PLAYA LAKES JOINT VENTURE

Area Implementation Plan for the Central Mixed-grass Prairie Bird Conservation Region (19) of Kansas



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 Central Mixed-grass 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 30,000 acres of wetlands, primarily playas, floodplain marshes, and moist-soil units (wetland birds).
- Increase the area of mixed grass prairie contributing to large blocks of habitat in the southern half of the Area by 2.6 million acres (**Lesser Prairie-Chicken**)
- Convert 1.4 million acres of cropland to CRP (grassland birds)
- Increase late successional riparian forest by 40,000 acres (**Baltimore Oriole**)
- Increase native riparian shrubland by 250,000 acres (**Bell's Vireo**).
- Convert 175,000 acres of cropland to sand sage (**Lesser Prairie-Chicken, Cassin's Sparrow**)
- Increase sand sage contributing to large blocks of habitat by 75,000 acres (Lesser Prairie-Chicken)
- Manage 2.7 million acres of mixed grass for many shrubs (Loggerhead Shrike, Lark Sparrow)
- Manage 500,000 acres of tallgrass for many shrubs (**Loggerhead Shrike, Lark Sparrow**)
- Manage 300,000 acres of shortgrass for many shrubs (**Loggerhead Shrike, Lark Sparrow**)

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:

Birds = Acres of habitat * habitat availability factor * habitat suitability factor * large block factor * 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 agriculatural habitats from spring and fall bioenergetic models. Agricultural habitats should 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 Greater White-fronted Goose (Midcontinent 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 521,000 ducks and 53,000 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. – mid-Dec.), winter (mid-Dec. – mid-Feb.), and spring (mid-Feb – Apr.) Use-day targets are approximately 42 million for fall, 42 million for winter, and 71 million for spring.

Based on the PLJV GIS, the top three waterfowl foraging habitats are emergent marsh (estimated approx. 74,000 acres), floodplain marsh (estimated approx. 49,000 acres), and saline wetlands (estimated approx. 13,000 acres) (Table 1). Habitat assessments and bioenergetics modeling suggested that this Area can support the foraging use-day objectives for all seasons.

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 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, midwinter survey data show that the highest duck numbers during the past 10 years have been 60% below the abundance targets for this Area (KDWP unpubl. data).

Therefore, as a provisional goal we recommend increasing suitable wetland habitat by 50% 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 122,851 acres of playas, 39,356 acres of floodplain marsh, 12,451 acres of moist-soil units, or some combination. As an interim target we recommend restoring or enhancing 28,732 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, probably the most complete in the entire PLJV, were used to develop an abundance target of approximately 25 million use-days, which includes abundance increases recommended in the U.S. Shorebird Conservation Plan. The top three wetland shorebird foraging habitats are emergent marsh (estimated approx. 74,000 acres), saline wetlands (estimated approx. 13,000 acres), and floodplain marsh (estimated approx. 49,000 acres) (Table 1). Habitat assessments and bioenergetics modeling suggested that existing wetland habitats in this Area can support only about 36% of this abundance target (approx. 16 million use-day deficit).

This Area needs additional wetland foraging habitat to support its migrant shorebird objectives. To accomplish this, we recommend restoring 21,008 acres of wetlands and managing specifically for shorebirds (very shallow water, mudflats, and sparse vegetation). This will provide approximately 16 million additional shorebird use-days and will bring the Area to desired carrying capacity. These acres should be in areas away from Cheyenne Bottoms and Quivira, such as Jamestown and McPherson, where shorebird densities currently are lower.

Others actions recommended to benefit shorebirds include maintaining or increasing the quantity and quality of saline wetlands and floodplain marshes, which provide important foraging habitat.

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. However agricultural habitats also are used by gulls and are the primary foraging habitats of sandhill cranes.

The Area is important to migrating and wintering Sandhill Cranes, and is an important stopover area for Whooping Cranes. Abundance targets for cranes were developed by stepping down objectives from existing plans (*Central Flyway Plan* for Sandhill Cranes and the *International Recovery Plan* for Whooping Cranes). Sandhill Crane abundance targets are approximately 1.7 million use-days in fall, 553,000 use-days during winter, and 950,000 use-days in spring. The

Whooping Crane abundance target is 5,477 use-days in both fall and spring. However, targets calculated by the PLJV do not correspond with survey data in Kansas. Using sandhill crane migration chronology from survey data (KDWP unpubl. data) yields the following use-day targets: 3.3 million in fall, 228,000 in winter, and 177,000 in spring. Similarly, based on migration chronology from observation data (USFWS unbpubl. data), 74% of whooping cranes occur in Kansas BCR 19 during fall.

In this Area, the most important wetland types for roosting cranes are wet meadows, emergent marshes, and floodplain marshes (Table 1). Wet meadows (estimated approx. 1.2 million acres) can provide important crane foraging 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.) and sandhill cranes primarily feed in crop fields (mainly harvested corn and green wheat). Emergent marshes and floodplain marshes (estimated approx. 74,000 and 49,000 acres, respectively) also provide foraging and roosting sites.

PLJV habitat assessments and bioenergetics modeling suggested that this Area can support the use-day objectives for cranes during all seasons (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 in the Area calls for restoration and protection efforts. Wetland degradation at sites other than Quivira and Cheyenne Bottoms may be causing cranes to concentrate at those sites. Wet meadows and floodplain marshes 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, recommendations described above for shorebirds also will benefit cranes.

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 (for the entire BCR 19; Sauer et al. 2005) to determine those species with statistically significant declining trends, and then used

those trends to determine a number of birds needed to bring a species up to goal by calculating the birds lost over the last thirty years and adding to the current estimated carrying capacity. Species with trends which did not fit our data quality requirements or with significant positive trends were assigned a goal of maintaining the current carrying capacity. If data quality increases for any non-significantly declining species in the future, the trend will be utilized to determine a population goal at that time.

For some species when data dictated an abundance goal greater than 100% of the current estimated numbers, a goal of doubling was utilized. For this Area, the species with negative trends greater than 2.3% per year were Greater Prairie-Chicken, Mississippi Kite, Swainson's Hawk, Short-eared Owl, Western Kingbird, Bell's Vireo, Loggerhead Shrike, Cassin's Sparrow, Henslow's Sparrow, Lark Bunting, and Lark Sparrow. The abundance goal for Lesser Prairie-Chicken was determined by the Kansas representative to the Lesser Prairie-Chicken Interstate Working Group (R. Rodgers, *pers. comm.*).

Grassland Guild

Grasslands comprise the largest portion of the remaining native habitat acreage in the Area. Grasslands here support priority species such as Greater and Lesser Prairie-Chicken; Swainson's Hawk; Western Kingbird; Loggerhead Shrike; Cassin's, Lark and Grasshopper Sparrow; Lark Bunting; and Eastern Meadowlark. 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. The species that drive this Area's mixed-grass prairie needs are those that reach their highest densities with larger proportions of shrub cover within grassland, such as Loggerhead Shrike and Lark Sparrow. However, this comes at the cost of birds which reach higher densities in grasslands with fewer shrubs. Balancing these needs has not yet been undertaken by the PLJV. Should state partners decide that managing grasslands for fewer shrubs is preferable, the recommendations in this plan will change.

Threats to grassland habitats overall include:

- 1) Fire suppression, which permits the encroachment of eastern redcedar. This has had a deleterious effect on those species which require grasslands with little tall, woody structure;
- 2) Conversion to agriculture. Although many agricultural crops are utilized by some priority birds to some extent, utilization by crop seed eaters tends to be at lower densities, often significantly lower. Additionally, the extent to which crop maintenance and harvesting affects productivity has not been well-established for some species. For others, such as Short-eared Owl, Busby and Zimmerman (2001) mention that croplands are often an "ecological trap", producing no birds. The extent of agricultural conversion on the landscape may also be a factor, as Lesser Prairie-Chickens thrived with small-scale agriculture adjacent to nearby grass/shrub prairie, but in recent decades with large-scale conversion to agriculture they have declined. Likewise, the extent to which unutilized agricultural lands remain fallow or are converted back to native grasses (CRP) will have an effect on some species, such as Ring-necked Pheasant, Northern Bobwhite, and Dickcissel, though these effects have not been well quantified;

3) Ironically, too much fire in the eastern portion of the Area, especially in tallgrass areas, ensures that grass will never attain the tall stature required for some species such as Greater Prairie-Chicken and Henslow's Sparrow.

The advent of CRP in the 1985 Farm Bill has helped to increase numbers of many grassland birds. Recent literature 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 or native shrubs, may greatly increase use by priority grassland birds. CRP acreage recommendations in this plan are being driven by the needs of Grasshopper Sparrow. However, Dickcissel also has the highest percentage of its population modeled as occupying this habitat type; over 34% of the carrying capacity of the entire Area is found in CRP. Further, the placement of CRP near smaller grassland patches (1,000 – 1,800 acres) can render those patches suitable for prairie-chickens. CRP can help create grassland patches that are greater than 2,000 acres, which fits the PLJV model for both Lesser and Greater Prairie-Chicken. Model constraints are: 1) no more than 3,000 acres of cropland, 2) no more than 50 acres of trees and 3) no more than 50 acres of smaller roads. The PLJV can help to pinpoint where the placement of additional CRP on the landscape may have the maximum benefit for these birds.

Tallgrass prairie is estimated at 818,748 acres. It is essential to the maintenance of such species as Henslow's Sparrow, and Eastern Meadowlark as well as species such as Upland Sandpiper and Greater Prairie-Chicken whose goal is only to maintain the current numbers.

Shortgrass is estimated at 464,169 acres and thus provides little of the overall objectives for most grassland birds in this Area. However, it is currently modeled as providing most of the numbers of Cassin's Sparrow and Lark Bunting in this Area.

A number of priority grassland species are not projected to meet goal based on recommendations in this plan. These are Swainson's Hawk, Western Kingbird, Scissor-tailed Flycatcher, Loggerhead Shrike, Lark Bunting, Lark Sparrow and Eastern Meadowlark. Regardless, we encourage implementing the actions recommended below while partners determine what further habitat work is possible and the models and assumptions are further evaluated (see Special Note below).

Specific recommendations are as follows:

Swainson's Hawk has declined in the last 30 years at an average rate of 4.0% per year across BCR 19, 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. Swainson's Hawk occurs across many of the habitat types below. All the recommendations presented in the Integrated Section, if fully implemented, based on the model, meet only 57% of the goal.

Loggerhead Shrike has declined in the last 30 years at an average rate of 3.9% per year across BCR 19, 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 1,375,860 acres of cropland to CRP or a CRP-like habitat, providing 2,052 additional birds;
- 2) Manage mixed grass prairie so that 766,048 additional acres have many shrubs (3 10% shrub cover; this does not include eastern red cedar), providing an additional 1,608 birds. PLJV estimates that 1,909,758 acres are in this condition currently; and
- 3) Manage tallgrass prairie so that additional 81,875 acres have many shrubs (3 10% shrub cover; this does not include eastern red cedar), providing an additional 524 birds. PLJV estimates that 409,374 acres are in this condition currently;
- 4) Manage shortgrass prairie so that 46,417 additional acres have many shrubs (3 10% shrub cover; this does not include eastern red cedar), providing an additional 252 birds. PLJV estimates that 232,084 acres are in this condition currently.

These recommendations, fully implemented, are modeled to meet only 62% of the goal.

Short-eared Owl has declined over the last 30 years at an average rate of 4.6% per year across BCR 19, 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 760,000 acres of cropland to CRP or CRP-like habitat, providing 731 birds; and
 - 2) Restore 21,008 acres of wetlands from cropland, providing 11 birds.

Scissor-tailed Flycatcher has declined over the last 30 years at an average rate of -2.3% per year in BCR 19. This rate of decline requires a doubling of the population. The recommendations, fully implemented, in the rest of this plan are modeled to meet only 38% of the goal.

Lark Sparrow has declined in the last 30 years at an average rate of 2.5% per year across BCR 19, meaning more than 50% of the population has been lost. We assume that the decline is due to loss of habitat and that a more than doubling of habitat is needed to meet the population goal which is consistent with the PIF goal of doubling the population. Recommended actions are:

- 1) Manage mixed grass prairie so that 766,048 additional acres have many shrubs (3 10% shrub cover; this does not include eastern red cedar), providing an additional 89,168 birds. PLJV estimates that 1,909,758 acres are in this condition currently;
 - 2) Convert 177,000 acres of cropland to sand sage, providing an additional 25,133 birds;
- 3) Manage tallgrass prairie so that additional 40,936 acres have many shrubs (3 10% shrub cover; this does not include eastern red cedar) and short (<15cm) grass, providing an additional 4,765 birds. PLJV estimates that 204,687 acres are in this condition currently; and
- 4) Manage shortgrass prairie so that 46,417 additional acres have many shrubs (3 10% shrub cover; this does not include eastern red cedar), providing an additional 1,858 birds. PLJV estimates that 232,084 acres are in this condition.

These recommendations, fully implemented, are modeled to meet only 72% of the goal.

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 and at least 1,000 acres of sand sage within a 5,000-acre block that also contains no more than 1) 3,000 acres of cropland, 2) 50 acres of roads (and no 4-lane roads), and 3) 50 acres of woodland types. Recommended actions for this species are:

- 1) Increase the amount of mixed grass prairie in the southern half of the Area, so that 2,597,270 acres contribute to large blocks (>2,000 acres) of habitat, providing an additional 15,036 birds. Currently the PLJV estimates that 1,394,123 acres contribute to large blocks of habitat;
- 2) Increase the amount of CRP by 150,000 acres in the southern half of the Area. Reconfigure the resultant acres so that 1,089,640 acres contribute to large blocks (>2,000 acres) of habitat, providing an additional 4,542 birds. Currently the PLJV estimates that 362,910 acres contribute: and
- 3) Increase the amount of sand sage in the southern half of the Area so that 75,890 acres contribute to large blocks (>2,000 acres) of habitat, providing an additional 187 birds. Currently the PLJV estimates that 63,916 acres contribute to large blocks.

