000	17,606	286,863	6.14%
		7,216	1.0000	0.0100	1.00000	244.0000	17,606	286,863	6.10%
Riverine Systems	Floodplain marsh	46,098	1.0000	0.0130	1.00000	244.0000	146,223	286,863	50.97%
		46,098	1.0000	0.0130	1.00000	244.0000	146,223	286,863	50.90%
Summary for Nonbreeding (11 records)				<i>Pre-planning Sum</i>			668,178		232.92%
				<i>Post-planning Sum</i>			668,178		232.60%

Species/Guild Name: Waterfowl-Nonbreeding

Season: Fall

Assoc Name	Condition Name	Condition		Large		CC	Goal	% of Goal	
		Acres	Avail.	Suit.	Block				Units
Cropland	Corn	965,468	1.0000	0.0000	1.00000	668.0000	0	3,796,840	0.00%
		892,987	1.0000	0.0000	1.00000	668.0000	0	3,796,840	0.00%
Cropland	Sorghum	1,003,014	1.0000	0.0000	1.00000	849.0000	0	3,796,840	0.00%
		927,715	1.0000	0.0000	1.00000	849.0000	0	3,796,840	0.00%
Cropland	Wheat	2,258,794	1.0000	0.0000	1.00000	1,336.0000	0	3,796,840	0.00%
		4,006,041	1.0000	0.0000	1.00000	1,336.0000	0	3,796,840	0.00%
Other Wetlands	Saline	3,257	1.0000	1.0000	1.00000	1,336.0000	4,351,873	3,796,840	114.62%
		3,257	1.0000	1.0000	1.00000	1,336.0000	4,351,873	3,796,840	114.60%
Other Wetlands	Moist-soil unit	0	1.0000	1.0000	1.00000	4,223.0000	0	3,796,840	0.00%
		0	1.0000	1.0000	1.00000	4,223.0000	0	3,796,840	0.00%
Other Wetlands	Emergent marsh	9,700	1.0000	1.0000	1.00000	1,336.0000	12,958,679	3,796,840	341.30%
		9,700	1.0000	1.0000	1.00000	1,336.0000	12,958,679	3,796,840	341.30%
Playa	Wet	5,702	1.0000	1.0000	1.00000	428.0000	2,440,512	3,796,840	64.28%
		5,702	1.0000	1.0000	1.00000	428.0000	2,440,512	3,796,840	64.20%
Reservoirs Lakes Ponds	Freshwater lake	0	1.0000	0.0500	1.00000	225.0000	0	3,796,840	0.00%
		0	1.0000	0.0500	1.00000	225.0000	0	3,796,840	0.00%
Reservoirs Lakes Ponds	Lagoon	176	1.0000	0.4000	1.00000	428.0000	30,160	3,796,840	0.79%
		176	1.0000	0.4000	1.00000	428.0000	30,160	3,796,840	0.70%
Reservoirs Lakes Ponds	Stock pond	2,394	1.0000	0.4000	1.00000	225.0000	215,423	3,796,840	5.67%
		2,394	1.0000	0.4000	1.00000	225.0000	215,423	3,796,840	5.60%
Reservoirs Lakes Ponds	Reservoir	4,314	1.0000	0.0500	1.00000	225.0000	48,538	3,796,840	1.28%
		4,314	1.0000	0.0500	1.00000	225.0000	48,538	3,796,840	1.20%
Riverine Systems	Floodplain marsh	46,098	1.0000	1.0000	1.00000	1,336.0000	61,587,003	3,796,840	1622.06%
		46,098	1.0000	1.0000	1.00000	1,336.0000	61,587,003	3,796,840	1622.00%
Riverine Systems	River channel	7,216	1.0000	1.0000	1.00000	50.0000	360,787	3,796,840	9.50%
		7,216	1.0000	1.0000	1.00000	50.0000	360,787	3,796,840	9.50%
Summary for Fall (13 records)					<i>Pre-planning Sum</i>		81,992,975		2159.50%
					<i>Post-planning Sum</i>		81,992,975		2159.10%

Species/Guild Name: Waterfowl-Nonbreeding

Season: Spring

Assoc Name	Condition Name	Condition		Large		CC	Goal	% of Goal	
		Acres	Avail.	Suit.	Block				Units
Cropland	Wheat	2,258,794	1.0000	0.0000	1.00000	1,336.0000	0	6,407,906	0.00%
		4,006,041	1.0000	0.0000	1.00000	1,336.0000	0	6,407,906	0.00%
Cropland	Sorghum	1,003,014	1.0000	0.0000	1.00000	849.0000	0	6,407,906	0.00%
		927,715	1.0000	0.0000	1.00000	849.0000	0	6,407,906	0.00%
Cropland	Corn	965,468	1.0000	0.0000	1.00000	668.0000	0	6,407,906	0.00%
		892,987	1.0000	0.0000	1.00000	668.0000	0	6,407,906	0.00%
Other Wetlands	Emergent marsh	9,700	1.0000	1.0000	1.00000	1,336.0000	12,958,679	6,407,906	202.23%
		9,700	1.0000	1.0000	1.00000	1,336.0000	12,958,679	6,407,906	202.20%
Other Wetlands	Moist-soil unit	0	1.0000	1.0000	1.00000	4,223.0000	0	6,407,906	0.00%
		0	1.0000	1.0000	1.00000	4,223.0000	0	6,407,906	0.00%
Other Wetlands	Saline	3,257	1.0000	1.0000	1.00000	1,336.0000	4,351,873	6,407,906	67.91%
		3,257	1.0000	1.0000	1.00000	1,336.0000	4,351,873	6,407,906	67.90%
Playa	Wet	5,702	1.0000	1.0000	1.00000	428.0000	2,440,512	6,407,906	38.09%
		5,702	1.0000	1.0000	1.00000	428.0000	2,440,512	6,407,906	38.00%
Reservoirs Lakes Ponds	Freshwater lake	0	1.0000	0.0500	1.00000	225.0000	0	6,407,906	0.00%
		0	1.0000	0.0500	1.00000	225.0000	0	6,407,906	0.00%
Reservoirs Lakes Ponds	Reservoir	4,314	1.0000	0.0500	1.00000	225.0000	48,538	6,407,906	0.76%
		4,314	1.0000	0.0500	1.00000	225.0000	48,538	6,407,906	0.70%
Reservoirs Lakes Ponds	Stock pond	2,394	1.0000	0.4000	1.00000	225.0000	215,423	6,407,906	3.36%
		2,394	1.0000	0.4000	1.00000	225.0000	215,423	6,407,906	3.30%
Reservoirs Lakes Ponds	Lagoon	176	1.0000	0.4000	1.00000	428.0000	30,160	6,407,906	0.47%
		176	1.0000	0.4000	1.00000	428.0000	30,160	6,407,906	0.40%
Riverine Systems	Floodplain marsh	46,098	1.0000	1.0000	1.00000	1,336.0000	61,587,003	6,407,906	961.11%
		46,098	1.0000	1.0000	1.00000	1,336.0000	61,587,003	6,407,906	961.10%
Riverine Systems	River channel	7,216	1.0000	1.0000	1.00000	50.0000	360,787	6,407,906	5.63%
		7,216	1.0000	1.0000	1.00000	50.0000	360,787	6,407,906	5.60%
Summary for Spring (13 records)					<i>Pre-planning Sum</i>		81,992,975		1279.56%
					<i>Post-planning Sum</i>		81,992,975		1279.20%