It is unclear at this point, whether the aggressive acreage recommendations above can be configured within the southern half of the Area. The PLJV will work with Kansas partners to refine the model for Lesser Prairie-Chicken, and the current acreage recommendations will likely change in the future.

Western Kingbird has declined in the last 30 years at an average rate of 2.4% per year across BCR 19, 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 1,375,860 acres of cropland to CRP or a CRP-like habitat, providing 69,944 additional birds (given the recommended actions in the rest of the document). However, all the recommendations presented in the plan, if fully implemented, are modeled to meet only 60% of the goal.

Grasshopper Sparrow has declined in the last 30 years at an average rate of 1.4%/yr in BCR 19. Recommended action is to convert 1,375,860 acres of cropland to CRP or a CRP-like habitat, providing 862,759 birds bringing the species to goal.

Eastern Meadowlark has declined over the last 30 years at an average rate of 1.1% /yr. in BCR 19. Recommended action is to convert 1,375,860 acres of cropland to CRP or a CRP-like habitat, providing 45,734 birds. However, all the recommendations presented in this plan, if fully implemented, are modeled to meet only 76% of the goal.

Henslow's Sparrow has declined in the last 30 years at an average rate of 7.9% per year across BCR 19, 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) Add or manage 33,026 additional acres of tallgrass prairie so that it contributes to large blocks of habitat, providing 3,808 additional birds. The PLJV estimates that 31,112 acres of tallgrass prairie contribute to large blocks of habitat. The current model requires at least 200 acres of grass types with no woodlands, trees or other habitat types.
- 2) Ensure that approximately 2,500 acres (in approx. 75-acre patches) are burned on a rotational basis with no patch being burned more frequently than about every 4-5 years, to maintain appropriate tallgrass conditions for Henslow's Sparrow.

Lark Bunting has declined in the last 30 years at an average rate of 5.7% per year across BCR 19, 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. However, the recommendations presented in this plan, if fully implemented, are modeled to meet only 59% of the goal. We recommend working toward these acreage goals while partners determine what further habitat work is possible and the models and assumptions are further evaluated.

Shrubland Guild

Shrublands of sand sage comprise little of the Area's land base. However, these shrublands are important to priority species such as Lesser Prairie-Chicken, Scaled Quail, and Cassin's and Lark Sparrow.

Threats to this shrub type are that it is relatively easily converted to cropland and not seen as highly productive wildlife habitat. However, even though agricultural lands are utilized by some priority birds to some extent, sand sage is critical to the maintenance of species such as Cassin's Sparrow and Scaled Quail in the Area.

Habitat recommendations are to increase the amount of sand sage by 177,000 acres.

Cassin's Sparrow has declined in the last 30 years at an average rate of 3.6% per year across BCR 19, 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 177,000 acres of cropland to sand sage in the western portion of the Area, providing 10,484 additional birds. Currently the PLJV estimates that there are 261,322 acres of sand sage; and
- 2) Manage shortgrass prairie so that 46,417 additional acres have many shrubs (3 10% shrub cover; this does not include eastern red cedar), providing an additional 924 birds. PLJV estimates that 232,084 acres are in this condition currently. This will bring the species up to goal.

Riparian Guild

Riparian areas, estimated at 1,362,594 acres, comprise approximately 5% of the land base in this Area, and are important to priority species such as Mississippi Kite, Red-headed Woodpecker, Bell's Vireo, Painted Bunting, and Baltimore Oriole. Of the breeding riparian-associated landbirds with statistically significant declining trends in BCR 19, Bell's Vireo and Baltimore Oriole are driving habitat recommendations.

Habitat goals are to increase the amount of late successional riparian forest (>30 years of age with decadent trees) by 37,062 acres and to increase native riparian shrubland by 251,398 acres.

However, current PLJV GIS has not evaluated native riparian shrubland that has been invaded by eastern redcedar or, in the western portion of the Area, by salt cedar (tamarisk) or Russian olive. In order to maintain species such as Bell's Vireo or Painted Bunting at objective levels, invasive riparian shrubland should be restored to native riparian shrubs comprised of willow and others.

Mississippi Kite has declined in the last 30 years at an average rate of 2.9% per year across BCR 19, 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) Increase the amount of late successional riparian forest by 9,059 acres, which will provide an additional 6,284 birds. Currently the PLJV estimates that 4,057 acres are in this condition within Mississippi Kite range. Both these recommendations should be filled within the range of Mississippi Kite in the southern tier of counties and the southeastern quadrant of the Area.

Bell's Vireo has declined in the last 30 years at an average rate of 3.9% per year across BCR 19, 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) Increase native riparian shrubland by 251,398 acres, providing 57,488 additional birds. Currently the PLJV estimates acreage of this condition at 11,582 acres; and
- 2) Manage mixed and tallgrass prairie in areas of rolling topography so that drainage bottoms contain dense thickets of shrubs such as plum. The PLJV has not modeled topography and there is no determination on how it might affect bird numbers, but this work would reduce the number of acres of riparian shrubland needed. Changes to these recommendations may occur if/when the PLJV can model shrubs within draws of upland areas.

Baltimore Oriole has declined over the last 30 years at an average rate of 1.1% /yr. in BCR 19. Studies in South Dakota have demonstrated that densities increase with increasing riparian forest age. Recommended action is to increase the amount of late successional riparian forest by 37,062 acres, which will provide an additional 38,432 birds. This will bring the species to goal.

Habitat Generalists

Ring-necked Pheasant is a high priority species in this Area. Because the species does not exhibit a declining trend in the BCR, there are no specific habitat recommendations. However, recommended habitat actions for other priority species should improve carrying capacity for pheasants by approximately 50% (see Table 2).

Special Note

Several breeding species in this Area are not projected to reach goal even if all the habitat recommendations are implemented. Potential problems with the available landcover data for this Area may partly explain this.

For example, we have evaluated the landcover from Oklahoma GAP and a newer landcover layer of eastern red cedar (ERC) developed by Oklahoma NRCS covering several counties in BCR 19 (over 4.5 million acres and just over 25% of the entire BCR). The images used for analysis in Oklahoma GAP were mostly taken in 1992 and the images for the ERC layer were taken in 2004, a gap of twelve years. We overlaid the older Oklahoma GAP layer with the newer ERC layer and, determined those areas originally classified as non-woodland and currently classified as ERC. The chart below lists various habitats and conditions, % converted to eastern red cedar and the average loss (divided by 12) of habitat per year.

Association	% converted to ERC	Avg. Loss per year
Pasture	9.17%	0.764%
Mixed Grass	15.71%	1.309%
Native riparian		1.533%
shrubland	18.40%	
Tallgrass	12.29%	1.024%
Wet meadow	20.38%	1.698%
Riparian canopy	20.46%	1.705%
Sand Sage	24.50%	2.042%
Riverine Systems	26.47%	2.205%
Shinnery	37.19%	3.099%

These rates of conversion, if they hold true for Kansas, would have a large effect on the numbers used in determining habitat goals for breeding landbirds. If corrected habitat acreages were run back through PLJV models, it would reduce the current estimated carrying capacity of most priority birds, reduce the goal for the species and conversely, increase the amount of habitat that could be converted from ERC to an appropriate condition for each species, perhaps allowing the species to achieve goal populations or get significantly closer.

These data are only preliminary and have not been incorporated into PLJV modeling. But given the current inability to achieve some bird goals, partners may wish to incorporate these data into the PLJV planning process in the future to achieve a more realistic picture of habitat needs for the Area.

INTEGRATED BIRD HABITAT RECOMMENDATIONS

(By Association)

Cropland

Convert 1,573,868 acres of cropland to CRP (1,375,860 acres), sand sage (177,000 acres, representing a 68% increase) and restored wetlands (21,008 acres) to support a variety of species and guilds.

CRP

Convert 1,375,860 acres of cropland to CRP or a CRP-like habitat. This will help support species such as Short-eared Owl, Grasshopper Sparrow, and Eastern Meadowlark.

At least 150,000 acres of CRP should be within Lesser Prairie-Chicken range in the southwestern portion of the Area. All CRP acres should be evaluated and then configured so that 1,089,640 acres contribute to large blocks of habitat for Lesser Prairie-Chicken (see Lesser Prairie-Chicken model). Currently the PLJV estimates that 362,910 acres contribute to large blocks in this Area.

Wherever possible, combat eastern redcedar invasion into this habitat. Develop programs to manage CRP for combating eastern redcedar invasion.

Mixed Grass

Wherever possible, combat eastern redcedar invasion into this habitat.

Increase mixed-grass prairie contributing to large blocks of habitat for Lesser Prairie-Chicken by 2,597,270 acres (a 186% increase) in the southern half of the Area. Currently the PLJV estimates that 1,394,123 acres contribute to large blocks of habitat.

Manage mixed-grass prairie so that 766,048 additional acres contain 3-10% shrub cover (shrubs here do not include eastern red cedar) for Lark Sparrow and Loggerhead Shrike. PLJV estimates that 1,909,758 acres are in this condition currently.

Other

No specific recommendations.

Other Wetlands

Restore 21,008 acres of wetlands (preferably from converted cropland) and manage for optimum shorebird foraging suitability (mudflats and very shallow water with minimal emergent cover) by grazing, burning, brush removal, water level management, etc. These acres should be in areas away from Cheyenne Bottoms and Quivira, such as Jamestown and McPherson, where shorebird densities currently are lower. This will provide about 16.1 million additional shorebird foraging use-days and will bring the carrying capacity of the region to the objective level. Emergent marshes currently support more shorebird foraging use-days than any other habitat, but could support much more with additional restoration and management. The Area is below desired carrying capacity for shorebirds. An additional 7-8,000 acres need to be restored or enhanced to reach the overall provisional wetland goal of restoring and enhancing 28,732 acres of wetlands, which include playas, moist-soil units, emergent marshes, and floodplain marshes, is unknown at this time.

Maintain/increase the quantity and quality of saline wetlands. This habitat provides important foraging habitat for shorebirds, and the Area is below desired carrying capacity.

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

Playa

Protect playas (estimated 25,322 acres, of which only 2,280 are estimated to be unpitted and wet during 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 (28,732), which includes moist-soil units, emergent marshes, and 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

Improve stock pond (estimated 49,648 acres) foraging habitat by fencing cattle from the shallow upper ends or instituting other grazing strategies that allow emergent vegetation to flourish in shallow water. The shallow areas of reservoirs (estimated 96,455 acres) should be managed to provide open muddy or sandy edges with minimal emergent vegetation. Ensure appropriate

water levels to maintain this type of habitat. These habitats support wetland birds.

Maintain colonial waterbird nesting sites (i.e., occupied rookeries) often found around these habitats.

Riverine Systems

Across the Area, increase the amount of late successional riparian forest by 37,062 acres for Baltimore Oriole. If 9,059 acres are in the southeastern quadrant of the Area and the entire southern tier of counties, it will support Mississippi Kite.

Increase native riparian shrubland by 251,398 acres to support Bell's Vireo. Currently the PLJV estimates acreage of this condition at 11,582 acres.

The two recommendations above must come at the expense of other habitats or conditions. For this plan we have opted to take these acres out of wet meadow (estimated approx. 1.2 million acres currently). Wherever else wet meadow exists, we recommend restoration 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.

Maintain and/or restore floodplain marshes.

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

Sand Sage

Convert 177,000 acres of cropland to sand sage in the western portion of the Area to support Cassin's Sparrow and Lesser Prairie-Chicken.

Increase the acreage of sand sage that contributes to large blocks of habitat for Lesser Prairie-Chicken by 75,890 acres (a 119% increase, see Lesser Prairie-Chicken model). Currently the PLJV estimates that 63,916 acres contribute.

Shortgrass

Manage shortgrass prairie so that 46,417 additional acres contain 3-10% shrub cover (shrubs here do not include eastern red cedar) for Loggerhead Shrike, Cassin's and Lark Sparrow.

Tallgrass

Add or manage 33,026 additional acres (a 106% increase) of tallgrass prairie so that it contributes to large blocks of habitat for Henslow's Sparrow. The PLJV estimates that 31,112 acres of tallgrass prairie currently contributes to large blocks of habitat.

Manage tallgrass prairie so that 40,936 additional acres contain 3-10% shrub cover (shrubs here do not include eastern red cedar) and low grass (<15cm) for Lark Sparrow and Loggerhead Shrike. PLJV estimates that 204,687 acres are in this condition currently.

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

- Busby. W.H. and J.L. Zimmerman. 2001. Kansas Breeding Bird Atlas. University Press of Kansas, Lawrence, KS. 466pp.
- 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.
- 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):

Carrying Capacity = Condition Acres * Availability * Suitability * Large Block * Units

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

Explanation of Column Headings

Assoc Name: "Association Name"; broad level PLJV habitat classification.

Condition Name: Finest level PLJV habitat classification.

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

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

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

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

Units: Bird densities in habitats that support them, expressed as breeding birds per acre for breeding species, or "use-days" per acre for nonbreeding birds (bioenergetics approach to planning; see planning team reports for details). These estimates were derived from the literature or expert opinion.

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

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

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

Table 3

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

Explanation of Column Headings

Association Name: Broad level PLJV habitat classification.

Condition Name: Finest level PLJV habitat classification.

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

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

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

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

Species/Guild No	ame: Cranes				Sec	ason: Fall			
Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Other Wetlands	Saline	12,877 12,875	1.0000 1.0 1.0000 1.0	0000	1.00000 1.00000	396.0000 396.0000	5,099,472 5,098,339	1,654,391 1,654,391	308.24% 308.10%
Other Wetlands	Emergent marsh	74,137 74,137	1.0000 1.0 1.0000 1.0		1.00000 1.00000	396.0000 396.0000	29,358,288 29,358,365	1,654,391 1,654,391	1774.57% 1774.50%
Other Wetlands	Moist-soil unit	349 21,360	1.0000 1.0 1.0000 1.0		1.00000 1.00000	1,253.0000 1,253.0000	437,868 26,764,232	1,654,391 1,654,391	26.47% 1617.70%
Playa	Wet	2,280 2,280	1.0000 1.0 1.0000 1.0		1.00000 1.00000	127.0000 127.0000	289,545 289,545	1,654,391 1,654,391	17.50% 17.50%
Riverine Systems	Floodplain marsh	48,917 48,917	1.0000 1.0 1.0000 1.0		1.00000 1.00000	396.0000 396.0000	19,371,181 19,371,181	1,654,391 1,654,391	1170.89% 1170.80%
Riverine Systems	Wet meadow	1,172,512 823,824	1.0000 1.0 1.0000 1.0		1.00000 1.00000	396.0000 396.0000	464,314,806 326,234,436	1,654,391 1,654,391	28065.60 19719.30
Summary for Fall	(6 records)			_	inning Sur anning Su		518,871,160 407,116,098		31363.27% 24607.90%
Species/Guild No	ame: Cranes				Se	ason: Sprin	g		
A N	C IV. N	Condition	A . 11	a .,	Large	II '	CC	G 1	0/ CC 1
Assoc Name Other Wetlands	Condition Name Emergent marsh	Acres 74,137 74,137	Avail. 5 1.0000 1.0 1.0000 1.0		Block 1.00000 1.00000	Units 396.0000 396.0000	CC 29,358,288 29,358,365	Goal 955,856 955,856	% of Goal 3071.41% 3071.40%
Other Wetlands	Saline	12,877 12,875	1.0000 1.0 1.0000 1.0		1.00000 1.00000	396.0000 396.0000	5,099,472 5,098,339	955,856 955,856	533.50% 533.30%
Other Wetlands	Moist-soil unit	349 21,360	1.0000 1.0 1.0000 1.0		1.00000 1.00000	1,253.0000 1,253.0000	437,868 26,764,232	955,856 955,856	45.81% 2800.00%
Playa	Wet	2,280 2,280	1.0000 1.0 1.0000 1.0		1.00000 1.00000	127.0000 127.0000	289,545 289,545	955,856 955,856	30.29% 30.20%
Riverine Systems	Wet meadow	1,172,512 823,824	1.0000 1.0 1.0000 1.0		1.00000 1.00000	396.0000 396.0000	464,314,806 326,234,436	955,856 955,856	48575.81 34130.00
Riverine Systems	Floodplain marsh	48,917 48,917	1.0000 1.0 1.0000 1.0		1.00000 1.00000	396.0000 396.0000	19,371,181 19,371,181	955,856 955,856	2026.58% 2026.50%
Summary for Spri	ing (6 records)			•	inning Sur anning Su		518,871,160 407,116,098		54283.40% 42591.40%
Species/Guild No	ame: Cranes				Se	ason: Winte	? r		
	C P. N	Condition		a :	Large	TT *	CC	G 1	ov 6.0 1
Assoc Name Cropland	Condition Name Sorghum	2,256,947 2,060,529	Avail. 3 1.0000 1.0 1.0000 1.0		Block 1.00000 1.00000	Units 252.0000 252.0000	CC 568,750,731 519,253,212		% of Goal 102912.25% 93955.90%
Cropland	Wheat	6,398,301	1.0000 1.0 1.0000 1.0 1.0000 1.0	0000	1.00000	396.0000 396.0000	2,533,727,196 2,313,220,932	552,656	458463.71% 418564.34%
Cropland	Peanuts	0	1.0000 1.0 1.0000 1.0		1.00000 1.00000	252.0000 252.0000	0 0	552,656 552,656	0.00% 0.00%
Cropland	Corn	1,244,215 1,135,932	1.0000 1.0 1.0000 1.0		1.00000 1.00000	396.0000 396.0000	492,708,967 449,829,248	552,656 552,656	89152.92 81394.00
Summary for Win	ter (4 records)				inning Sur anning Su		3,595,168,894 3,282,303,392		650528.88% 593914.37%
Species/Guild No	ame: Shorebirds-No	onbreeding- Condition	Wetland		Sec Large	ason: Nonb	reeding		
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal
Other Wetlands	Moist-soil unit	349 21,360	1.0000 0.3 1.0000 0.9		1.00000 1.00000	766.0000 766.0000	40,152 16,134,423	24,941,117 24,941,117	0.16% 64.60%
Other Wetlands	Emergent marsh	74,137 74,137	1.0000 0.1 1.0000 0.1		1.00000 1.00000	766.0000 766.0000	5,678,901 5,678,916	24,941,117 24,941,117	22.77% 22.70%
Other Wetlands	Saline	12,877 12,875	1.0000 0.1 1.0000 0.1		1.00000 1.00000	766.0000 766.0000	1,479,619 1,479,291	24,941,117 24,941,117	5.93% 5.90%
Playa	Wet pit only	1,520 1,520	1.0000 0.0 1.0000 0.0		1.00000 1.00000	766.0000 766.0000	1,164 1,164	24,941,117 24,941,117	0.00% 0.00%

Playa	Wet	2,280	1.0000	0.1000	1.00000	766.0000	174,639	24,941,117	0.70%
Reservoirs Lakes	Reservoir	2,280 96,455	1.0000 1.0000		1.00000 1.00000	766.0000 766.0000	174,639 369,422	24,941,117 24,941,117	0.70% 1.48%
Ponds		96,455	1.0000	0.0050	1.00000	766.0000	369,422	24,941,117	1.40%
Reservoirs Lakes Ponds	Freshwater lake	1,065 1,065	1.0000 1.0000		1.00000 1.00000	766.0000 766.0000	4,080 4,080	24,941,117 24,941,117	0.02% 0.00%
Reservoirs Lakes Ponds	Stock pond	49,648 49,648	1.0000 1.0000		1.00000 1.00000	766.0000 766.0000	190,150 190,150	24,941,117 24,941,117	0.76% 0.70%
Reservoirs Lakes Ponds	Lagoon	3,273 3,273	1.0000 1.0000		1.00000 1.00000	766.0000 766.0000	12,535 12,535	24,941,117 24,941,117	0.05% 0.00%
Riverine Systems	River channel	53,686 53,686	1.0000 1.0000		1.00000 1.00000	766.0000 766.0000	411,236 411,236	24,941,117 24,941,117	1.65% 1.60%
Riverine Systems	Floodplain marsh	48,917	1.0000	0.0130	1.00000	766.0000	487,117	24,941,117	1.95%
Summary for Nor	abreeding (11 records)	48,917	1.0000		1.00000 lanning Sui	766.0000 m	487,117 8,849,015	24,941,117	1.90% 35.48%
•				Post-p	lanning Su	m	24,942,973		99.50%
Species/Guild N	ame: Waterfowl-Nor	nbreeding			Se	ason: Fall			
Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Wheat	6,398,301	1.0000		1.00000	1,336.0000	0	42,198,871	0.00%
•		5,841,467	1.0000		1.00000	1,336.0000	0	42,198,871	0.00%
Cropland	Corn	1,244,215 1,135,932	1.0000 1.0000		1.00000 1.00000	668.0000 668.0000	0	42,198,871 42,198,871	0.00% 0.00%
Cropland	Sorghum	2,256,947	1.0000	0.0000	1.00000	849.0000	0	42,198,871	0.00%
Od. W.d. 1	0.1	2,060,529	1.0000		1.00000	849.0000	0	42,198,871	0.00%
Other Wetlands	Saline	12,877 12,875	1.0000 1.0000		1.00000 1.00000	1,336.0000 1,336.0000	17,204,278 17,200,457	42,198,871 42,198,871	40.77% 40.70%
Other Wetlands	Moist-soil unit	349 21,360	1.0000 1.0000		1.00000 1.00000	4,223.0000 4,223.0000	1,475,753 90,203,792	42,198,871 42,198,871	3.50% 213.70%
Other Wetlands	Emergent marsh	74,137 74,137	1.0000 1.0000		1.00000 1.00000	1,336.0000 1,336.0000	99,047,153 99,047,413	42,198,871 42,198,871	234.72% 234.70%
Playa	Wet	2,280	1.0000	1.0000	1.00000	428.0000	975,789	42,198,871	2.31%
Reservoirs Lakes	Stock pond	2,280 49,648	1.0000		1.00000 1.00000	428.0000 225.0000	975,789 4,468,288	42,198,871 42,198,871	2.30% 10.59%
Ponds	•	49,648	1.0000		1.00000	225.0000	4,468,288	42,198,871	10.50%
Reservoirs Lakes Ponds	Lagoon	3,273 3,273	1.0000 1.0000		1.00000 1.00000	428.0000 428.0000	560,302 560,302	42,198,871 42,198,871	1.33% 1.30%
Reservoirs Lakes Ponds	Reservoir	96,455 96,455	1.0000 1.0000		1.00000 1.00000	225.0000 225.0000	1,085,116 1,085,116	42,198,871 42,198,871	2.57% 2.50%
Reservoirs Lakes Ponds	Freshwater lake	1,065 1,065	1.0000 1.0000		1.00000 1.00000	225.0000 225.0000	11,984 11,984	42,198,871 42,198,871	0.03% 0.00%
Riverine Systems	Floodplain marsh	48,917 48,917	1.0000 1.0000		1.00000 1.00000	1,336.0000 1,336.0000	65,353,278 65,353,278	42,198,871 42,198,871	154.87% 154.80%
Riverine Systems	River channel	53,686	1.0000	1.0000	1.00000	50.0000	2,684,310	42,198,871	6.36%
Summary for Fall	l (13 records)	53,686	1.0000		1.00000 lanning Sui	50.0000 m	2,684,310 192,866,251	42,198,871	6.30% 457.04%
	(_	lanning Su		281,590,729		666.80%
Species/Guild N	ame: Waterfowl-Noi	nbreeding			Se	ason: Spring	?		
-	·	Condition			Large				
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal
Cropland	Corn	1,244,215 1,135,932	1.0000 1.0000		1.00000 1.00000	668.0000 668.0000	$0 \\ 0$	70,727,431 70,727,431	0.00% 0.00%
Cropland	Wheat	6,398,301 5,841,467	1.0000 1.0000		1.00000 1.00000	1,336.0000 1,336.0000	0	70,727,431 70,727,431	0.00% 0.00%
Cropland	Sorghum	2,256,947 2,060,529	1.0000 1.0000	0.0000	1.00000 1.00000	849.0000 849.0000	0	70,727,431 70,727,431	0.00% 0.00%
Other Wetlands	Moist-soil unit	349	1.0000	1.0000	1.00000	4,223.0000	1,475,753	70,727,431	2.09%
Other Wetlands	Emergent marsh	21,360 74,137	1.0000 1.0000		1.00000 1.00000	4,223.0000 1,336.0000	90,203,792 99,047,153	70,727,431 70,727,431	127.50% 140.04%
	. 6	74,137	1.0000		1.00000	1,336.0000	99,047,413	70,727,431	140.00%
Other Wetlands	Saline	12,877 12,875	1.0000 1.0000		1.00000 1.00000	1,336.0000 1,336.0000	17,204,278 17,200,457	70,727,431 70,727,431	24.32% 24.30%
Playa	Wet	2,280 2,280	1.0000 1.0000		1.00000 1.00000	428.0000 428.0000	975,789 975,789	70,727,431 70,727,431	1.38% 1.30%