Species/Guild Name: Waterfowl-Nonbreeding

Season: Winter

Assoc Name	Condition Name	Condition		Large		Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block				
Cropland	Corn	965,468	1.0000	1.0000	1.00000	668.0000	644,932,827	8,609,167	7491.23%
		892,987	1.0000	1.0000	1.00000	668.0000	596,515,642	8,609,167	6928.80%
Cropland	Sorghum	1,003,014	1.0000	1.0000	1.00000	849.0000	851,559,135	8,609,167	9891.31%
		927,715	1.0000	1.0000	1.00000	849.0000	787,629,848	8,609,167	9148.70%
Cropland	Wheat	2,258,794	1.0000	1.0000	1.00000	1,336.0000		8,609,167	
		4,006,041	1.0000	1.0000	1.00000	1,336.0000		8,609,167	
Other Wetlands	Emergent marsh	9,700	0.0000	1.0000	1.00000	1,336.0000	0	8,609,167	0.00%
		9,700	0.0000	1.0000	1.00000	1,336.0000	0	8,609,167	0.00%
Other Wetlands	Saline	3,257	0.0000	1.0000	1.00000	1,336.0000	0	8,609,167	0.00%
		3,257	0.0000	1.0000	1.00000	1,336.0000	0	8,609,167	0.00%
Other Wetlands	Moist-soil unit	0	0.0000	1.0000	1.00000	4,223.0000	0	8,609,167	0.00%
		0	0.0000	1.0000	1.00000	4,223.0000	0	8,609,167	0.00%
Playa	Wet	5,702	0.0000	1.0000	1.00000	428.0000	0	8,609,167	0.00%
		5,702	0.0000	1.0000	1.00000	428.0000	0	8,609,167	0.00%
Reservoirs Lakes Ponds	Lagoon	176	0.0000	0.4000	1.00000	428.0000	0	8,609,167	0.00%
		176	0.0000	0.4000	1.00000	428.0000	0	8,609,167	0.00%
Reservoirs Lakes Ponds	Stock pond	2,394	0.0000	0.4000	1.00000	225.0000	0	8,609,167	0.00%
		2,394	0.0000	0.4000	1.00000	225.0000	0	8,609,167	0.00%
Reservoirs Lakes Ponds	Reservoir	4,314	0.0000	0.0500	1.00000	225.0000	0	8,609,167	0.00%
		4,314	0.0000	0.0500	1.00000	225.0000	0	8,609,167	0.00%
Reservoirs Lakes Ponds	Freshwater lake	0	0.0000	0.0500	1.00000	225.0000	0	8,609,167	0.00%
		0	0.0000	0.0500	1.00000	225.0000	0	8,609,167	0.00%
Riverine Systems	Floodplain marsh	46,098	0.0000	1.0000	1.00000	1,336.0000	0	8,609,167	0.00%
		46,098	0.0000	1.0000	1.00000	1,336.0000	0	8,609,167	0.00%
Riverine Systems	River channel	7,216	0.0000	1.0000	1.00000	50.0000	0	8,609,167	0.00%
		7,216	0.0000	1.0000	1.00000	50.0000	0	8,609,167	0.00%
Summary for Winter (13 records)				<i>Pre-planning Sum</i>			1,496,491,962		17382.54%
				<i>Post-planning Sum</i>			1,384,145,490		16077.50%

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.

Species/Guild Name: Baltimore Oriole Season: Breeding

Assoc Name	Condition Name	Condition		Large			Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block					
Riverine Systems	Riparian canopy - late	708	1.0000	1.0000	1.00000	0.1037	73	214	34.11%	
	successional w/ understory	708	1.0000	1.0000	1.00000	0.1037	73	214	34.11%	
Riverine Systems	Riparian canopy - late	708	1.0000	1.0000	1.00000	0.1037	73	214	34.11%	
	successional w/o understory	708	1.0000	1.0000	1.00000	0.1037	73	214	34.11%	
Riverine Systems	Riparian canopy - early	1,062	1.0000	1.0000	1.00000	0.0317	34	214	15.89%	
	successional w/o understor	1,062	1.0000	1.0000	1.00000	0.0317	34	214	15.89%	
Riverine Systems	Riparian canopy - early	1,062	1.0000	1.0000	1.00000	0.0317	34	214	15.89%	
	successional w/ understory	1,062	1.0000	1.0000	1.00000	0.0317	34	214	15.89%	
Summary for Breeding (4 records)				<i>Pre-planning Sum</i>			214		100.00%	
				<i>Post-planning Sum</i>			214		100.00%	

Species/Guild Name: Bell's Vireo Season: Breeding

Assoc Name	Condition Name	Condition		Large			Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block					
Mixed Grass	Few shrubs/ low grass	32,332	0.1010	1.0000	1.00000	0.0082	27	142	19.01%	
		19,400	0.1010	1.0000	1.00000	0.0082	16	142	11.27%	
Mixed Grass	Many shrubs/low grass	32,332	0.1000	1.0000	1.00000	0.0082	27	142	19.01%	
		45,266	0.1000	1.0000	1.00000	0.0082	37	142	26.06%	
Mixed Grass	Many shrubs/high grass	32,332	0.1000	1.0000	1.00000	0.0082	27	142	19.01%	
		45,266	0.1000	1.0000	1.00000	0.0082	37	142	26.06%	
Mixed Grass	Few shrubs/high grass	32,332	0.1000	1.0000	1.00000	0.0082	27	142	19.01%	
		19,400	0.1000	1.0000	1.00000	0.0082	16	142	11.27%	
Riverine Systems	Riparian canopy - early	1,062	1.0000	1.0000	1.00000	0.0059	6	142	4.23%	
	successional w/ understory	1,062	1.0000	1.0000	1.00000	0.0059	6	142	4.23%	
Riverine Systems	Riparian canopy - late	708	1.0000	1.0000	1.00000	0.0059	4	142	2.82%	
	successional w/ understory	708	1.0000	1.0000	1.00000	0.0059	4	142	2.82%	
Riverine Systems	Native riparian shrubland	3,364	0.1000	1.0000	1.00000	0.0721	24	142	16.90%	
		3,364	0.1000	1.0000	1.00000	0.0721	24	142	16.90%	
Summary for Breeding (7 records)				<i>Pre-planning Sum</i>			142		100.00%	
				<i>Post-planning Sum</i>			140		98.59%	

Species/Guild Name: Bullock's Oriole Season: Breeding

Assoc Name	Condition Name	Condition		Large			Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block					
Other	small roads	145,316	1.0000	1.0000	1.00000	0.0016	233	4,420	5.27%	
		145,316	1.0000	1.0000	1.00000	0.0016	233	4,420	5.27%	
Other	Urban/Suburban	22,812	0.0500	1.0000	1.00000	0.3778	431	4,420	9.75%	
		22,812	0.0500	1.0000	1.00000	0.3778	431	4,420	9.75%	
Riverine Systems	Riparian canopy - early	1,062	1.0000	1.0000	1.00000	0.7557	803	4,420	18.17%	
	successional w/o understor	1,062	1.0000	1.0000	1.00000	0.7557	803	4,420	18.17%	
Riverine Systems	Riparian canopy - early	1,062	1.0000	1.0000	1.00000	0.7557	803	4,420	18.17%	
	successional w/ understory	1,062	1.0000	1.0000	1.00000	0.7557	803	4,420	18.17%	
Riverine Systems	Riparian canopy - late	708	1.0000	1.0000	1.00000	0.7557	535	4,420	12.10%	
	successional w/o understory	708	1.0000	1.0000	1.00000	0.7557	535	4,420	12.10%	
Riverine Systems	Riparian canopy - late	708	1.0000	1.0000	1.00000	0.7557	535	4,420	12.10%	
	successional w/ understory	708	1.0000	1.0000	1.00000	0.7557	535	4,420	12.10%	
Shortgrass	Few shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.0016	270	4,420	6.11%	
		298,331	1.0000	1.0000	1.00000	0.0016	477	4,420	10.79%	
Shortgrass	Many shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0016	270	4,420	6.11%	
		74,086	1.0000	1.0000	1.00000	0.0016	119	4,420	2.69%	
Shortgrass	Few shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0016	270	4,420	6.11%	
		114,403	1.0000	1.0000	1.00000	0.0016	183	4,420	4.14%	
Shortgrass	Many shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.0016	270	4,420	6.11%	
		287,203	1.0000	1.0000	1.00000	0.0016	460	4,420	10.41%	
Summary for Breeding (10 records)				<i>Pre-planning Sum</i>			4,420		100.00%	
				<i>Post-planning Sum</i>			4,579		103.59%	

Species/Guild Name: Burrowing Owl**Season: Breeding**

Assoc Name	Condition Name	Condition		Large			Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Block				
Sand Sage	Low grass	379,998	1.0000	1.0000	1.00000	0.0100	3,800	7,210	52.70%	
		56,567	1.0000	1.0000	1.00000	0.0100	566	7,210	7.85%	
Sand Sage	High grass	20,000	1.0000	1.0000	1.00000	0.0100	200	7,210	2.77%	
		509,106	1.0000	1.0000	1.00000	0.0100	5,091	7,210	70.61%	
Shortgrass	Few shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0024	405	7,210	5.62%	
		114,403	1.0000	1.0000	1.00000	0.0024	275	7,210	3.81%	
Shortgrass	Many shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0024	405	7,210	5.62%	
		74,086	1.0000	1.0000	1.00000	0.0024	178	7,210	2.47%	
Shortgrass	PD town	119,982	1.0000	1.0000	1.00000	0.0200	2,400	7,210	33.29%	
		119,921	1.0000	1.0000	1.00000	0.0200	2,398	7,210	33.26%	
Summary for Breeding (5 records)					Pre-planning Sum		7,210		100.00%	
					Post-planning Sum		8,508		118.00%	

Species/Guild Name: Cassin's Sparrow**Season: Breeding**

Assoc Name	Condition Name	Condition		Large			Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Block				
Sand Sage	Low grass	379,998	1.0000	0.2460	1.00000	0.0536	5,011	38,525	13.01%	
		56,567	1.0000	0.4669	1.00000	0.0536	1,416	38,525	3.68%	
Sand Sage	High grass	20,000	1.0000	0.2460	1.00000	0.0536	264	38,525	0.69%	
		509,106	1.0000	0.4669	1.00000	0.0536	12,741	38,525	33.07%	
Shortgrass	Few shrubs/high grass	168,914	1.0000	0.2460	1.00000	0.0477	1,982	38,525	5.14%	
		298,331	1.0000	0.2460	1.00000	0.0477	3,501	38,525	9.09%	
Shortgrass	Few shrubs/low grass	168,914	1.0000	0.2460	1.00000	0.0477	1,982	38,525	5.14%	
		114,403	1.0000	0.2460	1.00000	0.0477	1,342	38,525	3.48%	
Shortgrass	Many shrubs/high grass	168,914	1.0000	0.2460	1.00000	0.2460	10,222	38,525	26.53%	
		287,203	1.0000	0.2460	1.00000	0.2460	17,380	38,525	45.11%	
Shortgrass	Many shrubs/low grass	168,914	1.0000	0.2460	1.00000	0.2460	10,222	38,525	26.53%	
		74,086	1.0000	0.2460	1.00000	0.2460	4,483	38,525	11.64%	
Summary for Breeding (6 records)					Pre-planning Sum		29,683		77.05%	
					Post-planning Sum		40,863		106.07%	