Reservoirs Lakes Ponds	Reservoir	96,455 96,455	1.0000 0.0 1.0000 0.0		00000	225.0000 225.0000	1,085,116 1,085,116	70,727,431 70,727,431	1.53% 1.50%
Reservoirs Lakes	Stock pond	49,648	1.0000 0.4		00000	225.0000	4,468,288	70,727,431	6.32%
Ponds	Stock polid	49,648	1.0000 0.4		00000	225.0000	4,468,288		6.30%
Reservoirs Lakes	Freshwater lake	1,065	1.0000 0.0	0500 1.	00000	225.0000	11,984	70,727,431	0.02%
Ponds		1,065	1.0000 0.0	0500 1.	00000	225.0000	11,984	70,727,431	0.00%
Reservoirs Lakes	Lagoon	3,273	1.0000 0.4		00000	428.0000	560,302	70,727,431	0.79%
Ponds		3,273	1.0000 0.4		00000	428.0000	560,302	, ,	0.70%
Riverine Systems	Floodplain marsh	48,917	1.0000 1.0		00000	1,336.0000	65,353,278	70,727,431	92.40%
		48,917	1.0000 1.0		00000	1,336.0000	65,353,278		92.40%
Riverine Systems	River channel	53,686 53,686	1.0000 1.0 1.0000 1.0		00000	50.0000 50.0000	2,684,310 2,684,310	70,727,431 70,727,431	3.80% 3.70%
Summary for Sprin	ng (12 noonds)	33,080		Pre-plann			192,866,251	70,727,431	272.68%
Summary for Sprin	ng (15 records)			re-piann Post-plani			281,590,729		397.70%
Species/Guild Na	me: Waterfowl-No	onbreeding			Se	ason: Wini	ter		
		Condition			Large				
Assoc Name	Condition Name	Acres			Block	Units	CC	Goal	% of Goal
Cropland	Wheat	6,398,301 5,841,467	1.0000 1.0 1.0000 1.0		00000	1,336.0000 1,336.0000		42,303,248 42,303,248	
Cumland	Com						021 125 220		1064 710/
Cropland	Corn	1,244,215 1,135,932	1.0000 1.0 1.0000 1.0		00000	668.0000 668.0000	831,135,328 758,802,873	42,303,248 42,303,248	1964.71% 1793.70%
Cropland	Sorghum	2,256,947	1.0000 1.0		00000	849.0000	1,916,148,298	42,303,248	4529.55%
Сторіана	Sorgium	2,060,529	1.0000 1.0		00000	849.0000	1,749,388,799		4135.30%
Other Wetlands	Emergent marsh	74.137	0.0000 1.0		00000	1,336.0000	0	42,303,248	0.00%
omer wedands	Zinergent marsii	74,137	0.0000 1.0		00000	1,336.0000	0	, , -	0.00%
Other Wetlands	Moist-soil unit	349	0.0000 1.0	0000 1.	00000	4,223.0000	0	42,303,248	0.00%
		21,360	0.0000 1.0	0000 1.	00000	4,223.0000	0	42,303,248	0.00%
Other Wetlands	Saline	12,877	0.0000 1.0		00000	1,336.0000	0	42,303,248	0.00%
		12,875	0.0000 1.0	0000 1.	00000	1,336.0000	0	42,303,248	0.00%
Playa	Wet	2,280	0.0000 1.0		00000	428.0000	0	42,303,248	0.00%
		2,280	0.0000 1.0		00000	428.0000	0		0.00%
Reservoirs Lakes	Stock pond	49,648	0.0000 0.4		00000	225.0000	0	42,303,248	0.00%
Ponds	ъ .	49,648	0.0000 0.4		00000	225.0000		,,	0.00%
Reservoirs Lakes Ponds	Reservoir	96,455 96,455	0.0000 0.0		00000	225.0000 225.0000	0	42,303,248 42,303,248	0.00% 0.00%
	Freshwater lake	1,065	0.0000 0.0		00000	225.0000	0	42,303,248	0.00%
Reservoirs Lakes Ponds	riesiiwater iake	1,065	0.0000 0.0		00000	225.0000	0		0.00%
Reservoirs Lakes	Lagoon	3,273	0.0000 0.4		00000	428.0000	0	42,303,248	0.00%
Ponds	Lagoon	3,273	0.0000 0.4		00000	428.0000	0		0.00%
Riverine Systems	Floodplain marsh	48,917	0.0000 1.0	0000 1.	00000	1,336.0000	0	42,303,248	0.00%
	<u>F</u>	48,917	0.0000 1.0		00000	1,336.0000	0		0.00%
Riverine Systems	River channel	53,686	0.0000 1.0	0000 1.	00000	50.0000	0	42,303,248	0.00%
•		53,686	0.0000 1.0	0000 1.	00000	50.0000	0	42,303,248	0.00%
Summary for Wint	ter (13 records)		F	Pre-plann	ing Sui	n	2,747,283,626		6494.26%
	P	Post-plani	ning Su	m	2,508,191,672		5929.00%		

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 No	ame: Baltimore Oriole				Sea	son: Breeding				
		Condition			Large					
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal	
Other	Urban/Suburban	186,748 186,748		1.0000 1.0000	1.00000 1.00000	0.3190 0.3190	59,573 59,573	138,390 138,390	43.05% 43.05%	
Riverine Systems	Riparian canopy - early	20,303		1.0000	1.00000	0.3169	6,434	138,390	4.65%	
	successional w/o understor			1.0000	1.00000	0.3169	6,434	138,390	4.65%	
Riverine Systems	Riparian canopy - early successional w/ understory	20,303		1.0000 1.0000	1.00000 1.00000	0.3169 0.3169	6,434 6,434	138,390 138,390	4.65% 4.65%	
Riverine Systems	Riparian canopy - late successional w/ understor	13,490 y 43,603		1.0000 1.0000	1.00000 1.00000	1.0369 1.0369	13,987 45,212	138,390 138,390	10.11% 32.67%	
Riverine Systems	Riparian canopy - late successional w/o understor	13,490 ry 43,603		1.0000 1.0000	1.00000 1.00000	1.0369 1.0369	13,987 45,212	138,390 138,390	10.11% 32.67%	
Summary for Bree	eding (5 records)			-	lanning Sum lanning Sum		100,415 162,865		72.56% 117.68%	
Species/Guild No	ame: Bell's Vireo				Sea	son: Breeding				
		Condition			Large					
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal	
Mixed Grass	Many shrubs/high grass	954,879 1,337,903		1.0000 1.0000	1.00000 1.00000	0.0200 0.0200	19,098 26,758	112,127 112,127	17.03% 23.86%	
Mixed Grass	Many shrubs/low grass	954,879		1.0000	1.00000	0.0200	19,098	112,127	17.03%	
D' ' G .		1,337,903		1.0000	1.00000	0.0200	26,758	112,127	23.86%	
Riverine Systems	Native riparian shrubland	11,582 262,981		1.0000 1.0000	1.00000 1.00000	0.2186 0.2186	2,532 57,488	112,127 112,127	2.26% 51.27%	
Tallgrass	Many shrubs/high grass	204,687 245,624		1.0000 1.0000	1.00000 1.00000	0.0400 0.0400	8,187 9,825	112,127 112,127	7.30% 8.76%	
Tallgrass	Many shrubs/low grass	204,687 245,624		1.0000 1.0000	1.00000 1.00000	0.0400 0.0400	8,187 9,825	112,127 112,127	7.30% 8.76%	
Summary for Bree	eding (5 records)			-	lanning Sum lanning Sum		57,102 130,654		50.92% 116.52%	
Snecies/Guild N	ame: Burrowing Owl				Sea	son: Breeding				
Species, Guila 110	_	Condition			Large	som Breeding				
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal	
Mixed Grass	PD town	9,959 9,959	1.0000 1.0000	0.4000 0.4000	1.00000 1.00000	0.2132 0.2132	849 849	849 849	100.00% 100.00%	
Summary for Bree	eding (1 record)			_	lanning Sum lanning Sum		849 849		100.00% 100.00%	
Species/Guild No	ame: Cassin's Sparrow		Season: Breeding							
		Condition			Large					
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal	
Sand Sage	Low grass	80,106 248,256		1.0000 1.0000	1.00000 1.00000	0.0054 0.0054	433 1,341	23,161 23,161	1.87% 5.79%	
Sand Sage	Low grass	80,106 248,256	1.0000	1.0000 1.0000 1.0000	1.00000 1.00000 1.00000	0.0541 0.0541	4,334 13,431	23,161 23,161 23,161	18.71% 57.99%	
Sand Sage	High grass	4,216 13,066	1.0000	1.0000 1.0000 1.0000	1.00000 1.00000 1.00000	0.0541 0.0541	228 707	23,161 23,161 23,161	0.98% 3.05%	
Shortgrass	Few shrubs/high grass	116,042	1.0000	1.0000	1.00000	0.0047	545	23,161	2.35%	
Charteress	Few shrubs/low grass	92,834 116,042		1.0000	1.00000	0.0047	436	23,161	1.88%	
Shortgrass	rew sinubs/iow grass	92,834		1.0000 1.0000	1.00000 1.00000	0.0047 0.0047	545 436	23,161 23,161	2.35% 1.88%	

Shortgrass	Many shrubs/high grass	116,042 139,251	1.0000 1.0000		1.00000 1.00000	0.0246 0.0246	2,855 3,426	23,161 23,161	12.33% 14.79%
Shortgrass	Many shrubs/low grass	116,042 139,251	1.0000 1.0000		1.00000 1.00000	0.0246 0.0246	2,855 3,426	23,161 23,161	12.33% 14.79%
Summary for Breed	ding (7 records)	139,231	1.0000	Pre-pl	anning Sum lanning Sum	0.0240	11,795 23,203	23,101	50.92% 100.18%
Species/Guild Na	me: Dickcissel	a w				on: Breeding			
Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Hay	654,659 654,812	1.0000 1.0000	1.0000	1.00000 1.00000	0.2112 0.2112	138,264 138,296	5,691,979 5,691,979	2.43% 2.43%
Cropland	Sorghum	2,256,947 2,060,529	1.0000 1.0000		1.00000 1.00000	0.0084 0.0084	18,958 17,308	5,691,979 5,691,979	0.33% 0.30%
Cropland	Pasture	0	1.0000 1.0000		1.00000 1.00000	0.2112 0.2112	0	5,691,979 5,691,979	0.00% 0.00%
Cropland	Alfalfa	560,620 560,702	1.0000 1.0000		1.00000 1.00000	0.3279 0.3279	183,827 183,854	5,691,979 5,691,979	3.23% 3.23%
Cropland	Corn	1,244,215 1,135,932	1.0000 1.0000		1.00000 1.00000	0.0084 0.0084	10,451 9,542	5,691,979 5,691,979	0.18% 0.17%
Cropland	Wheat	6,398,301 5,841,467	1.0000 1.0000	1.0000	1.00000 1.00000	0.0048 0.0048	30,712 28,039	5,691,979 5,691,979	0.54% 0.49%
CRP	Native	1,406,629 2,782,489	1.0000 1.0000	1.0000	1.00000 1.00000	1.3600 1.3600	1,913,015 3,784,185	5,691,979 5,691,979	33.61% 66.48%
CRP	Non-native	0 0	1.0000 1.0000	1.0000	1.00000 1.00000	1.3600 1.3600	0 0	5,691,979 5,691,979	0.00% 0.00%
Mixed Grass	Few shrubs/high grass	954,879 571,855	1.0000 1.0000	1.0000	1.00000 1.00000	1.4164 1.4164	1,352,490 809,975	5,691,979 5,691,979	23.76% 14.23%
Mixed Grass	Few shrubs/ low grass	954,879 571,855	1.0000 1.0000	1.0000	1.00000 1.00000	1.4164 1.4164	1,352,490 809,975	5,691,979 5,691,979	23.76% 14.23%
Riverine Systems	Native riparian shrublane		1.0000 1.0000		1.00000 1.00000	0.0162 0.0162	188 4,260	5,691,979 5,691,979	0.00% 0.07%
Riverine Systems	Wet meadow	1,172,512 823,824	1.0000 1.0000	1.0000	1.00000 1.00000	0.4250 0.4250	498,318 350,125	5,691,979 5,691,979	8.75% 6.15%
Tallgrass	Few shrubs/ low grass	204,687 73,687	1.0000 1.0000		1.00000 1.00000	0.4721 0.4721	96,633 34,788	5,691,979 5,691,979	1.70% 0.61%
Tallgrass	Few shrubs/high grass	204,687 253,812	1.0000 1.0000		1.00000 1.00000	0.4721 0.4721	96,633 119,825	5,691,979 5,691,979	1.70% 2.11%
Summary for Bree	ding (14 records)	,-		Pre-pl	anning Sum lanning Sum		5,691,979 6,290,172	, , , , , , , , , , , , , , , , , , , ,	99.99% 110.51%
					Ü		,,,,,		
Species/Guild Na	me: Eastern Meadov	v <i>lark</i> Condition			Seas Large	on: Resident			
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal
Cropland	Alfalfa	560,620	1.0000		1.00000	0.0165	5,550	307,928	1.80%
Cropland	Hay	560,702 654,659	1.0000 1.0000		1.00000 1.00000	0.0165 0.0433	9,252 17,008	307,928 307,928	3.00% 5.52%
Cropiana	1111)	654,812	1.0000		1.00000	0.0433	28,353	307,928	9.21%
Cropland	Pasture	0	1.0000 1.0000		1.00000 1.00000	0.0720 0.0720	0	307,928 307,928	0.00% 0.00%
CRP	Non-native	0 0	1.0000 1.0000		1.00000 1.00000	0.0554 0.0554	$0 \\ 0$	307,928 307,928	0.00% 0.00%
CRP	Native	1,406,629 2,782,489	1.0000 1.0000		1.00000 1.00000	0.0554 0.0554	46,756 92,490	307,928 307,928	15.18% 30.04%
Mixed Grass	Few shrubs/ low grass	954,879 571,855	1.0000 1.0000		1.00000 1.00000	0.0540 0.0540	30,938 18,528	307,928 307,928	10.05% 6.02%
Mixed Grass	Few shrubs/high grass	954,879 571,855	1.0000 1.0000	0.6000	1.00000 1.00000	0.0660 0.0660	37,813 22,645	307,928 307,928	12.28% 7.35%
Other Wetlands	Moist-soil unit	349 21,360	1.0000 1.0000	0.6000	1.00000 1.00000	0.0121 0.0121	3 155	307,928 307,928	0.00% 0.05%

Riverine Systems	Wet meadow	1,172,512 823,824	1.0000 0.6000 1.0000 0.6000	1.00000 1.00000	0.0121 0.0121	8,512 5,981	307,928 307,928	2.76% 1.94%
Sand Sage	Low grass	80,106 248,256	1.0000 0.6000 1.0000 0.6000	1.00000 1.00000	0.0025 0.0025	120 372	307,928 307,928	0.04% 0.12%
Sand Sage	High grass	4,216 13,066	1.0000 0.6000 1.0000 0.6000	1.00000 1.00000	0.0034 0.0034	9 27	307,928 307,928	0.00% 0.01%
Tallgrass	Few shrubs/ low grass	204,687 73,687	1.0000 0.6000 1.0000 0.6000	1.00000 1.00000	0.3570 0.3570	43,844 15,784	307,928 307,928	14.24% 5.13%
Tallgrass	Few shrubs/high grass	204,687 253,812	1.0000 0.6000 1.0000 0.6000	1.00000 1.00000	0.2677 0.2677	32,877 40,767	307,928 307,928	10.68% 13.24%
Summary for Resi	dent (13 records)		_	lanning Sum olanning Sum		223,430 234,354		72.55% 76.10%
Species/Guild No	ume: Grasshopper Sp			_	on: Breedin	ıg		
Assoc Name	Condition Name	Condition Acres	Avail. Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Wheat	6,398,301	1.0000 1.0000	1.00000	0.0121	77,419	2,582,830	3.00%
Cropiana	Wheat	5,841,467	1.0000 1.0000	1.00000	0.0121	70,682	2,582,830	2.74%
Cropland	Alfalfa	560,620 560,702	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0337 0.0337	18,893 18,896	2,582,830 2,582,830	0.73% 0.73%
Cropland	Pasture	0	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0337 0.0337	0 0	2,582,830 2,582,830	0.00% 0.00%
Cropland	Hay	654,659 654,812	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0337 0.0337	22,062 22,067	2,582,830 2,582,830	0.85% 0.85%
CRP	Non-native	0	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.6330 0.6330	0 0	2,582,830 2,582,830	0.00% 0.00%
CRP	Native	1,406,629 2,782,489	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.6330 0.6330	890,396 1,761,316	2,582,830 2,582,830	34.47% 68.19%
Mixed Grass	Many shrubs/low grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0336 0.0336	32,084 44,954	2,582,830 2,582,830	1.24% 1.74%
Mixed Grass	Few shrubs/high grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.1628 0.1628	155,454 93,098	2,582,830 2,582,830	6.02% 3.60%
Mixed Grass	Few shrubs/ low grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0336 0.0336	32,084 19,214	2,582,830 2,582,830	1.24% 0.74%
Mixed Grass	Many shrubs/high grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.1628 0.1628	155,454 217,811	2,582,830 2,582,830	6.02% 8.43%
Riverine Systems	Wet meadow	1,172,512 823,824	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0396 0.0396	46,431 32,623	2,582,830 2,582,830	1.80% 1.26%
Sand Sage	Low grass	80,106 248,256	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0354 0.0354	2,836 8,788	2,582,830 2,582,830	0.11% 0.34%
Sand Sage	High grass	4,216 13,066	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.1711 0.1711	721 2,236	2,582,830 2,582,830	0.03% 0.09%
Shortgrass	Few shrubs/high grass	116,042 92,834	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.1628 0.1628	18,892 15,113	2,582,830 2,582,830	0.73% 0.59%
Shortgrass	Few shrubs/low grass	116,042	1.0000 1.0000	1.00000	0.0336	3,899	2,582,830	0.15%
Shortgrass	Many shrubs/low grass	92,834 116,042 139,251	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	1.00000 1.00000 1.00000	0.0336 0.0336 0.0336	3,899	2,582,830 2,582,830 2,582,830	0.12% 0.15% 0.18%
Shortgrass	Many shrubs/high grass	116,042 139,251	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.1628 0.1628	18,892	2,582,830 2,582,830	0.73% 0.88%
Tallgrass	Few shrubs/ low grass	204,687 73,687	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.2890 0.2890	59,155	2,582,830 2,582,830	2.29% 0.82%
Tallgrass	Many shrubs/high grass	204,687 245,624	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.2890 0.2890	59,155 70,985	2,582,830 2,582,830	2.29% 2.75%
Tallgrass	Few shrubs/high grass	204,687 253,812	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.2890 0.2890	59,155	2,582,830 2,582,830	2.29% 2.84%
Tallgrass	Many shrubs/low grass	204,687 245,624	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.2890 0.2890	59,155 70,985	2,582,830 2,582,830	2.29% 2.75%
Summary for Bree	eding (21 records)	•		lanning Sum		1,716,036	•	66.43%
,			-	olanning Sum		2,573,884		99.65%

Species/Guild N	ame: Greater Prairie-				son: Resident	•		
A NI	C. Pr. M	Condition	A '1 G '	Large	TT '4	CC	C 1	0/ CC 1
Assoc Name	Condition Name	Acres	Avail. Suit.	Block	Units	CC	Goal	% of Goal
CRP	Native	1,406,629 2,782,489	1.0000 0.5000 1.0000 0.5000	0.14400 0.54400	0.0377 0.0377	3,818 28,533	78,086 78,086	4.89% 36.54%
CRP	Non-native	0	1.0000 0.5000 1.0000 0.5000	0.14400 0.54400	0.0377 0.0377	0	78,086 78,086	0.00% 0.00%
Mixed Grass	Many shrubs/low grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000	0.39100 0.72500	0.0377 0.0377	14,076 36,568	78,086 78,086	18.03% 46.83%
Mixed Grass	Few shrubs/ low grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	0.39100 0.72500	0.0377 0.0377	14,076 15,630	78,086 78,086	18.03% 20.02%
Mixed Grass	Few shrubs/high grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	0.39100 0.72500	0.0377 0.0377	14,076 15,630	78,086 78,086	18.03% 20.02%
Mixed Grass	Many shrubs/high grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000	0.39100 0.72500	0.0377 0.0377	14,076 36,568	78,086 78,086	18.03% 46.83%
Sand Sage	Low grass	80,106 248,256	1.0000 0.5000 1.0000 0.5000	0.00000	0.0377 0.0377	0	78,086 78,086	0.00% 0.00%
Sand Sage	High grass	4,216 13,066	1.0000 0.5000 1.0000 0.5000	0.00000	0.0377 0.0377	0	78,086 78,086	0.00% 0.00%
Tallgrass	Few shrubs/high grass	204,687 253,812	1.0000 1.0000 1.0000 1.0000	0.58200 0.68200	0.0377 0.0377	4,491 6,526	78,086 78,086	5.75% 8.36%
Tallgrass	Few shrubs/ low grass	204,687 73,687	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	0.58200 0.68200	0.0377 0.0377 0.0377	4,491 1,895	78,086 78,086	5.75% 2.43%
Tallgrass	Many shrubs/low grass	204,687 245,624	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	0.58200 0.68200	0.0377 0.0377 0.0377	4,491	78,086 78,086	5.75% 8.09%
Tallgrass	Many shrubs/high grass	204,687	1.0000 1.0000	0.58200	0.0377	6,315 4,491	78,086	5.75%
C f D	:	245,624	1.0000 1.0000	0.68200	0.0377	6,315	78,086	8.09%
Summary for Res	ident (12 records)		•	lanning Sum lanning Sum		78,086 153,980		100.00% 197.19%
Species/Guild N	ame: Henslow's Spari	row		Sea	son: Breeding	g		
Species/Guild N	_	row Condition		Large	son: Breeding			
Assoc Name	Condition Name	Condition Acres	Avail. Suit.	Large Block	Units	CC	Goal	% of Goal
-	Condition Name Many shrubs/high grass	Condition	Avail. Suit. 1.0000 1.0000 1.0000 1.0000	Large			Goal 7,477 7,477	% of Goal 1.47% 2.06%
Assoc Name	Condition Name	Condition Acres 954,879	1.0000 1.0000	Large Block 0.00100	Units 0.1153	CC 110	7,477	1.47%
Assoc Name Mixed Grass	Condition Name Many shrubs/high grass	Condition Acres 954,879 1,337,903 954,879	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Large Block 0.00100 0.00100	Units 0.1153 0.1153 0.1153	CC 110 154 110	7,477 7,477 7,477	1.47% 2.06% 1.47%
Assoc Name Mixed Grass Mixed Grass	Condition Name Many shrubs/high grass Few shrubs/high grass	Condition Acres 954,879 1,337,903 954,879 571,855 204,687	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600	Units 0.1153 0.1153 0.1153 0.1153	CC 110 154 110 66 1,794	7,477 7,477 7,477 7,477 7,477	1.47% 2.06% 1.47% 0.88% 23.99%
Assoc Name Mixed Grass Mixed Grass Tallgrass	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 0.07600	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153	CC 110 154 110 66 1,794 4,583 1,794	7,477 7,477 7,477 7,477 7,477 7,477 7,477	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 23.99%
Assoc Name Mixed Grass Mixed Grass Tallgrass Tallgrass Summary for Bre	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 0.07600 0.15660 lanning Sum	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153	CC 110 154 110 66 1,794 4,583 1,794 4,435 3,808 9,238	7,477 7,477 7,477 7,477 7,477 7,477 7,477	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 23.99% 59.32%
Assoc Name Mixed Grass Mixed Grass Tallgrass Tallgrass Summary for Bre	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass reding (4 records) Same: Lark Bunting	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 0.15660 danning Sum lanning Sum Large	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153	CC 110 154 110 66 1,794 4,583 1,794 4,435 3,808 9,238	7,477 7,477 7,477 7,477 7,477 7,477 7,477	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 23.99% 59.32%
Assoc Name Mixed Grass Mixed Grass Tallgrass Tallgrass Summary for Bre Species/Guild No. Assoc Name	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass reding (4 records)	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687 245,624	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 Pre-pi Post-p	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 danning Sum lanning Sum Large Block	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 Units	CC 110 154 110 66 1,794 4,583 1,794 4,435 3,808 9,238	7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 23.99% 59.32%
Assoc Name Mixed Grass Mixed Grass Tallgrass Tallgrass Summary for Bre	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass reding (4 records) Same: Lark Bunting	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687 245,624 Condition	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 Pre-pi Post-p	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 0.15660 danning Sum lanning Sum Large	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153	CC 110 154 110 66 1,794 4,583 1,794 4,435 3,808 9,238	7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 23.99% 59.32% 50.93% 123.55%
Assoc Name Mixed Grass Mixed Grass Tallgrass Tallgrass Summary for Bre Species/Guild No. Assoc Name	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass reding (4 records) Same: Lark Bunting Condition Name	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687 245,624 Condition Acres 654,659	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 Pre-pi Post-p Avail. Suit. 0.2540 0.2540	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 0.07600 0.15660 danning Sum lanning Sum Large Block 1.00000	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 Units 0.0042	CC 110 154 110 66 1,794 4,583 1,794 4,435 3,808 9,238 CC 177	7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 Goal 18,564	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 23.99% 59.32% 50.93% 123.55%
Assoc Name Mixed Grass Mixed Grass Tallgrass Tallgrass Summary for Bre Species/Guild No. Assoc Name Cropland	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass reding (4 records) Same: Lark Bunting Condition Name Hay	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687 245,624 Condition Acres 654,659 654,812 6,398,301	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 Pre-pi Post-p Avail. Suit. 0.2540 0.2540 0.2540 0.2540 0.2540 0.2540	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 0.07600 danning Sum lanning Sum Large Block 1.00000 1.00000	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 Units 0.0042 0.0042 0.0042 0.0060	CC 110 154 110 66 1,794 4,583 1,794 4,435 3,808 9,238 CC 177 177 2,477	7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 60al 18,564 18,564 18,564	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 23.99% 59.32% 50.93% 123.55% % of Goal 0.95% 0.95% 13.34%
Assoc Name Mixed Grass Mixed Grass Tallgrass Tallgrass Summary for Bre Species/Guild No. Assoc Name Cropland Cropland	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass reding (4 records) Came: Lark Bunting Condition Name Hay Wheat	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687 245,624 Condition Acres 654,659 654,812 6,398,301 5,841,467 0	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 Pre-pi Post-p Avail. Suit. 0.2540 0.2540 0.2540 0.2540 0.2540 0.2540 0.2540 0.2540 0.2540 0.2540 0.2540 0.2540	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 0.07600 danning Sum lanning Sum Large Block 1.00000 1.00000 1.00000 1.00000	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 Units 0.0042 0.0042 0.0042 0.0060 0.0060 0.0060 0.0042	CC 110 154 110 66 1,794 4,583 1,794 4,435 3,808 9,238 CC 177 177 2,477 2,261 0	7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 60al 18,564 18,564 18,564 18,564	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 23.99% 59.32% 50.93% 123.55% % of Goal 0.95% 0.95% 1.3.34% 12.18% 0.00%
Assoc Name Mixed Grass Mixed Grass Tallgrass Tallgrass Summary for Bre Species/Guild No. Assoc Name Cropland Cropland Cropland	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass reding (4 records) Came: Lark Bunting Condition Name Hay Wheat Pasture	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687 245,624 Condition Acres 654,659 654,812 6,398,301 5,841,467 0 0 560,620	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 Pre-pi Post-p Avail. Suit. 0.2540	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 0.07600 0.15660 danning Sum Large Block 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 Units 0.0042 0.0042 0.0042 0.0060 0.0060 0.0060 0.0042 0.0042 0.0042	CC 110 154 110 66 1,794 4,583 1,794 4,435 3,808 9,238 CC 177 177 2,477 2,261 0 0 152	7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 60al 18,564 18,564 18,564 18,564 18,564 18,564	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 59.32% 50.93% 123.55% % of Goal 0.95% 0.95% 1.3.34% 12.18% 0.00% 0.00% 0.82%
Assoc Name Mixed Grass Mixed Grass Tallgrass Tallgrass Summary for Bre Species/Guild No Assoc Name Cropland Cropland Cropland Cropland Cropland	Condition Name Many shrubs/high grass Few shrubs/high grass Few shrubs/high grass Many shrubs/high grass reding (4 records) Condition Name Hay Wheat Pasture Alfalfa	Condition Acres 954,879 1,337,903 954,879 571,855 204,687 253,812 204,687 245,624 Condition Acres 654,659 654,812 6,398,301 5,841,467 0 0 560,620 560,702 954,879	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 Pre-pi Post-p Avail. Suit. 0.2540	Large Block 0.00100 0.00100 0.00100 0.00100 0.07600 0.15660 0.07600 0.15660 danning Sum Large Block 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000	Units 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 0.1153 Units 0.0042 0.0042 0.0060 0.0060 0.0060 0.0042 0.0042 0.0042 0.0042 0.0042 0.0042 0.0042 0.0042 0.0042 0.0042 0.0042 0.0042 0.0042 0.0042	CC 110 154 110 66 1,794 4,583 1,794 4,435 3,808 9,238 CC 177 177 2,477 2,261 0 0 152 152 579	7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 7,477 60al 18,564 18,564 18,564 18,564 18,564 18,564 18,564 18,564	1.47% 2.06% 1.47% 0.88% 23.99% 61.29% 59.32% 50.93% 123.55% % of Goal 0.95% 0.95% 13.34% 12.18% 0.00% 0.00% 0.82% 0.82% 3.12%