Species/Guild Name: Dickcissel**Season: Breeding**

Assoc Name	Condition Name	Condition		Large			Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Block				
Cropland	Sorghum	1,003,014	0.8210	1.0000	1.00000	0.0028	2,306	298,687	0.77%	
		927,715	0.8210	1.0000	1.00000	0.0028	2,133	298,687	0.71%	
Cropland	Corn	965,468	0.8210	1.0000	1.00000	0.0028	2,219	298,687	0.74%	
		892,987	0.8210	1.0000	1.00000	0.0028	2,053	298,687	0.69%	
Cropland	Pasture	0	0.8210	1.0000	1.00000	0.0392	0	298,687	0.00%	
		0	0.8210	1.0000	1.00000	0.0392	0	298,687	0.00%	
Cropland	Wheat	2,258,794	0.8210	1.0000	1.00000	0.0715	132,595	298,687	44.39%	
		4,006,041	0.8210	1.0000	1.00000	0.0715	235,161	298,687	78.73%	
Cropland	Alfalfa	166,275	0.8210	1.0000	1.00000	0.0715	9,761	298,687	3.27%	
		153,792	0.8210	1.0000	1.00000	0.0715	9,028	298,687	3.02%	
Cropland	Hay	68,387	0.8210	1.0000	1.00000	0.0392	2,201	298,687	0.74%	
		63,253	0.8210	1.0000	1.00000	0.0392	2,036	298,687	0.68%	
CRP	Non-native	0	0.8210	1.0000	1.00000	0.2266	0	298,687	0.00%	
		0	0.8210	1.0000	1.00000	0.2266	0	298,687	0.00%	
CRP	Native	780,360	0.8210	1.0000	1.00000	0.2266	145,177	298,687	48.61%	
		994,024	0.8210	1.0000	1.00000	0.2266	184,927	298,687	61.91%	
Mixed Grass	Few shrubs/high grass	32,332	0.8210	1.0000	1.00000	0.0392	1,041	298,687	0.35%	
		19,400	0.8210	1.0000	1.00000	0.0392	624	298,687	0.21%	
Mixed Grass	Few shrubs/ low grass	32,332	0.8210	1.0000	1.00000	0.0392	1,041	298,687	0.35%	
		19,400	0.8210	1.0000	1.00000	0.0392	624	298,687	0.21%	
Riverine Systems	Wet meadow	87,356	0.8210	1.0000	1.00000	0.0324	2,324	298,687	0.78%	
		87,356	0.8210	1.0000	1.00000	0.0324	2,324	298,687	0.78%	
Riverine Systems	Native riparian shrubland	3,364	0.8210	1.0000	1.00000	0.0081	22	298,687	0.01%	
		3,364	0.8210	1.0000	1.00000	0.0081	22	298,687	0.01%	
Summary for Breeding (12 records)					Pre-planning Sum		298,687		100.00%	
					Post-planning Sum		438,932		146.95%	

Species/Guild Name: Eastern Meadowlark**Season: Breeding**

Assoc Name	Condition Name	Condition		Large			Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block					
CRP	Native	780,360	0.1000	1.0000	1.00000	0.0014	109	264	41.29%	
		994,024	0.1000	1.0000	1.00000	0.0014	139	264	52.65%	
CRP	Non-native	0	0.1000	1.0000	1.00000	0.0014	0	264	0.00%	
		0	0.1000	1.0000	1.00000	0.0014	0	264	0.00%	
Riverine Systems	Wet meadow	87,356	0.1000	1.0000	1.00000	0.0121	106	264	40.15%	
		87,356	0.1000	1.0000	1.00000	0.0121	106	264	40.15%	
Sand Sage	High grass	20,000	0.1000	1.0000	1.00000	0.0017	3	264	1.14%	
		509,106	0.1000	1.0000	1.00000	0.0017	87	264	32.95%	
Sand Sage	Low grass	379,998	0.1000	1.0000	1.00000	0.0012	46	264	17.42%	
		56,567	0.1000	1.0000	1.00000	0.0012	7	264	2.65%	
Summary for Breeding (5 records)				Pre-planning Sum			264		100.00%	
				Post-planning Sum			339		128.41%	

Species/Guild Name: Grasshopper Sparrow**Season: Breeding**

Assoc Name	Condition Name	Condition		Large			Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block					
Cropland	Wheat	2,258,794	1.0000	1.0000	1.00000	0.1377	311,036	2,041,151	15.24%	
		4,006,041	1.0000	1.0000	1.00000	0.1377	551,632	2,041,151	27.03%	
Cropland	Pasture	0	1.0000	1.0000	1.00000	0.1578	0	2,041,151	0.00%	
		0	1.0000	1.0000	1.00000	0.1578	0	2,041,151	0.00%	
Cropland	Alfalfa	166,275	1.0000	1.0000	1.00000	0.1377	22,896	2,041,151	1.12%	
		153,792	1.0000	1.0000	1.00000	0.1377	21,177	2,041,151	1.04%	
Cropland	Hay	68,387	1.0000	1.0000	1.00000	0.1578	10,792	2,041,151	0.53%	
		63,253	1.0000	1.0000	1.00000	0.1578	9,981	2,041,151	0.49%	
CRP	Non-native	0	1.0000	1.0000	1.00000	0.7498	0	2,041,151	0.00%	
		0	1.0000	1.0000	1.00000	0.7498	0	2,041,151	0.00%	
CRP	Native	780,360	1.0000	1.0000	1.00000	0.7498	585,114	2,041,151	28.67%	
		994,024	1.0000	1.0000	1.00000	0.7498	745,319	2,041,151	36.51%	
Mixed Grass	Few shrubs/high grass	32,332	1.0000	1.0000	1.00000	0.3256	10,527	2,041,151	0.52%	
		19,400	1.0000	1.0000	1.00000	0.3256	6,316	2,041,151	0.31%	
Mixed Grass	Many shrubs/low grass	32,332	1.0000	1.0000	1.00000	0.0673	2,176	2,041,151	0.11%	
		45,266	1.0000	1.0000	1.00000	0.0673	3,046	2,041,151	0.15%	
Mixed Grass	Few shrubs/ low grass	32,332	1.0000	1.0000	1.00000	0.0673	2,176	2,041,151	0.11%	
		19,400	1.0000	1.0000	1.00000	0.0673	1,306	2,041,151	0.06%	
Mixed Grass	Many shrubs/high grass	32,332	1.0000	1.0000	1.00000	0.3256	10,527	2,041,151	0.52%	
		45,266	1.0000	1.0000	1.00000	0.3256	14,738	2,041,151	0.72%	
Riverine Systems	Wet meadow	87,356	1.0000	1.0000	1.00000	0.1190	10,395	2,041,151	0.51%	
		87,356	1.0000	1.0000	1.00000	0.1190	10,395	2,041,151	0.51%	
Sand Sage	Low grass	379,998	1.0000	1.0000	1.00000	0.0430	16,340	2,041,151	0.80%	
		56,567	1.0000	1.0000	1.00000	0.0430	2,432	2,041,151	0.12%	
Sand Sage	High grass	20,000	1.0000	1.0000	1.00000	0.2080	4,160	2,041,151	0.20%	
		509,106	1.0000	1.0000	1.00000	0.2080	105,894	2,041,151	5.19%	
Shortgrass	Few shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.1579	26,672	2,041,151	1.31%	
		298,331	1.0000	1.0000	1.00000	0.1579	47,106	2,041,151	2.31%	
Shortgrass	Many shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.1579	26,672	2,041,151	1.31%	
		287,203	1.0000	1.0000	1.00000	0.1579	45,349	2,041,151	2.22%	
Summary for Breeding (15 records)				Pre-planning Sum			1,039,483		50.92%	
				Post-planning Sum			1,564,691		76.65%	

Species/Guild Name: Greater Prairie-Chicken**Season: Resident**

Assoc Name	Condition Name	Condition		Large			Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block					
CRP	Non-native	0	1.0000	1.0000	0.09400	0.0125	0	1,203	0.00%	
		0	1.0000	1.0000	0.25400	0.0125	0	1,203	0.00%	
CRP	Native	780,360	1.0000	1.0000	0.09400	0.0125	917	1,203	76.23%	
		994,024	1.0000	1.0000	0.25400	0.0125	3,156	1,203	262.34%	
Mixed Grass	Few shrubs/high grass	32,332	0.5000	1.0000	0.23100	0.0125	47	1,203	3.91%	
		19,400	0.5000	1.0000	0.23100	0.0125	28	1,203	2.33%	
Mixed Grass	Few shrubs/ low grass	32,332	0.5000	1.0000	0.23100	0.0125	47	1,203	3.91%	
		19,400	0.5000	1.0000	0.23100	0.0125	28	1,203	2.33%	
Mixed Grass	Many shrubs/high grass	32,332	0.5000	1.0000	0.23100	0.0125	47	1,203	3.91%	
		45,266	0.5000	1.0000	0.23100	0.0125	65	1,203	5.40%	

Mixed Grass	Many shrubs/low grass	32,332	0.5000	1.0000	0.23100	0.0125	47	1,203	3.91%
		45,266	0.5000	1.0000	0.23100	0.0125	65	1,203	5.40%
Sand Sage	High grass	20,000	0.5000	1.0000	0.03900	0.0125	5	1,203	0.42%
		509,106	0.5000	1.0000	0.20000	0.0125	636	1,203	52.87%
Sand Sage	Low grass	379,998	0.5000	1.0000	0.03900	0.0125	93	1,203	7.73%
		56,567	0.5000	1.0000	0.20000	0.0125	71	1,203	5.90%
Summary for Resident (8 records)					<i>Pre-planning Sum</i>		1,203	100.00%	
					<i>Post-planning Sum</i>		4,049	336.57%	

Species/Guild Name: Lark Bunting

Season: Breeding

Assoc Name	Condition Name	Condition			Large		Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Block				
Cropland	Hay	68,387	1.0000	1.0000	1.00000	0.0977	6,681	1,447,367	0.46%	
		63,253	1.0000	1.0000	1.00000	0.0977	6,180	1,447,367	0.43%	
Cropland	Fallow	0	1.0000	1.0000	1.00000	0.1797	0	1,447,367	0.00%	
		0	1.0000	1.0000	1.00000	0.1797	0	1,447,367	0.00%	
Cropland	Alfalfa	166,275	1.0000	1.0000	1.00000	0.1797	29,880	1,447,367	2.06%	
		153,792	1.0000	1.0000	1.00000	0.1797	27,636	1,447,367	1.91%	
Cropland	Wheat	2,258,794	1.0000	1.0000	1.00000	0.1797	405,905	1,447,367	28.04%	
		4,006,041	1.0000	1.0000	1.00000	0.1797	719,886	1,447,367	49.74%	
Cropland	Pasture	0	1.0000	1.0000	1.00000	0.0977	0	1,447,367	0.00%	
		0	1.0000	1.0000	1.00000	0.0977	0	1,447,367	0.00%	
CRP	Native	780,360	1.0000	1.0000	1.00000	0.2044	159,506	1,447,367	11.02%	
		994,024	1.0000	1.0000	1.00000	0.2044	203,179	1,447,367	14.04%	
Mixed Grass	Many shrubs/high grass	32,332	1.0000	1.0000	1.00000	0.1059	3,424	1,447,367	0.24%	
		45,266	1.0000	1.0000	1.00000	0.1059	4,794	1,447,367	0.33%	
Mixed Grass	Few shrubs/high grass	32,332	1.0000	1.0000	1.00000	0.1151	3,721	1,447,367	0.26%	
		19,400	1.0000	1.0000	1.00000	0.1151	2,233	1,447,367	0.15%	
Mixed Grass	Few shrubs/ low grass	32,332	1.0000	1.0000	1.00000	0.0953	3,081	1,447,367	0.21%	
		19,400	1.0000	1.0000	1.00000	0.0953	1,849	1,447,367	0.13%	
Mixed Grass	Many shrubs/low grass	32,332	1.0000	1.0000	1.00000	0.0894	2,891	1,447,367	0.20%	
		45,266	1.0000	1.0000	1.00000	0.0894	4,047	1,447,367	0.28%	
Sand Sage	Low grass	379,998	1.0000	1.0000	1.00000	0.1051	39,938	1,447,367	2.76%	
		56,567	1.0000	1.0000	1.00000	0.1051	5,945	1,447,367	0.41%	
Sand Sage	High grass	20,000	1.0000	1.0000	1.00000	0.1051	2,102	1,447,367	0.15%	
		509,106	1.0000	1.0000	1.00000	0.1051	53,507	1,447,367	3.70%	
Shortgrass	Few shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0953	16,097	1,447,367	1.11%	
		114,403	1.0000	1.0000	1.00000	0.0953	10,903	1,447,367	0.75%	
Shortgrass	Many shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0894	15,101	1,447,367	1.04%	
		74,086	1.0000	1.0000	1.00000	0.0894	6,623	1,447,367	0.46%	
Shortgrass	PD town	119,982	1.0000	1.0000	1.00000	0.0953	11,434	1,447,367	0.79%	
		119,921	1.0000	1.0000	1.00000	0.0953	11,428	1,447,367	0.79%	
Shortgrass	Many shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.1059	17,888	1,447,367	1.24%	
		287,203	1.0000	1.0000	1.00000	0.1059	30,415	1,447,367	2.10%	
Shortgrass	Few shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.1151	19,442	1,447,367	1.34%	
		298,331	1.0000	1.0000	1.00000	0.1151	34,338	1,447,367	2.37%	
Summary for Breeding (17 records)					<i>Pre-planning Sum</i>		737,091	50.92%		
					<i>Post-planning Sum</i>		1,122,963	77.58%		

Species/Guild Name: Lark Sparrow

Season: Breeding

Assoc Name	Condition Name	Condition			Large		Units	CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Block				
Mixed Grass	Many shrubs/high grass	32,332	0.7370	1.0000	1.00000	0.1209	2,881	113,055	2.55%	
		45,266	0.7370	1.0000	1.00000	0.1209	4,033	113,055	3.57%	
Mixed Grass	Few shrubs/ low grass	32,332	0.7370	1.0000	1.00000	0.1209	2,881	113,055	2.55%	
		19,400	0.7370	1.0000	1.00000	0.1209	1,729	113,055	1.53%	
Mixed Grass	Many shrubs/low grass	32,332	0.7370	1.0000	1.00000	0.1209	2,881	113,055	2.55%	
		45,266	0.7370	1.0000	1.00000	0.1209	4,033	113,055	3.57%	
Mixed Grass	Few shrubs/high grass	32,332	0.7370	1.0000	1.00000	0.1209	2,881	113,055	2.55%	
		19,400	0.7370	1.0000	1.00000	0.1209	1,729	113,055	1.53%	
Riverine Systems	Native riparian shrubland	3,364	0.7370	1.0000	1.00000	0.0016	4	113,055	0.00%	
		3,364	0.7370	1.0000	1.00000	0.0016	4	113,055	0.00%	
Sand Sage	Low grass	379,998	0.7370	1.0000	1.00000	0.1420	39,768	113,055	35.18%	
		56,567	0.7370	1.0000	1.00000	0.1420	5,920	113,055	5.24%	
Sand Sage	High grass	20,000	0.7370	1.0000	1.00000	0.1420	2,093	113,055	1.85%	

		509,106	0.7370	1.0000	1.00000	0.1420	53,280	113,055	47.13%
Shortgrass	Few shrubs/high grass	168,914	0.7370	1.0000	1.00000	0.1209	15,051	113,055	13.31%
		298,331	0.7370	1.0000	1.00000	0.1209	26,582	113,055	23.51%
Shortgrass	Many shrubs/low grass	168,914	0.7370	1.0000	1.00000	0.1209	15,051	113,055	13.31%
		74,086	0.7370	1.0000	1.00000	0.1209	6,601	113,055	5.84%
Shortgrass	Many shrubs/high grass	168,914	0.7370	1.0000	1.00000	0.1209	15,051	113,055	13.31%
		287,203	0.7370	1.0000	1.00000	0.1209	25,591	113,055	22.64%
Shortgrass	Few shrubs/low grass	168,914	0.7370	1.0000	1.00000	0.1209	15,051	113,055	13.31%
		114,403	0.7370	1.0000	1.00000	0.1209	10,194	113,055	9.02%
Summary for Breeding (11 records)							113,593		100.47%
							139,696		123.56%