		9,959	0.2540 0.2540	1.00000	0.0094	6	18,564	0.03%
Sand Sage	Low grass	80,106 248,256	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0105 0.0105	841 2,607	18,564 18,564	4.53% 14.04%
Sand Sage	High grass	4,216 13,066	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0105 0.0105	44 137	18,564 18,564	0.24% 0.74%
Shortgrass	Few shrubs/low grass	116,042 92,834	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	1.00000 1.00000 1.00000	0.0094 0.0094	1,091 873	18,564 18,564	5.88% 4.70%
Shortgrass	Many shrubs/high grass	116,042 139,251	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0105 0.0105	1,218 1,462	18,564 18,564	6.56% 7.88%
Shortgrass	Many shrubs/low grass	116,042 139,251	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	1.00000 1.00000 1.00000	0.0087 0.0087	1,010 1,211	18,564 18,564	5.44% 6.52%
Shortgrass	Few shrubs/high grass	116,042 92,834	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0114 0.0114	1,323 1,058	18,564 18,564	7.13% 5.70%
Summary for Bre	eding (13 records)	,	•	lanning Sum lanning Sum		9,454 11,042	,	50.92% 59.48%
Consider/Could N	I L C			C	D <i>L</i> :	_		
Species/Guita No	ame: Lark Sparrow	Condition		Large	son: Breedin	g		
Assoc Name	Condition Name	Acres	Avail. Suit.	Block	Units	CC	Goal	% of Goal
Mixed Grass	Many shrubs/low grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.1205 0.1205	115,063 161,217	577,982 577,982	19.91% 27.89%
Mixed Grass	Many shrubs/high grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.1205 0.1205	115,063 161,217	577,982 577,982	19.91% 27.89%
Mixed Grass	Few shrubs/ low grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0041 0.0041	3,915 2,345	577,982 577,982	0.68% 0.41%
Mixed Grass	Few shrubs/high grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0041 0.0041	3,915 2,345	577,982 577,982	0.68% 0.41%
Riverine Systems	Native riparian shrubland		1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	19 421	577,982 577,982	0.00% 0.07%
Sand Sage	Low grass	80,106 248,256	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.1420 0.1420	11,375 35,252	577,982 577,982	1.97% 6.10%
Sand Sage	High grass	4,216 13,066	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.1420 0.1420	599 1,855	577,982 577,982	0.10% 0.32%
Shortgrass	Many shrubs/high grass	116,042 139,251	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0607 0.0607	7,044 8,453	577,982 577,982	1.22% 1.46%
Shortgrass	Many shrubs/low grass	116,042 139,251	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0607 0.0607	7,044 8,453	577,982 577,982	1.22% 1.46%
Shortgrass	Few shrubs/low grass	116,042 92,834	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0207 0.0207	2,402 1,922	577,982 577,982	0.42% 0.33%
Shortgrass	Few shrubs/high grass	116,042 92,834	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0207 0.0207	2,402 1,922	577,982 577,982	0.42% 0.33%
Tallgrass	Few shrubs/ low grass	204,687	1.0000 1.0000	1.00000	0.0041	839	577,982	0.15%
Tallgrass	Many shrubs/low grass	73,687 204,687 245,624	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	1.00000 1.00000 1.00000	0.0041 0.1205 0.1205	302 24,665 29,598	577,982 577,982 577,982	0.05% 4.27% 5.12%
Summary for Bre	eding (13 records)			lanning Sum lanning Sum		294,345 415,302		50.92% 71.85%
			1 000 P	g 2		110,002		7 2100 70
Species/Guild No	ame: Lesser Prairie-C	hicken Condition		Sea Large	son: Residen	nt .		
Assoc Name	Condition Name	Acres	Avail. Suit.	Block	Units	CC	Goal	% of Goal
CRP	Native	1,406,629	1.0000 0.5000	0.25800	0.0125	2,268	40,633	5.58%
CRP	Non-native	2,782,489	1.0000 0.5000 1.0000 0.5000	0.70000 0.25800	0.0125 0.0125	12,173 0	40,633 40,633	29.96% 0.00%
		0	1.0000 0.5000	0.70000	0.0125	0	40,633	0.00%
Mixed Grass	Many shrubs/high grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000	0.36500 0.68000	0.0125 0.0125	4,357 11,372	40,633 40,633	10.72% 27.99%
Mixed Grass	Few shrubs/high grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	0.36500 0.68000	0.0125 0.0125	4,357 4,861	40,633 40,633	10.72% 11.96%

M: 1 C	M	054.070	1 0000 1 0000	0.26500	0.0125	4.257	10.622	10.720/
Mixed Grass	Many shrubs/low grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000	0.36500 0.68000	0.0125 0.0125	4,357 11,372	40,633 40,633	10.72% 27.99%
Mixed Grass	Few shrubs/ low grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	0.36500 0.68000	0.0125 0.0125	4,357 4,861	40,633 40,633	10.72% 11.96%
Sand Sage	Low grass	80,106 248,256	1.0000 1.0000 1.0000 1.0000	0.75800 0.90000	0.0156 0.0156	947 3,486	40,633 40,633	2.33% 8.58%
Sand Sage	High grass	4,216 13,066	1.0000 1.0000 1.0000 1.0000	0.75800	0.0156 0.0156	50 183	40,633 40,633	0.12% 0.45%
Summary for Resi	dent (8 records)	13,000		olanning Sum	0.0130	20,693	10,033	50.92%
·	,		-	planning Sum		48,308		118.89%
Species/Guild Na	ume: Loggerhead Shr	ik <i>e</i>		Seas	son: Residen	t		
Species, Guila 110	inici 2088ci iicaa Siii	Condition		Large	Join Restació	•		
Assoc Name	Condition Name	Acres	Avail. Suit		Units	CC	Goal	% of Goal
Cropland	Hay	654,659 654,812	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	1,047 1,048	48,390 48,390	2.16% 2.17%
Cropland	Alfalfa	560,620	1.0000 1.0000		0.0016	897	48,390	1.85%
		560,702	1.0000 1.0000	1.00000	0.0016	897	48,390	1.85%
Cropland	Pasture	0	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	0 0	48,390 48,390	0.00% 0.00%
CRP	Non-native	0	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	0 0	48,390 48,390	0.00% 0.00%
CRP	Native	1,406,629	1.0000 1.0000	1.00000	0.0016	2,251	48,390	4.65%
		2,782,489	1.0000 1.0000	1.00000	0.0016	4,452	48,390	9.20%
Mixed Grass	Few shrubs/ low grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	1,528 915	48,390 48,390	3.16% 1.89%
Mixed Grass	Few shrubs/high grass	954,879 571,855	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	1,528 915	48,390 48,390	3.16% 1.89%
Mixed Grass	Many shrubs/high grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0037 0.0037	3,533 4,950	48,390 48,390	7.30% 10.23%
Mixed Grass	PD town	9,959 9,959	1.0000 1.0000 1.0000 1.0000		0.0016 0.0016	16 16	48,390 48,390	0.03% 0.03%
Mixed Grass	Many shrubs/low grass	954,879 1,337,903	1.0000 1.0000 1.0000 1.0000		0.0037 0.0037	3,533 4,950	48,390 48,390	7.30% 10.23%
Sand Sage	High grass	4,216	1.0000 1.0000		0.0037	16	48,390	0.03%
		13,066	1.0000 1.0000	1.00000	0.0037	48	48,390	0.10%
Sand Sage	Low grass	80,106 248,256	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0037 0.0037	296 919	48,390 48,390	0.61% 1.90%
Shortgrass	Few shrubs/high grass	116,042 92,834	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0042 0.0042	487 390	48,390 48,390	1.01% 0.81%
Shortgrass	Many shrubs/low grass	116,042 139,251	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0096 0.0096	1,114 1,337	48,390 48,390	2.30% 2.76%
Shortgrass	Few shrubs/low grass	116,042	1.0000 1.0000	1.00000	0.0042	487	48,390	1.01%
Shortgrass	Many shrubs/high grass	92,834 116,042	1.0000 1.0000 1.0000 1.0000		0.0042 0.0096	390 1,114	48,390 48,390	0.81% 2.30%
		139,251	1.0000 1.0000	1.00000	0.0096	1,337	48,390	2.76%
Tallgrass	Many shrubs/high grass	204,687 245,624	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0115 0.0115	2,354 2,825	48,390 48,390	4.86% 5.84%
Tallgrass	Many shrubs/low grass	204,687 245,624	1.0000 1.0000 1.0000 1.0000	1.00000 1.00000	0.0115 0.0115	2,354 2,825	48,390 48,390	4.86% 5.84%
Tallgrass	Few shrubs/high grass	204,687 253,812	1.0000 1.0000 1.0000 1.0000	1.00000	0.0051 0.0051	1,044 1,294	48,390 48,390	2.16% 2.67%
Tallgrass	Few shrubs/ low grass	204,687 73,687	1.0000 1.0000 1.0000 1.0000	1.00000	0.0051 0.0051	1,044 376	48,390 48,390	2.16% 0.78%
Summary for Resi	dent (20 records)	. 5,001		olanning Sum	0.0001	24,643	.0,570	50.92%
Summing 101 ROSI	(20 1000140)			planning Sum		29,884		61.75%

Species/Guild Name: Mississippi Kite					Seas	son: Breeding			
		Condition			Large				
Assoc Name	Condition Name	Acres		Suit.	Block	Units	CC	Goal	% of Goal
Other	Urban/Suburban	186,748 186,748	0.6000 0. 0.6000 0.		1.00000 1.00000	0.2312 0.2312	10,362 10,362	19,090 19,090	54.28% 54.28%
Riverine Systems	Riparian canopy - late successional w/ understor	13,490 ry 43,603	0.4000 0. 0.4000 0.		1.00000 1.00000	0.6937 0.6937	1,407 4,549	19,090 19,090	7.37% 23.83%
Riverine Systems	Riparian canopy - late successional w/o understo	13,490 ry 43,603	0.4000 0. 0.4000 0.		1.00000 1.00000	0.6937 0.6937	1,407 4,549	19,090 19,090	7.37% 23.83%
Summary for Breed	ding (3 records)	•		-	nning Sum unning Sum		13,176 19,460		69.02% 101.94%
Snecies/Guild Na	me: Northern Bobwhi	ite			Seas	son: Resident			
Species, Guia Iva		Condition			Large	on. Resident			
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal
Cropland	Alfalfa	560,620 560,702	1.0000 1. 1.0000 1.		1.00000 1.00000	0.0260 0.0260	14,576 14,578	675,607 675,607	2.16% 2.16%
Cropland	Нау	654,659 654,812	1.0000 1. 1.0000 1.		1.00000 1.00000	0.0260 0.0260	17,021 17,025	675,607 675,607	2.52% 2.52%
Cropland	Pasture	0	1.0000 1. 1.0000 1.		1.00000 1.00000	0.0260 0.0260	0	675,607 675,607	0.00% 0.00%
Cropland	Soybeans	770,400 703,354	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0260 0.0260	20,030 18,287	675,607 675,607	2.96% 2.71%
Cropland	Sunflowers	99,465 90,809	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0260 0.0260	2,586 2,361	675,607 675,607	0.38% 0.35%
Cropland	Sorghum	2,256,947 2,060,529	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0260 0.0260	58,681 53,574	675,607 675,607	8.69% 7.93%
Cropland	Wheat	6,398,301 5,841,467	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0260 0.0260	166,356 151,878	675,607 675,607	24.62% 22.48%
CRP	Native	1,406,629 2,782,489	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0320 0.0320	45,012 89,040	675,607 675,607	6.66% 13.18%
CRP	Non-native	0 0	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0320 0.0320 0.0320	0 0	675,607 675,607	0.00% 0.00%
Mixed Grass	Many shrubs/low grass	954,879 1,337,903	1.0000 1. 1.0000 1. 1.0000 1.	.0000	1.00000 1.00000 1.00000	0.0200 0.0200	19,098 26,758	675,607 675,607	2.83% 3.96%
Mixed Grass	Few shrubs/ low grass	954,879 571,855	1.0000 1. 1.0000 1. 1.0000 1.	.0000	1.00000 1.00000 1.00000	0.0200 0.0200 0.0200	19,098 11,437	675,607 675,607	2.83% 1.69%
Mixed Grass	Many shrubs/high grass	954,879 1,337,903	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0200 0.0200	19,098 26,758	675,607 675,607	2.83% 3.96%
Mixed Grass	Few shrubs/high grass	954,879 571,855	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0200 0.0200	19,098 11,437	675,607 675,607	2.83% 1.69%
Riverine Systems	Riparian canopy - early successional w/o understo	20,303	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0980 0.0980	1,990 1,990	675,607 675,607	0.29% 0.29%
Riverine Systems	Riparian canopy - late successional w/o understo	13,490	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0980 0.0980	1,322 4,273	675,607 675,607	0.20% 0.63%
Riverine Systems	Native riparian shrubland	11,582 262,981	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0980 0.0980	1,135 25,772	675,607 675,607	0.17% 3.81%
Riverine Systems	Riparian canopy - late successional w/ understor	13,490	1.0000 1. 1.0000 1. 1.0000 1.	.0000	1.00000 1.00000 1.00000	0.0980 0.0980 0.0980	1,322 4,273	675,607 675,607	0.20% 0.63%
Riverine Systems	Riparian canopy - early successional w/ understory	20,303	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0980 0.0980	1,990 1,990	675,607 675,607	0.29% 0.29%
Riverine Systems		1,172,512 823,824	1.0000 1. 1.0000 1.	.0000	1.00000 1.00000	0.0980 0.0980	114,906 80,735	675,607 675,607	17.01% 11.95%
Tallgrass	Few shrubs/ low grass	204,687 73,687	1.0000 1. 1.0000 1. 1.0000 1.	.0000	1.00000 1.00000 1.00000	0.1860 0.1860	38,072 13,706	675,607 675,607	5.64% 2.03%
Tallgrass	Many shrubs/low grass	204,687	1.0000 1.	.0000	1.00000	0.1860	38,072	675,607	5.64%
Tallgrass	Many shrubs/high grass	245,624 204,687	1.0000 1.	.0000	1.00000	0.1860 0.1860	45,686 38,072	675,607 675,607	6.76% 5.64%
Tallgrass	Few shrubs/high grass	245,624 204,687	1.0000 1.0000 1.		1.00000 1.00000	0.1860 0.1860	45,686 38,072	675,607 675,607	6.76% 5.64%

Summary for Resid	dent (23 records)	253,812		000 1.0 Pre-plann Post-plann	0	0.1860	47,209 675,607 694,453	675,607	6.99% 99.99% 102.78%
Species/Guild Na	me: Painted Bunting				Seas	on: Breeding	7		
A N		ondition	A '1 G		Large	TT *-	CC	G 1	0/ 60 1
Assoc Name	Condition Name	Acres 11,582	Avail. S		3lock)0000	Units 0.0350	CC 41	Goal 41	% of Goal
Riverine Systems	Native riparian shrubland	262,981	1.0000 0.1		00000	0.0350	92	41	100.00% 224.39%
Summary for Bree	ding (1 record)	,	Pre-planning Sum Post-planning Sum				41 92		100.00% 224.39%
Species/Guild Na	me: Red-headed Wood	-		-		on: Breeding	7		
Assoc Name	Condition Name	ondition Acres	Avail. S		Large Block	Units	CC	Goal	% of Goal
Other	Urban/Suburban	186,748 186,748	1.0000 1.0 1.0000 1.0	0000 1.0	00000	0.1506 0.1506	28,124 28,124	37,368 37,368	75.26% 75.26%
Riverine Systems	Riparian canopy - late successional w/ understory	13,490 43,603	1.0000 1.0 1.0000 1.0		00000	0.3426 0.3426	4,622 14,938	37,368 37,368	12.37% 39.98%
Riverine Systems	Riparian canopy - late successional w/o understor	13,490 y 43,603	1.0000 1.0 1.0000 1.0		00000	0.3426 0.3426	4,622 14,938	37,368 37,368	12.37% 39.98%
Summary for Bree	ding (3 records)			Pre-plann Post-plann	0		37,368 58,000		100.00% 155.21%
Species/Guild Name: Ring-necked Pheasant				Season: Resident					
Species, Gilla Iva	_	ondition		1	Large	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Assoc Name	Condition Name	Acres	Avail. S		Block	Units	CC	Goal	% of Goal
Cropland	Alfalfa	560,620 560,702	1.0000 1.0 1.0000 1.0		00000	0.0300 0.0300	16,819 16,821	77,210 77,210	21.78% 21.79%
Cropland	Hay	654,659 654,812	1.0000 1.0 1.0000 1.0		00000	0.0121 0.0121	7,921 7,923	77,210 77,210	10.26% 10.26%
Cropland	2	2,256,947 2,060,529	1.0000 1.0 1.0000 1.0		00000	0.0016 0.0016	3,611 3,297	77,210 77,210	4.68% 4.27%
Cropland	Pasture	0	1.0000 1.0 1.0000 1.0	000 1.0	00000	0.0121 0.0121	0	77,210 77,210	0.00% 0.00%
Cropland		1,244,215 1,135,932	1.0000 1.0 1.0000 1.0	000 1.0	00000	0.0016 0.0016	1,991 1,817	77,210 77,210	2.58% 2.35%
Cropland		5,398,301 5,841,467	1.0000 1.0 1.0000 1.0		00000	0.0016 0.0016	10,237 9,346	77,210 77,210	13.26% 12.10%
CRP	2	,406,629 2,782,489	1.0000 1.0 1.0000 1.0	000 1.0	00000	0.0240 0.0240	33,759 66,780	77,210 77,210	43.72% 86.49%
CRP	Non-native	0	1.0000 1.0 1.0000 1.0	000 1.0	00000	0.0240 0.0240	0	77,210 77,210	0.00% 0.00%
Other Wetlands	Emergent marsh	74,137 74,137	1.0000 1.0 1.0000 1.0	000 1.0	00000	0.0121 0.0121	897 897	77,210 77,210	1.16% 1.16%
Playa	Dry	21,532 21,532	1.0000 1.0 1.0000 1.0		00000	0.0121 0.0121	261 261	77,210 77,210	0.34% 0.34%
Riverine Systems	Native riparian shrubland	11,582 262,981	1.0000 1.00 1.0000 1.00 1.0000 1.00	0000 1.0	00000	0.0121 0.0291 0.0291	337 7,653	77,210 77,210 77,210	0.44% 9.91%
Riverine Systems	Riparian canopy - early successional w/ understory	20,303 20,303	1.0000 1.0 1.0000 1.0		00000	0.0291 0.0291	591 591	77,210 77,210	0.77% 0.77%
Riverine Systems	Riparian canopy - late successional w/o understor	13,490 y 43,603	1.0000 1.0 1.0000 1.0		00000	0.0291 0.0291	393 1,269	77,210 77,210	0.51% 1.64%
Riverine Systems	Riparian canopy - late successional w/ understory	13,490 43,603	1.0000 1.0 1.0000 1.0		00000	0.0291 0.0291	393 1,269	77,210 77,210	0.51% 1.64%
Summary for Resident (14 records)		Pre-planning Sum Post-planning Sum				77,210 117,924		100.00% 152.73%	

Species/Guild Name: Scaled Quail						son: Residen	t		
Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Sand Sage	Low grass	80,106		1.0000	1.00000	0.0022	2	2	% of Goal
		248,256		1.0000	1.00000	0.0022	5	2	250.00%
Sand Sage	High grass	4,216 13,066		1.0000 1.0000	1.00000 1.00000	$0.0022 \\ 0.0022$	0 0	2 2	0.00% 0.00%
Summary for Resi	dent (2 records)			_	anning Sum		2 5		100.00%
				Post-p	lanning Sum		5		250.00%
Species/Guild Name: Scissor-tailed Flycatcher		•	Season: Breeding				g		
Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
Cropland	Pasture	0		0.4172	1.00000	0.0062	0	16,475	0.00%
		0		0.4172	1.00000	0.0062	0	16,475	0.00%
Cropland	Hay	654,659 654,812		0.4172 0.4172	1.00000 1.00000	0.0062 0.0062	1,693 1,694	16,475 16,475	10.28% 10.28%
Mixed Grass	Few shrubs/high grass	954,879 571,855		0.4172 0.4172	1.00000 1.00000	0.0062 0.0062	2,470 1,479	16,475 16,475	14.99% 8.98%
Mixed Grass	Few shrubs/ low grass	954,879 571,855		0.4172 0.4172	1.00000 1.00000	0.0062 0.0062	2,470 1,479	16,475 16,475	14.99% 8.98%
Other	Urban/Suburban	186,748 186,748	1.0000	0.4172 0.4172	1.00000 1.00000	0.0062 0.0062	483 483	16,475 16,475	2.93% 2.93%
Other	small roads	492,494	1.0000	0.4172	1.00000	0.0062	1,274	16,475	7.73%
Summary for Bree	oding (6 records)	492,494	1.0000	0.4172	1.00000 anning Sum	0.0062	1,274 8,390	16,475	7.73% 50.92%
Summary for Bree	eunig (o records)			_	anning Sum lanning Sum		6,409		38.90%
Species/Guild Name: Short-eared Owl						son: Breedin	g		
Assoc Name	Condition Name	Condition Acres	Avail.	Suit.	Large Block	Units	CC	Goal	% of Goal
CRP	Native Native	1,406,629		0.5000	1.00000	0.0005	352	1,339	26.29%
		2,782,489		1.0000	1.00000	0.0005	1,391	1,339	103.88%
CRP	Non-native	0		0.5000 1.0000	1.00000 1.00000	0.0005 0.0005	0	1,339 1,339	0.00% 0.00%
Other Wetlands	Emergent marsh	74,137		1.0000	1.00000	0.0005	37	1,339	2.76%
		74,137		1.0000	1.00000	0.0005	37	1,339	2.76%
Other Wetlands	Moist-soil unit	349 21,360		1.0000 1.0000	1.00000 1.00000	0.0005 0.0005	0 11	1,339 1,339	0.00% 0.82%
Riverine Systems	Wet meadow	1,172,512 823,824		0.5000 0.5000	1.00000 1.00000	0.0005 0.0005	293 206	1,339 1,339	21.88% 15.38%
Summary for Bree	eding (5 records)			Pre-pl	anning Sum		682		50.93%
				Post-p	lanning Sum		1,645		122.85%
Species/Cuild No	ıme: Snowy Plover				Sagu	on. Duadin			
Species/Guita Na	ime: Showy Flover	Condition	Season: Breeding Large						
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal
Other Wetlands	Saline	12,877		1.0000	1.00000	0.0585	753 753	802	93.89%
Riverine Systems	Unvegetated sandbar	12,875 8,312		1.0000	1.00000 1.00000	0.0585 0.0059	753 49	802 802	93.89% 6.11%
Summary for Bree		8,312		1.0000	1.00000	0.0059	49 802	802	6.11% 100.00%
Summary for Bree	eunig (2 records)				anning Sum lanning Sum		802		100.00%
G		1			G	D 1			
Species/Guild Name: Swainson's Hawk Condition					Seas Large	son: Breedin	g		
Assoc Name	Condition Name	Acres	Avail.	Suit.	Block	Units	CC	Goal	% of Goal
Cropland	Hay	654,659	0.5000	1.0000	1.00000	0.0016	524	31,214	1.68%

		654,812	0.5000	1.0000	1.00000	0.0016	524	31,214	1.68%
Cropland	Alfalfa	560,620 560,702	0.5000 0.5000	1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	448 449	31,214 31,214	1.44% 1.44%
Cropland	Pasture	0	0.5000 0.5000	1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	0 0	31,214 31,214	0.00% 0.00%
Cropland	Wheat	6,398,301 5,841,467	0.5000 0.5000	1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	5,119 4,673	31,214 31,214	16.40% 14.97%
Cropland	Wheat	6,398,301 5,841,467	0.5000 0.5000	1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	5,119 4,673	31,214 31,214	16.40% 14.97%
Mixed Grass	Few shrubs/ low grass	954,879 571,855		1.0000	1.00000 1.00000	0.0020 0.0020	955 572	31,214 31,214	3.06% 1.83%
Mixed Grass	Many shrubs/high grass	954,879 1,337,903		1.0000	1.00000 1.00000	0.0011 0.0011	525 736	31,214 31,214	1.68% 2.36%
Mixed Grass	Few shrubs/high grass	954,879 571,855		1.0000	1.00000 1.00000	0.0020 0.0020	955 572	31,214 31,214	3.06% 1.83%
Mixed Grass	Many shrubs/low grass	954,879 1,337,903	0.5000 0.5000	1.0000 1.0000	1.00000 1.00000	0.0011 0.0011	525 736	31,214 31,214	1.68% 2.36%
Riverine Systems	Riparian canopy - late successional w/ understo	13,490 ory 43,603	0.5000 0.5000	1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	11 35	31,214 31,214	0.04% 0.11%
Riverine Systems	Wet meadow	1,172,512 823,824	0.5000 0.5000	1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	938 659	31,214 31,214	3.01% 2.11%
Riverine Systems	Riparian canopy - late successional w/o underst	13,490 tory 43,603		1.0000 1.0000	1.00000 1.00000	0.0016 0.0016	11 35	31,214 31,214	0.04% 0.11%
Sand Sage	High grass	4,216 13,066	0.5000 0.5000	1.0000 1.0000	1.00000 1.00000	0.0011 0.0011	2 7	31,214 31,214	0.01% 0.02%
Sand Sage	Low grass	80,106 248,256	0.5000 0.5000	1.0000 1.0000	1.00000 1.00000	0.0011 0.0011	44 137	31,214 31,214	0.14% 0.44%
Shortgrass	Many shrubs/high grass	116,042 139,251		1.0000 1.0000	1.00000 1.00000	0.0011 0.0011	128 153	31,214 31,214	0.41% 0.49%
Shortgrass	Few shrubs/high grass	116,042 92,834		1.0000 1.0000	1.00000 1.00000	0.0020 0.0020	232 186	31,214 31,214	0.74% 0.60%
Shortgrass	Many shrubs/low grass	116,042 139,251		1.0000 1.0000	1.00000 1.00000	0.0011 0.0011	128 153	31,214 31,214	0.41% 0.49%
Shortgrass	Few shrubs/low grass	116,042 92,834	1.0000 1.0000	1.0000 1.0000	1.00000 1.00000	0.0020 0.0020	232 186	31,214 31,214	0.74% 0.60%
Summary for Breeding (18 records)					anning Sum lanning Sum		15,896 14,486		50.92% 46.40%
Species/Guild No	ame: Upland Sandpip	er			Sea	son: Breeding	3		
	G 11.1 M	Condition	,	a	Large	T T 1.	aa	G 1	o, 6G 1
Assoc Name Cropland	Condition Name Pasture		Avail.	Suit. 1.0000	Block 1.00000	Units 0.0154	CC 0	Goal 70,940	% of Goal 0.00%
Cropiand	Pasture	0	0.3000		1.00000	0.0154	0	70,940	0.00%
CRP	Native	1,406,629 2,782,489	0.3000 0.3000	1.0000 1.0000	1.00000 1.00000	0.0080 0.0080	3,376 6,678	70,940 70,940	4.76% 9.41%
Mixed Grass	Few shrubs/high grass	954,879 571,855	0.3000 0.3000	1.0000 1.0000	1.00000 1.00000	0.0190 0.0190	5,443 3,260	70,940 70,940	7.67% 4.60%
Mixed Grass	Few shrubs/ low grass	954,879 571,855	0.3000 0.3000	1.0000 1.0000	1.00000 1.00000	0.0133 0.0133	3,810 2,282	70,940 70,940	5.37% 3.22%
Riverine Systems	Wet meadow	1,172,512 823,824	0.3000 0.3000	1.0000 1.0000	1.00000 1.00000	0.0523 0.0523	18,397 12,926	70,940 70,940	25.93% 18.22%
Tallgrass	Few shrubs/high grass	204,687		1.0000	1.00000	0.1570	32,136	70,940	45.30%
Tallgrass	Few shrubs/ low grass	253,812 204,687 73,687		1.0000 1.0000 1.0000	1.00000 1.00000 1.00000	0.1570 0.0380 0.0380	39,848 7,778 2,800	70,940 70,940 70,940	56.17% 10.96% 3.95%
Summary for Bree	eding (7 records)	. 2,007	0000		anning Sum		70,940	. 5,2 10	100.00%
	3				lanning Sum		67,794		95.56%