Species/Guild Name: Lesser Prairie-Chicken

Season: Resident

Assoc Name	Condition Name	Condition	Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
CRP	Non-native		0	1.0000	0.7000	0.34300	0.0125	0	14,965	0.00%
			0	1.0000	0.7000	0.76000	0.0125	0	14,965	0.00%
CRP	Native		780,360	1.0000	0.7000	0.34300	0.0125	2,342	14,965	15.65%
			994,024	1.0000	0.7000	0.76000	0.0125	6,610	14,965	44.17%
Mixed Grass	Many shrubs/low grass		32,332	1.0000	0.5000	0.51100	0.0125	103	14,965	0.69%
			45,266	1.0000	0.5000	0.51100	0.0125	145	14,965	0.97%
Mixed Grass	Many shrubs/high grass		32,332	1.0000	0.5000	0.51100	0.0125	103	14,965	0.69%
			45,266	1.0000	0.5000	0.51100	0.0125	145	14,965	0.97%
Mixed Grass	Few shrubs/ low grass		32,332	1.0000	0.5000	0.51100	0.0125	103	14,965	0.69%
			19,400	1.0000	0.5000	0.51100	0.0125	62	14,965	0.41%
Mixed Grass	Few shrubs/high grass		32,332	1.0000	0.5000	0.51100	0.0125	103	14,965	0.69%
			19,400	1.0000	0.5000	0.51100	0.0125	62	14,965	0.41%
Sand Sage	High grass		20,000	1.0000	1.0000	0.78000	0.0156	243	14,965	1.62%
			509,106	1.0000	1.0000	0.90000	0.0156	7,148	14,965	47.76%
Sand Sage	Low grass		379,998	1.0000	1.0000	0.78000	0.0156	4,624	14,965	30.90%
			56,567	1.0000	1.0000	0.90000	0.0156	794	14,965	5.31%
Summary for Resident (8 records)								7,621		50.92%
								14,966		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	Pasture		0	0.4970	1.0000	1.00000	0.0089	0	6,191	0.00%
			0	0.4970	1.0000	1.00000	0.0089	0	6,191	0.00%
Cropland	Alfalfa		166,275	0.4970	1.0000	1.00000	0.0089	735	6,191	11.87%
			153,792	0.4970	1.0000	1.00000	0.0089	680	6,191	10.98%
Cropland	Hay		68,387	0.4970	1.0000	1.00000	0.0089	302	6,191	4.88%
			63,253	0.4970	1.0000	1.00000	0.0089	280	6,191	4.52%
CRP	Non-native		0	0.4970	1.0000	1.00000	0.0015	0	6,191	0.00%
			0	0.4970	1.0000	1.00000	0.0015	0	6,191	0.00%
CRP	Native		780,360	0.4970	1.0000	1.00000	0.0015	582	6,191	9.40%
			994,024	0.4970	1.0000	1.00000	0.0015	741	6,191	11.97%
Mixed Grass	Many shrubs/high grass		32,332	0.4970	1.0000	1.00000	0.0115	185	6,191	2.99%
			45,266	0.4970	1.0000	1.00000	0.0115	259	6,191	4.18%
Mixed Grass	Few shrubs/ low grass		32,332	0.4970	1.0000	1.00000	0.0050	80	6,191	1.29%
			19,400	0.4970	1.0000	1.00000	0.0050	48	6,191	0.78%
Mixed Grass	Many shrubs/low grass		32,332	0.4970	1.0000	1.00000	0.0115	185	6,191	2.99%
			45,266	0.4970	1.0000	1.00000	0.0115	259	6,191	4.18%
Mixed Grass	Few shrubs/high grass		32,332	0.4970	1.0000	1.00000	0.0050	80	6,191	1.29%
			19,400	0.4970	1.0000	1.00000	0.0050	48	6,191	0.78%
Sand Sage	High grass		20,000	0.4970	1.0000	1.00000	0.0049	49	6,191	0.79%
			509,106	0.4970	1.0000	1.00000	0.0049	1,240	6,191	20.03%
Sand Sage	Low grass		379,998	0.4970	1.0000	1.00000	0.0049	925	6,191	14.94%
			56,567	0.4970	1.0000	1.00000	0.0049	138	6,191	2.23%
Shortgrass	Few shrubs/low grass		168,914	0.4970	1.0000	1.00000	0.0050	420	6,191	6.78%
			114,403	0.4970	1.0000	1.00000	0.0050	284	6,191	4.59%
Shortgrass	PD town		119,982	0.4970	1.0000	1.00000	0.0050	298	6,191	4.81%
			119,921	0.4970	1.0000	1.00000	0.0050	298	6,191	4.81%
Shortgrass	Many shrubs/low grass		168,914	0.4970	1.0000	1.00000	0.0115	965	6,191	15.59%
			74,086	0.4970	1.0000	1.00000	0.0115	423	6,191	6.83%

Shortgrass	Few shrubs/high grass	168,914	0.4970	1.0000	1.00000	0.0050	420	6,191	6.78%
		298,331	0.4970	1.0000	1.00000	0.0050	741	6,191	11.97%
Shortgrass	Many shrubs/high grass	168,914	0.4970	1.0000	1.00000	0.0115	965	6,191	15.59%
		287,203	0.4970	1.0000	1.00000	0.0115	1,642	6,191	26.52%
Summary for Resident (16 records)							6,191		100.00%
							7,081		114.37%

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/ low grass	32,332	1.0000	1.0000	0.02500	0.0005	0	122	0.00%
		19,400	1.0000	1.0000	0.25000	0.0005	2	122	1.64%
Mixed Grass	Few shrubs/high grass	32,332	1.0000	1.0000	0.02500	0.0005	0	122	0.00%
		19,400	1.0000	1.0000	0.25000	0.0005	2	122	1.64%
Shortgrass	Few shrubs/low grass	168,914	1.0000	1.0000	0.27400	0.0005	23	122	18.85%
		114,403	1.0000	1.0000	0.52000	0.0005	30	122	24.59%
Shortgrass	PD town	119,982	1.0000	1.0000	0.27400	0.0005	16	122	13.11%
		119,921	1.0000	1.0000	0.27400	0.0005	16	122	13.11%
Shortgrass	Few shrubs/high grass	168,914	1.0000	1.0000	0.27400	0.0005	23	122	18.85%
		298,331	1.0000	1.0000	0.52000	0.0005	78	122	63.93%
Summary for Breeding (5 records)							62		50.82%
							128		104.92%

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	22,812	0.1000	1.0000	1.00000	0.2312	527	543	97.05%
		22,812	0.1000	1.0000	1.00000	0.2312	527	543	97.05%
Riverine Systems	Riparian canopy - early successional w/o understor	1,062	0.0500	0.4000	1.00000	0.2289	5	543	0.92%
		1,062	0.0500	0.4000	1.00000	0.2289	5	543	0.92%
Riverine Systems	Riparian canopy - late successional w/ understory	708	0.0500	0.4000	1.00000	0.2289	3	543	0.55%
		708	0.0500	0.4000	1.00000	0.2289	3	543	0.55%
Riverine Systems	Riparian canopy - early successional w/ understory	1,062	0.0500	0.4000	1.00000	0.2289	5	543	0.92%
		1,062	0.0500	0.4000	1.00000	0.2289	5	543	0.92%
Riverine Systems	Riparian canopy - late successional w/o understory	708	0.0500	0.4000	1.00000	0.2289	3	543	0.55%
		708	0.0500	0.4000	1.00000	0.2289	3	543	0.55%
Summary for Breeding (5 records)							543		100.00%
							543		100.00%

Species/Guild Name: Mountain Plover

Season: Breeding

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Fallow	0	1.0000	0.2000	1.00000	0.0135	0	589	0.00%
		0	1.0000	0.2000	1.00000	0.0135	0	589	0.00%
Shortgrass	PD town	119,982	1.0000	0.2000	1.00000	0.0117	281	589	47.71%
		119,921	1.0000	0.2000	1.00000	0.0117	281	589	47.71%
Shortgrass	Few shrubs/low grass	168,914	1.0000	0.0170	1.00000	0.0067	19	589	3.23%
		114,403	1.0000	0.4000	1.00000	0.0067	307	589	52.12%
Summary for Breeding (3 records)							300		50.93%
							588		99.83%

Species/Guild Name: Northern Bobwhite

Season: Resident

Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Alfalfa	166,275	0.3690	1.0000	1.00000	0.0028	172	9,979	1.72%
		153,792	0.3690	1.0000	1.00000	0.0028	159	9,979	1.59%
Cropland	Pasture	0	0.3690	1.0000	1.00000	0.0028	0	9,979	0.00%
		0	0.3690	1.0000	1.00000	0.0028	0	9,979	0.00%
Cropland	Hay	68,387	0.3690	1.0000	1.00000	0.0028	71	9,979	0.71%
		63,253	0.3690	1.0000	1.00000	0.0028	65	9,979	0.65%
Cropland	Wheat	2,258,794	0.3690	1.0000	1.00000	0.0028	2,334	9,979	23.39%
		4,006,041	0.3690	1.0000	1.00000	0.0028	4,139	9,979	41.48%
Cropland	Sorghum	1,003,014	0.3690	1.0000	1.00000	0.0028	1,036	9,979	10.38%
		927,715	0.3690	1.0000	1.00000	0.0028	959	9,979	9.61%

Mixed Grass	Many shrubs/high grass	32,332	0.3690	1.0000	1.00000	0.1280	1,527	9,979	15.30%
		45,266	0.3690	1.0000	1.00000	0.1280	2,138	9,979	21.42%
Mixed Grass	Few shrubs/high grass	32,332	0.3690	1.0000	1.00000	0.0459	548	9,979	5.49%
		19,400	0.3690	1.0000	1.00000	0.0459	329	9,979	3.30%
Mixed Grass	Many shrubs/low grass	32,332	0.3690	1.0000	1.00000	0.1280	1,527	9,979	15.30%
		45,266	0.3690	1.0000	1.00000	0.1280	2,138	9,979	21.42%
Mixed Grass	Few shrubs/ low grass	32,332	0.3690	1.0000	1.00000	0.0459	548	9,979	5.49%
		19,400	0.3690	1.0000	1.00000	0.0459	329	9,979	3.30%
Riverine Systems	Wet meadow	87,356	0.3690	1.0000	1.00000	0.0490	1,579	9,979	15.82%
		87,356	0.3690	1.0000	1.00000	0.0490	1,579	9,979	15.82%
Riverine Systems	Native riparian shrubland	3,364	0.3690	1.0000	1.00000	0.0490	61	9,979	0.61%
		3,364	0.3690	1.0000	1.00000	0.0490	61	9,979	0.61%
Sand Sage	Low grass	379,998	0.3690	1.0000	1.00000	0.0039	547	9,979	5.48%
		56,567	0.3690	1.0000	1.00000	0.0039	81	9,979	0.81%
Sand Sage	High grass	20,000	0.3690	1.0000	1.00000	0.0039	29	9,979	0.29%
		509,106	0.3690	1.0000	1.00000	0.0039	733	9,979	7.35%
Summary for Resident (13 records)							<i>Pre-planning Sum</i>	9,979	100.00%
							<i>Post-planning Sum</i>	12,710	127.36%

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		22,812	1.0000	1.0000	1.00000	0.0167	381	0	0.00%
			22,812	1.0000	1.0000	1.00000	0.0167	381	0	0.00%
Riverine Systems	Riparian canopy - late successional w/ understory		708	1.0000	1.0000	1.00000	0.0100	7	14	50.00%
			708	1.0000	1.0000	1.00000	0.0100	7	14	50.00%
Riverine Systems	Riparian canopy - late successional w/o understory		708	1.0000	1.0000	1.00000	0.0100	7	14	50.00%
			708	1.0000	1.0000	1.00000	0.0100	7	14	50.00%
Summary for Breeding (3 records)							<i>Pre-planning Sum</i>	395	100.00%	
							<i>Post-planning Sum</i>	395	100.00%	

Species/Guild Name: Ring-necked Pheasant

Season: Resident

Assoc Name	Condition Name	Condition	Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Pasture		0	1.0000	1.0000	1.00000	0.0043	0	132,826	0.00%
			0	1.0000	1.0000	1.00000	0.0043	0	132,826	0.00%
Cropland	Hay		68,387	1.0000	1.0000	1.00000	0.0043	294	132,826	0.22%
			63,253	1.0000	1.0000	1.00000	0.0043	272	132,826	0.20%
Cropland	Alfalfa		166,275	1.0000	1.0000	1.00000	0.0043	715	132,826	0.54%
			153,792	1.0000	1.0000	1.00000	0.0043	661	132,826	0.50%
Cropland	Wheat		2,258,794	1.0000	1.0000	1.00000	0.0112	25,298	132,826	19.05%
			4,006,041	1.0000	1.0000	1.00000	0.0112	44,868	132,826	33.78%
CRP	Native		780,360	1.0000	1.0000	1.00000	0.0240	18,729	132,826	14.10%
			994,024	1.0000	1.0000	1.00000	0.0240	23,857	132,826	17.96%
CRP	Non-native		0	1.0000	1.0000	1.00000	0.0240	0	132,826	0.00%
			0	1.0000	1.0000	1.00000	0.0240	0	132,826	0.00%
Other Wetlands	Moist-soil unit		0	1.0000	1.0000	1.00000	0.3303	0	132,826	0.00%
			0	1.0000	1.0000	1.00000	0.3303	0	132,826	0.00%
Playa	Dry		53,853	1.0000	1.0000	1.00000	0.0550	2,962	132,826	2.23%
			53,853	1.0000	1.0000	1.00000	0.0550	2,962	132,826	2.23%
Riverine Systems	Native riparian shrubland		3,364	1.0000	1.0000	1.00000	0.0291	98	132,826	0.07%
			3,364	1.0000	1.0000	1.00000	0.0291	98	132,826	0.07%
Riverine Systems	Wet meadow		87,356	1.0000	1.0000	1.00000	0.3303	28,854	132,826	21.72%
			87,356	1.0000	1.0000	1.00000	0.3303	28,854	132,826	21.72%
Shortgrass	Few shrubs/low grass		168,914	1.0000	1.0000	1.00000	0.0044	743	132,826	0.56%
			114,403	1.0000	1.0000	1.00000	0.0044	503	132,826	0.38%
Shortgrass	Few shrubs/high grass		168,914	1.0000	1.0000	1.00000	0.0044	743	132,826	0.56%
			298,331	1.0000	1.0000	1.00000	0.0044	1,313	132,826	0.99%
Summary for Resident (12 records)							<i>Pre-planning Sum</i>	78,436	59.05%	
							<i>Post-planning Sum</i>	103,388	77.83%	

Species/Guild Name: Scaled Quail**Season: Resident**

Assoc Name	Condition Name	Condition		Large			CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Units			
Sand Sage	High grass	20,000	0.0750	1.0000	1.00000	0.0023	3	184	1.63%
		509,106	0.0750	1.0000	1.00000	0.0023	88	184	47.83%
Sand Sage	Low grass	379,998	0.0750	1.0000	1.00000	0.0023	66	184	35.87%
		56,567	0.0750	1.0000	1.00000	0.0023	10	184	5.43%
Shortgrass	Many shrubs/low grass	168,914	0.0750	1.0000	1.00000	0.0023	29	184	15.76%
		74,086	0.0750	1.0000	1.00000	0.0023	13	184	7.07%
Shortgrass	Many shrubs/high grass	168,914	0.0750	1.0000	1.00000	0.0023	29	184	15.76%
		287,203	0.0750	1.0000	1.00000	0.0023	50	184	27.17%
Shortgrass	Few shrubs/high grass	168,914	0.0750	1.0000	1.00000	0.0023	29	184	15.76%
		298,331	0.0750	1.0000	1.00000	0.0023	51	184	27.72%
Shortgrass	Few shrubs/low grass	168,914	0.0750	1.0000	1.00000	0.0023	29	184	15.76%
		114,403	0.0750	1.0000	1.00000	0.0023	20	184	10.87%
Summary for Resident (6 records)				Pre-planning Sum			185		100.54%
				Post-planning Sum			232		126.08%

Species/Guild Name: Short-eared Owl**Season: Breeding**

Assoc Name	Condition Name	Condition		Large			CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Units			
CRP	Native	780,360	1.0000	0.5000	1.00000	0.0005	195	522	37.36%
		994,024	1.0000	0.7027	1.00000	0.0005	349	522	66.86%
CRP	Non-native	0	1.0000	0.5000	1.00000	0.0005	0	522	0.00%
		0	1.0000	0.5000	1.00000	0.0005	0	522	0.00%
Other Wetlands	Moist-soil unit	0	1.0000	1.0000	1.00000	0.0005	0	522	0.00%
		0	1.0000	1.0000	1.00000	0.0005	0	522	0.00%
Playa	Dry	53,853	1.0000	1.0000	1.00000	0.0005	27	522	5.17%
		53,853	1.0000	1.0000	1.00000	0.0005	27	522	5.17%
Riverine Systems	Wet meadow	87,356	1.0000	1.0000	1.00000	0.0005	44	522	8.43%
		87,356	1.0000	1.0000	1.00000	0.0005	44	522	8.43%
Summary for Breeding (5 records)				Pre-planning Sum			266		50.96%
				Post-planning Sum			420		80.46%