Species/Guild Name: Western Kingbird Season: Breeding Condition Large Condition Name Acres Avail. Block Units CCGoal % of Goal Cropland Wheat 6,398,301 1.0000 1.0000 1.00000 0.0040 25,593 1,035,227 2.47% 5,841,467 1.0000 1.0000 1.00000 0.0040 23,366 1,035,227 2.26% Wheat 6,398,301 1.00000 0.0040 1,035,227 2.47% Cropland 1.0000 1.0000 25.593 5,841,467 1.0000 1.0000 1.00000 0.0040 23,366 1,035,227 2.26% 654,659 1.0000 1.0000 1.00000 0.0040 1,035,227 0.25% Cropland Hay 2.619 654,812 2,619 1,035,227 0.25% 1.0000 1.0000 1.00000 0.0040 Cropland Pasture 0 1.0000 1.0000 1.00000 0.0040 0 1,035,227 0.00% 1,035,227 0 1.0000 1.0000 1.00000 0.0040 0 0.00% Alfalfa 2,242 0.22% Cropland 560,620 1.0000 1.0000 1.00000 0.0040 1,035,227 560,702 1.0000 1.0000 1.00000 0.0040 2,243 1,035,227 0.22% CRP Non-native 1.0000 1.0000 1.00000 0.0600 0 1,035,227 0.00% 0 1.0000 1.0000 1.00000 0.0600 0 1,035,227 0.00%CRP Native 1,406,629 1.0000 1.0000 1.00000 0.0600 84.398 1,035,227 8.15% 2,782,489 $1.0000 \ 1.0000$ 1.00000 0.0600 166,949 1,035,227 16.13% Mixed Grass Many shrubs/low grass 954,879 1.0000 1.0000 1.00000 0.0459 43,829 1,035,227 4.23% 1,337,903 1.0000 1.0000 1.00000 0.0459 61,410 1,035,227 5.93% Mixed Grass Many shrubs/high grass 954,879 1.0000 1.0000 1.00000 0.0459 43,829 1,035,227 4.23% 1,035,227 1,337,903 $1.0000 \ 1.0000$ 1.00000 0.0459 61,410 5.93% Mixed Grass Few shrubs/high grass 954,879 1.0000 1.0000 1.00000 0.0645 61,590 1,035,227 5.95% 1,035,227 571.855 1.0000 1.0000 1.00000 0.0645 36,885 3.56% Mixed Grass Few shrubs/ low grass 954,879 1.00000 0.0645 61,590 1,035,227 5.95% 1.0000 1.0000 1.0000 1.0000 571,855 1.00000 0.0645 36,885 1,035,227 3.56% 0.2575 Other Urban/Suburban 186,748 1.0000 1.0000 1.00000 48.088 1,035,227 4.65% 186,748 1.0000 1.0000 1.00000 0.2575 48,088 1,035,227 4.65% Other small roads 492,494 1.0000 1.0000 1.00000 0.0202 9,948 1,035,227 0.96% 492,494 1.0000 1.0000 1.00000 0.0202 9,948 1,035,227 0.96% Riverine Systems Wet meadow 1,172,512 1.0000 1.0000 1.00000 0.0600 70,351 1,035,227 6.80% 823,824 1.0000 1.0000 1.00000 0.0600 49,429 1,035,227 4.77% Riverine Systems Native riparian shrubland 11,582 1.0000 1.0000 1.00000 0.0600 695 1,035,227 0.07% 262,981 1.0000 1.0000 1.00000 0.0600 15,779 1,035,227 1.52% 20,303 1.0000 1.0000 1.00000 0.0600 1,218 1,035,227 0.12% Riverine Systems Riparian canopy - early successional w/o understor 20,303 1.0000 1.0000 1.00000 0.0600 1.218 1,035,227 0.12%20,303 1.00000 1,035,227 0.12% Riverine Systems Riparian canopy - early 1.0000 1.0000 0.0600 1.218 successional w/ understory 20,303 1.0000 1.0000 1.00000 0.0600 1,218 1,035,227 0.12% 1.00000 0.0457 1,035,227 0.35% Sand Sage 80.106 1.0000 1.0000 3.661 Low grass 248,256 1.0000 1.0000 1.00000 0.0457 11,345 1,035,227 1.10% 4.216 1.0000 1.0000 1.00000 0.0457 193 1.035.227 0.02% Sand Sage High grass 13,066 1.0000 1.0000 1.00000 0.0457 597 1,035,227 0.06%1.00000 1,035,227 0.72% Shortgrass Many shrubs/high grass 116,042 1.0000 1.0000 0.0641 7.438 139,251 1.0000 1.0000 1.00000 0.0641 8,926 1,035,227 0.86% 1.00000 0.0457 1,035,227 0.51% Shortgrass Many shrubs/low grass 116.042 1.0000 1.0000 5.303 139,251 1.0000 1.0000 1.00000 0.0457 6,364 1,035,227 0.61% 1.00000 0.51% Shortgrass Few shrubs/high grass 116,042 1.0000 1.0000 0.0457 5.303 1.035.227 92,834 $1.0000 \ 1.0000$ 1.00000 0.0457 4,243 1,035,227 0.41% 7,438 Shortgrass Few shrubs/low grass 116,042 1.0000 1.0000 1.00000 0.0641 1,035,227 0.72% 92,834 1.0000 1.0000 1.00000 5,951 1,035,227 0.57% 0.0641 **Tallgrass** Few shrubs/ low grass 204,687 1.0000 1.0000 1.00000 0.0215 4,401 1,035,227 0.43% 73,687 1.0000 1.0000 1.00000 1,584 1,035,227 0.0215 0.15% Tallgrass Many shrubs/high grass 204,687 1.0000 1.0000 1.00000 0.0153 3,132 1,035,227 0.30% 245,624 1.0000 1.0000 1.00000 0.0153 3.758 1.035.227 0.36% Tallgrass Many shrubs/low grass 204,687 1.0000 1.0000 1.00000 0.0153 3,132 1,035,227 0.30% 1.0000 1.0000 1.00000 1.035.227 245,624 0.0153 3.758 0.36% **Tallgrass** Few shrubs/high grass 204,687 1.0000 1.0000 1.00000 0.0215 4,401 1,035,227 0.43% 1,035,227 0.0215 5,457 253,812 1.0000 1.0000 1.00000 0.53% Summary for Breeding (27 records) 50.91% Pre-planning Sum 527,203

Post-planning Sum

592,796

57.25%

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
Association Name	Condition Name	Acres		Net Change
Cropland	Alfalfa	560,620	560,702	82
Cropland	Sod farm	1,808	1,651	-157
Cropland	Wheat	6,398,301	5,841,467	-556,834
Cropland	Corn	1,244,215	1,135,932	-108,283
Cropland	Hay	654,659	654,812	153
Cropland	Pasture	0	0	0
Cropland	Sunflowers	99,465	90,809	-8,656
Cropland	Soybeans	770,400	703,354	-67,046
Cropland	Peanuts	0	0	0
Cropland	Sorghum	2,256,947	2,060,529	-196,418
Cropland	Fallow	0	0	0
Cropland	Other	6,098,098	5,461,391	-636,707
CRP	Non-native	0	0	0
CRP	Native	1,406,629	2,782,489	1,375,860
Mixed Grass	PD town	9,959	9,959	0
Mixed Grass	Few shrubs/high grass	954,879	571,855	-383,024
Mixed Grass	Many shrubs/high grass	954,879	1,337,903	383,024
Mixed Grass	Many shrubs/low grass	954,879	1,337,903	383,024
Mixed Grass	Few shrubs/ low grass	954,879	571,855	-383,024
Other	Other	3,566	3,566	0
Other	small roads	492,494	492,494	0
Other	Urban/Suburban	186,748	186,748	0
Other	4-lane roads	16,361	16,361	0
Other Wetlands	Saline	12,877	12,875	-2
Other Wetlands	Emergent marsh	74,137	74,137	0
Other Wetlands	Moist-soil unit	349	21,360	21,011
Playa	Wet	2,280	2,280	0
Playa	Dry	21,532	21,532	0
Playa	Wet pit only	1,520	1,520	0
Reservoirs Lakes Ponds	Pit	3,937		
Reservoirs Lakes Ponds	Lagoon	3,273	3,273	0
Reservoirs Lakes Ponds	Freshwater lake	1,065	1,065	0
Reservoirs Lakes Ponds	Reservoir	96,455	96,455	0
Reservoirs Lakes Ponds	Stock pond	49,648	49,648	0
Riverine Systems	Unvegetated sandbar	8,312	8,312	0
Riverine Systems	River channel	53,686	53,686	0
Riverine Systems	Native riparian shrubland	11,582	262,981	251,399
Riverine Systems	Warmwater slough	0	0	0
Riverine Systems	Riparian canopy - early	20,303	20,303	0
Riverine Systems	Wet meadow	1,172,512	823,824	-348,688
Riverine Systems	Riparian canopy - late	13,490	43,603	30,113
Riverine Systems	Floodplain marsh	48,917	48,917	0
Riverine Systems	Riparian canopy - early	20,303	20,303	0
Riverine Systems	Exotic riparian shrubland	0	0	0
Riverine Systems	Riparian canopy - late	13,490	43,603	30,113
Sand Sage	Low grass	80,106	248,256	168,150
Sand Sage	High grass	4,216	13,066	8,850
Shortgrass	Many shrubs/low grass	116,042	139,251	23,209
Shortgrass	Few shrubs/high grass	116,042	92,834	-23,208
Shortgrass	Few shrubs/low grass	116,042	92,834	-23,208
Shortgrass	Many shrubs/high grass	116,042	139,251	23,209

	Sum	26 975 696	27 016 692	
Tallgrass	Many shrubs/low grass	204,687	245,624	40,937
Tallgrass	Few shrubs/ low grass	204,687	73,687	-131,000
Tallgrass	Few shrubs/high grass	204,687	253,812	49,125
Tallgrass	Many shrubs/high grass	204,687	245,624	40,937

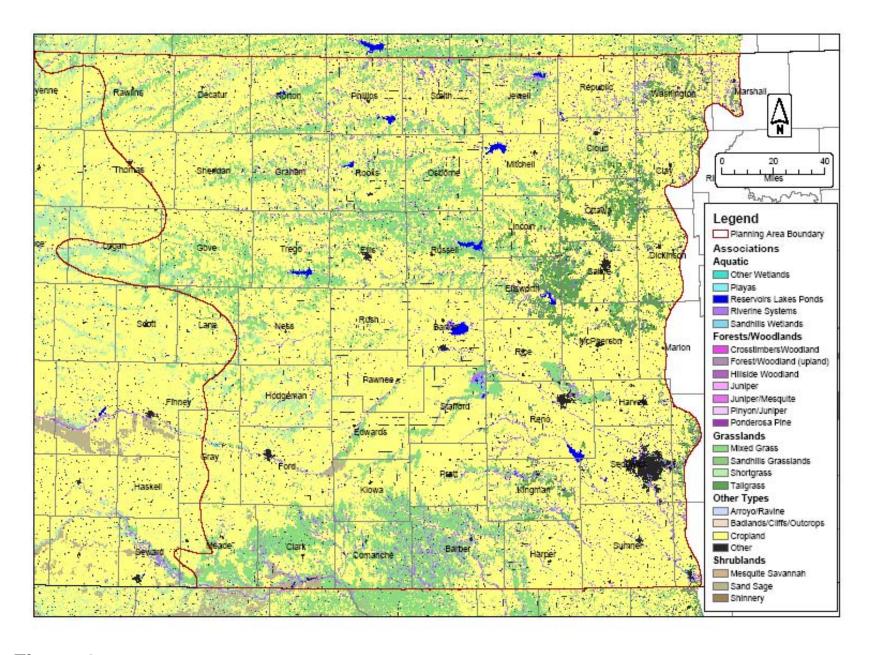


Figure 1. Bird habitat associations for the Central Mixed-grass Prairie Bird Conservation Region of Kansas.