Species/Guild Name: Swainson's Hawk**Season: Breeding**

Assoc Name	Condition Name	Condition		Large			CC	Goal	% of Goal
		Acres	Avail.	Suit.	Block	Units			
Cropland	Wheat	2,258,794	1.0000	1.0000	1.00000	0.0023	5,195	8,307	62.54%
		4,006,041	1.0000	1.0000	1.00000	0.0023	9,214	8,307	110.92%
Cropland	Pasture	0	1.0000	1.0000	1.00000	0.0014	0	8,307	0.00%
		0	1.0000	1.0000	1.00000	0.0014	0	8,307	0.00%
Cropland	Hay	68,387	1.0000	1.0000	1.00000	0.0014	96	8,307	1.16%
		63,253	1.0000	1.0000	1.00000	0.0014	89	8,307	1.07%
Cropland	Alfalfa	166,275	1.0000	1.0000	1.00000	0.0014	233	8,307	2.80%
		153,792	1.0000	1.0000	1.00000	0.0014	215	8,307	2.59%
Cropland	Fallow	0	1.0000	1.0000	1.00000	0.0023	0	8,307	0.00%
		0	1.0000	1.0000	1.00000	0.0023	0	8,307	0.00%
CRP	Non-native	0	1.0000	1.0000	1.00000	0.0014	0	8,307	0.00%
		0	1.0000	1.0000	1.00000	0.0014	0	8,307	0.00%
CRP	Native	780,360	1.0000	1.0000	1.00000	0.0014	1,093	8,307	13.16%
		994,024	1.0000	1.0000	1.00000	0.0014	1,392	8,307	16.76%
Mixed Grass	Few shrubs/ low grass	32,332	1.0000	1.0000	1.00000	0.0019	61	8,307	0.73%
		19,400	1.0000	1.0000	1.00000	0.0019	37	8,307	0.45%
Mixed Grass	Many shrubs/high grass	32,332	1.0000	1.0000	1.00000	0.0010	32	8,307	0.39%
		45,266	1.0000	1.0000	1.00000	0.0010	45	8,307	0.54%
Mixed Grass	Many shrubs/low grass	32,332	1.0000	1.0000	1.00000	0.0010	32	8,307	0.39%
		45,266	1.0000	1.0000	1.00000	0.0010	45	8,307	0.54%
Mixed Grass	Few shrubs/high grass	32,332	1.0000	1.0000	1.00000	0.0019	61	8,307	0.73%
		19,400	1.0000	1.0000	1.00000	0.0019	37	8,307	0.45%
Riverine Systems	Riparian canopy - late successional w/o understory	708	1.0000	1.0000	1.00000	0.0014	1	8,307	0.01%
		708	1.0000	1.0000	1.00000	0.0014	1	8,307	0.01%
Riverine Systems	Wet meadow	87,356	1.0000	1.0000	1.00000	0.0014	122	8,307	1.47%
		87,356	1.0000	1.0000	1.00000	0.0014	122	8,307	1.47%
Riverine Systems	Riparian canopy - late successional w/ understory	708	1.0000	1.0000	1.00000	0.0014	1	8,307	0.01%
		708	1.0000	1.0000	1.00000	0.0014	1	8,307	0.01%

Sand Sage	High grass	20,000	1.0000	1.0000	1.00000	0.0010	20	8,307	0.24%
		509,106	1.0000	1.0000	1.00000	0.0010	509	8,307	6.13%
Sand Sage	Low grass	379,998	1.0000	1.0000	1.00000	0.0010	380	8,307	4.57%
		56,567	1.0000	1.0000	1.00000	0.0010	57	8,307	0.69%
Shortgrass	Many shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0010	169	8,307	2.03%
		74,086	1.0000	1.0000	1.00000	0.0010	74	8,307	0.89%
Shortgrass	Few shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0019	321	8,307	3.86%
		114,403	1.0000	1.0000	1.00000	0.0019	217	8,307	2.61%
Shortgrass	Many shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.0010	169	8,307	2.03%
		287,203	1.0000	1.0000	1.00000	0.0010	287	8,307	3.45%
Shortgrass	Few shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.0019	321	8,307	3.86%
		298,331	1.0000	1.0000	1.00000	0.0019	567	8,307	6.83%
Summary for Breeding (20 records)							8,307		99.99%
						<i>Pre-planning Sum</i>	8,307		99.99%
						<i>Post-planning Sum</i>	12,909		155.39%

Species/Guild Name: Upland Sandpiper

Season: Breeding

Assoc Name	Condition Name	Condition	Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Hay	68,387	0.1060	1.0000	1.00000	0.0003	0.0003	2	345	0.58%
		63,253	0.1060	1.0000	1.00000	0.0003	0.0003	2	345	0.58%
Cropland	Alfalfa	166,275	0.1060	1.0000	1.00000	0.0003	0.0003	5	345	1.45%
		153,792	0.1060	1.0000	1.00000	0.0003	0.0003	5	345	1.45%
Cropland	Pasture	0	0.1060	1.0000	1.00000	0.0003	0.0003	0	345	0.00%
		0	0.1060	1.0000	1.00000	0.0003	0.0003	0	345	0.00%
CRP	Native	780,360	0.1060	1.0000	1.00000	0.0040	0.0040	331	345	95.94%
		994,024	0.1060	1.0000	1.00000	0.0040	0.0040	421	345	122.03%
CRP	Non-native	0	0.1060	1.0000	1.00000	0.0040	0.0040	0	345	0.00%
		0	0.1060	1.0000	1.00000	0.0040	0.0040	0	345	0.00%
Mixed Grass	Few shrubs/high grass	32,332	0.1060	1.0000	1.00000	0.0004	0.0004	1	345	0.29%
		19,400	0.1060	1.0000	1.00000	0.0004	0.0004	1	345	0.29%
Mixed Grass	Many shrubs/low grass	32,332	0.1060	1.0000	1.00000	0.0004	0.0004	1	345	0.29%
		45,266	0.1060	1.0000	1.00000	0.0004	0.0004	2	345	0.58%
Mixed Grass	Many shrubs/high grass	32,332	0.1060	1.0000	1.00000	0.0004	0.0004	1	345	0.29%
		45,266	0.1060	1.0000	1.00000	0.0004	0.0004	2	345	0.58%
Mixed Grass	Few shrubs/ low grass	32,332	0.1060	1.0000	1.00000	0.0004	0.0004	1	345	0.29%
		19,400	0.1060	1.0000	1.00000	0.0004	0.0004	1	345	0.29%
Riverine Systems	Wet meadow	87,356	0.1060	1.0000	1.00000	0.0004	0.0004	4	345	1.16%
		87,356	0.1060	1.0000	1.00000	0.0004	0.0004	4	345	1.16%
Summary for Breeding (10 records)								346		100.29%
						<i>Pre-planning Sum</i>		346		100.29%
						<i>Post-planning Sum</i>		438		126.95%

Species/Guild Name: Western Kingbird

Season: Breeding

Assoc Name	Condition Name	Condition	Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Wheat	2,258,794	1.0000	1.0000	1.00000	0.0237	0.0237	53,533	229,539	23.32%
		4,006,041	1.0000	1.0000	1.00000	0.0237	0.0237	94,943	229,539	41.36%
Cropland	Pasture	0	1.0000	1.0000	1.00000	0.0594	0.0594	0	229,539	0.00%
		0	1.0000	1.0000	1.00000	0.0594	0.0594	0	229,539	0.00%
Cropland	Alfalfa	166,275	1.0000	1.0000	1.00000	0.0594	0.0594	9,877	229,539	4.30%
		153,792	1.0000	1.0000	1.00000	0.0594	0.0594	9,135	229,539	3.98%
Cropland	Hay	68,387	1.0000	1.0000	1.00000	0.0594	0.0594	4,062	229,539	1.77%
		63,253	1.0000	1.0000	1.00000	0.0594	0.0594	3,757	229,539	1.64%
CRP	Native	780,360	1.0000	1.0000	1.00000	0.0237	0.0237	18,495	229,539	8.06%
		994,024	1.0000	1.0000	1.00000	0.0237	0.0237	23,558	229,539	10.26%
CRP	Non-native	0	1.0000	1.0000	1.00000	0.0237	0.0237	0	229,539	0.00%
		0	1.0000	1.0000	1.00000	0.0237	0.0237	0	229,539	0.00%
Mixed Grass	Many shrubs/low grass	32,332	1.0000	1.0000	1.00000	0.0456	0.0456	1,474	229,539	0.64%
		45,266	1.0000	1.0000	1.00000	0.0456	0.0456	2,064	229,539	0.90%
Mixed Grass	Few shrubs/high grass	32,332	1.0000	1.0000	1.00000	0.0639	0.0639	2,066	229,539	0.90%
		19,400	1.0000	1.0000	1.00000	0.0639	0.0639	1,240	229,539	0.54%
Mixed Grass	Few shrubs/ low grass	32,332	1.0000	1.0000	1.00000	0.0639	0.0639	2,066	229,539	0.90%
		19,400	1.0000	1.0000	1.00000	0.0639	0.0639	1,240	229,539	0.54%
Mixed Grass	Many shrubs/high grass	32,332	1.0000	1.0000	1.00000	0.0456	0.0456	1,474	229,539	0.64%
		45,266	1.0000	1.0000	1.00000	0.0456	0.0456	2,064	229,539	0.90%
Other	small roads	145,316	1.0000	1.0000	1.00000	0.0237	0.0237	3,444	229,539	1.50%

		145,316	1.0000	1.0000	1.00000	0.0237	3,444	229,539	1.50%
Other	Urban/Suburban	22,812	1.0000	1.0000	1.00000	0.2575	5,874	229,539	2.56%
		22,812	1.0000	1.0000	1.00000	0.2575	5,874	229,539	2.56%
Riverine Systems	Riparian canopy - early successional w/ understory	1,062	1.0000	1.0000	1.00000	0.7600	807	229,539	0.35%
		1,062	1.0000	1.0000	1.00000	0.7600	807	229,539	0.35%
Riverine Systems	Wet meadow	87,356	1.0000	1.0000	1.00000	0.7600	66,391	229,539	28.92%
		87,356	1.0000	1.0000	1.00000	0.7600	66,391	229,539	28.92%
Riverine Systems	Riparian canopy - early successional w/o understor	1,062	1.0000	1.0000	1.00000	0.7600	807	229,539	0.35%
		1,062	1.0000	1.0000	1.00000	0.7600	807	229,539	0.35%
Riverine Systems	Native riparian shrubland	3,364	1.0000	1.0000	1.00000	0.7600	2,557	229,539	1.11%
		3,364	1.0000	1.0000	1.00000	0.7600	2,557	229,539	1.11%
Riverine Systems	Riparian canopy - late successional w/o understory	708	1.0000	1.0000	1.00000	0.7600	538	229,539	0.23%
		708	1.0000	1.0000	1.00000	0.7600	538	229,539	0.23%
Riverine Systems	Riparian canopy - late successional w/ understory	708	1.0000	1.0000	1.00000	0.7600	538	229,539	0.23%
		708	1.0000	1.0000	1.00000	0.7600	538	229,539	0.23%
Sand Sage	High grass	20,000	1.0000	1.0000	1.00000	0.0370	740	229,539	0.32%
		509,106	1.0000	1.0000	1.00000	0.0370	18,837	229,539	8.21%
Sand Sage	Low grass	379,998	1.0000	1.0000	1.00000	0.0370	14,060	229,539	6.13%
		56,567	1.0000	1.0000	1.00000	0.0370	2,093	229,539	0.91%
Shortgrass	Many shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.0456	7,702	229,539	3.36%
		287,203	1.0000	1.0000	1.00000	0.0456	13,096	229,539	5.71%
Shortgrass	Few shrubs/high grass	168,914	1.0000	1.0000	1.00000	0.0639	10,794	229,539	4.70%
		298,331	1.0000	1.0000	1.00000	0.0639	19,063	229,539	8.30%
Shortgrass	Many shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0639	10,794	229,539	4.70%
		74,086	1.0000	1.0000	1.00000	0.0639	4,734	229,539	2.06%
Shortgrass	Few shrubs/low grass	168,914	1.0000	1.0000	1.00000	0.0639	10,794	229,539	4.70%
		114,403	1.0000	1.0000	1.00000	0.0639	7,310	229,539	3.18%
Summary for Breeding (24 records)							228,887		99.71%
							284,090		123.76%

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
Cropland	Hay	68,387	63,253	-5,134
Cropland	Sod farm	670	620	-50
Cropland	Alfalfa	166,275	153,792	-12,483
Cropland	Pasture	0	0	0
Cropland	Fallow	0	0	0
Cropland	Corn	965,468	892,987	-72,481
Cropland	Sorghum	1,003,014	927,715	-75,299
Cropland	Soybeans	85,819	79,377	-6,442
Cropland	Peanuts	0	0	0
Cropland	Wheat	2,258,794	4,006,041	1,747,247
Cropland	Other	2,072,405	0	-2,072,405
Cropland	Sunflowers	81,126	75,036	-6,090
CRP	Native	780,360	994,024	213,664
CRP	Non-native	0	0	0
Mixed Grass	Many shrubs/high grass	32,332	45,266	12,934
Mixed Grass	Few shrubs/high grass	32,332	19,400	-12,932
Mixed Grass	Many shrubs/low grass	32,332	45,266	12,934
Mixed Grass	Few shrubs/ low grass	32,332	19,400	-12,932
Other	small roads	145,316	145,316	0
Other	Other	409	409	0
Other	Urban/Suburban	22,812	22,812	0
Other	4-lane roads	2,082	2,082	0
Other Wetlands	Saline	3,257	3,257	0
Other Wetlands	Emergent marsh	9,700	9,700	0
Other Wetlands	Moist-soil unit	0	0	0
Playa	Wet	5,702	5,702	0
Playa	Wet pit only	3,801	3,801	0
Playa	Dry	53,853	53,853	0
Reservoirs Lakes Ponds	Stock pond	2,394	2,394	0
Reservoirs Lakes Ponds	Reservoir	4,314	4,314	0
Reservoirs Lakes Ponds	Pit	1,197	1,197	0
Reservoirs Lakes Ponds	Freshwater lake	0	0	0
Reservoirs Lakes Ponds	Lagoon	176	176	0
Riverine Systems	Wet meadow	87,356	87,356	0
Riverine Systems	Floodplain marsh	46,098	46,098	0
Riverine Systems	Native riparian shrubland	3,364	3,364	0
Riverine Systems	Riparian canopy - late	708	708	0
Riverine Systems	Exotic riparian shrubland	0	0	0
Riverine Systems	Riparian canopy - early	1,062	1,062	0
Riverine Systems	Riparian canopy - late	708	708	0
Riverine Systems	Riparian canopy - early	1,062	1,062	0
Riverine Systems	Warmwater slough	0	0	0
Riverine Systems	Unvegetated sandbar	0	0	0
Riverine Systems	River channel	7,216	7,216	0
Sand Sage	Low grass	379,998	56,567	-323,431
Sand Sage	High grass	20,000	509,106	489,106
Shortgrass	Few shrubs/low grass	168,914	114,403	-54,511
Shortgrass	Few shrubs/high grass	168,914	298,331	129,417
Shortgrass	Many shrubs/high grass	168,914	287,203	118,289
Shortgrass	Many shrubs/low grass	168,914	74,086	-94,828
Shortgrass	PD town	119,982	119,921	-61
Sum		9,184,381	9,209,869	

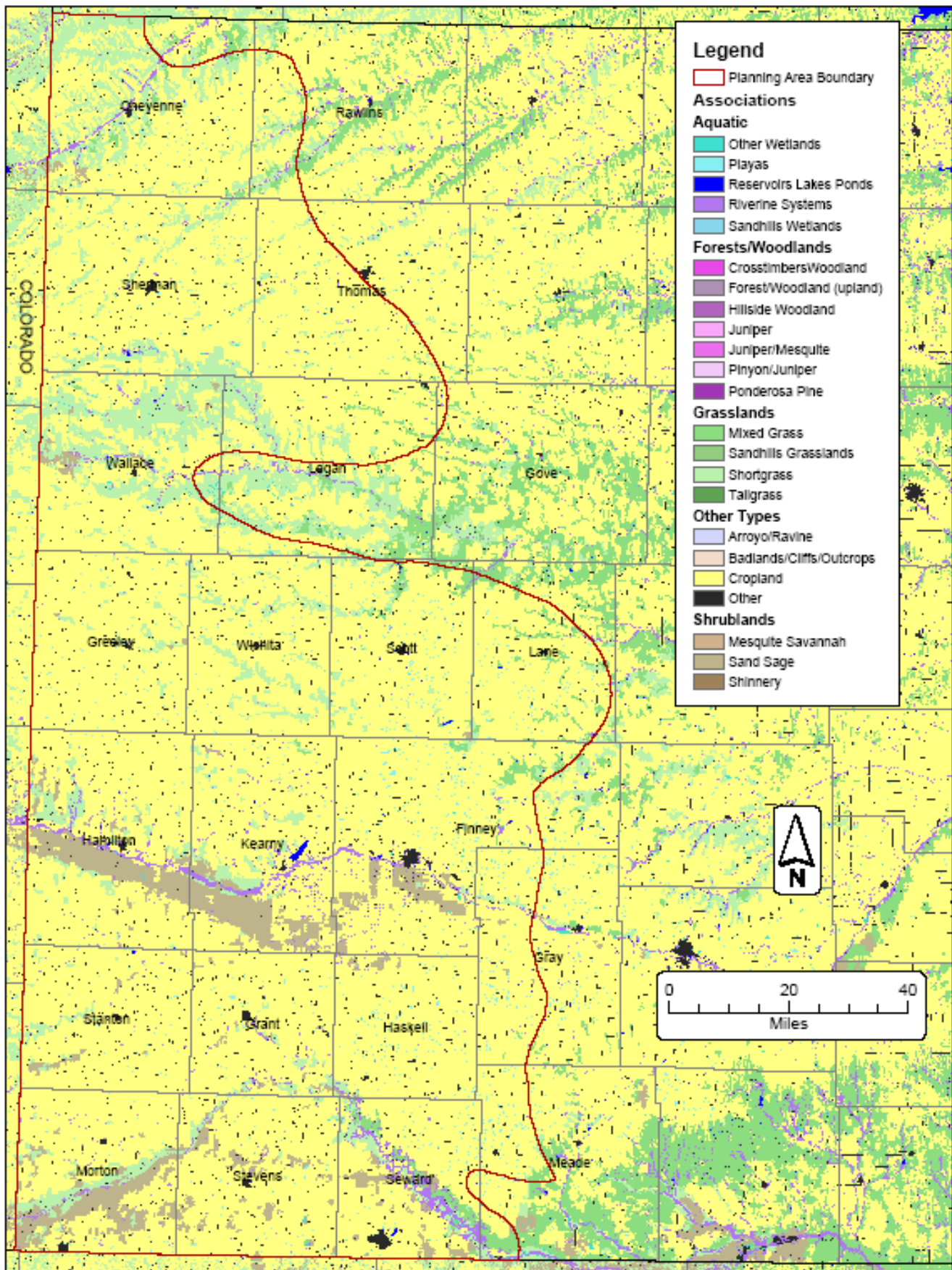


Figure 1. Bird habitat associations for the Shortgrass Prairie Bird Conservation Region of Kansas.