Resources Directed at Benefiting Lesser Prairie-Chickens in Kansas (January 2006 – February 2007)

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Population and Harvest:

The Kansas Department of Wildlife and Parks (KDWP) estimated the 2006 breeding population of lesser prairie chickens (LPC) in the state at between 19,700 and 31,100. These estimates were derived through a procedure that integrates GAP habitat area estimates within the known range of the species in Kansas, GAP habitat areas on 15 existing survey routes, and survey results from the existing routes. The breeding population increase recorded in 2006 represented the third consecutive year of increase for LPC in Kansas. From this population, it was estimated that hunters harvested approximately 200 LPC during about 1,900 hunter-days in the 2006 season. Even if no increase for fall population is assumed, this represents a harvest rate between 0.6 and 1.0 percent.

Severe drought conditions during the spring and early summer of 2006 throughout most the LPC range in Kansas probably limited LPC reproduction, suggesting that diminished breeding populations will be detected in the 2007 surveys. These losses may have been exacerbated in the westernmost sections of the Kansas LPC range by deep snow cover that persisted through all of January and February 2007. However, most of the Kansas LPC range lies east of this snow-impacted area and this range could provide good reproductive conditions in 2007 due to the excellent soil-moisture conditions present this spring.

Programs and Practices Directly Benefiting LPC in Kansas:

(1) The Conservation Reserve Program (CRP) is certainly the single largest program that has been shown to positively affect LPC (Rodgers and Hoffman 2005). In the 2006 33rd signup, Kansas enrolled approximately 87,100 acres of new CRP contracts in the 31 counties where LPC are currently found in Kansas. Of this total, 22,700 acres were added in the 5 counties (FO,HG,ME,NS,SW) that constituted the Kansas LPC Conservation Priority Area (CPA). These additions brought the overall amount of CRP in these counties to 1.75 million acres, much of which is enrolled in Conservation Practice 25 (Rare and Declining Habitats) and is or will be seeded to mixtures favorable for LPC.

(2) In response to concerns expressed by KDWP, the Farm Service Agency (FSA) in Kansas mandated the removal of invasive trees on all CRP tracts statewide, including 1.75 million acres in the 31 counties where LPC are present. Of course, only some of these tracts had been impacted by tree invasion, but the tree removal associated with Reauthorization and Extension (REX) process likely improved habitat conditions on an estimated 200,000 to 400,000 acres of CRP stands in or near the LPC range.

(3) A coalition of Kansas state agencies and private organizations has worked to develop a Conservation Reserve Enhancement Program (CREP) proposal for the Upper Arkansas River basin. This CREP would enhance financial incentives available to encourage landowners in this basin to remove irrigated croplands from production and enroll them in the CRP. The ultimate aims of this effort would be to reduce groundwater consumption and restore streamflow in an

area where groundwater reserves are rapidly declining. The CREP would provide a transition of these fields back to permanent grasslands. In 2006, the Kansas legislature approved the use of up to $5 million as part of the 20% state matching funds needed for the CREP. This allocation was contingent upon the final approval of the CREP by the U.S. Department of Agriculture (USDA) and final release of the state funds by the 2007 Kansas legislature. The Upper Arkansas River CREP, should it become operational, could potentially increase LPC habitat availability on 100,000 acres in the basin, particularly on the sandy soils often favored by LPC. Edwards, Finney, Ford, Gray, Kearny, and Pawnee counties could be positively impacted by this CREP.

(4) New CRP Conservation Priority Areas (CPA) have been proposed by the Kansas FSA that include portions of the Kansas LPC range. Included in proposed Kansas CPA8 are Gove, Logan, Lane, Scott, and Trego counties in the northern portion of the LPC range. Ellis and part of Rush counties are in CPA7 which takes in a small area of the most northeastern extremes of the LPC range. Whenever another general CRP signup next occurs, CRP offers from these areas will receive additional Environmental Benefit Index points, increasing the probability of contract acceptance.

(5) As an integral part of the development of new electrical power plants proposed for the current location of the Sunflower Power Corporation's facility near Holcomb, Wheatland Electric (an associated company) has purchased 48 mi^2 of center-pivot-irrigated cropland to the southwest of the facility. Because the area lies within an Intensive Groundwater Use Control Area (IGUCA), no additional water rights can be granted for new groundwater pumping. As a result, these purchases were necessary to obtain sufficient water resources to operate the new facilities. The deep sandy soils where these purchases have occurred dictates that these lands cannot be farmed with dryland cropping practices. Of necessity, these sandy croplands must be restored to grasslands. Wheatland Electric has recently undertaken a 5-year process of restoring these irrigated crop fields to grassland. Through consultation with grassland and wildlife professionals from Sharp Brother's seed company, Pheasants Forever, The Nature Conservancy, and KDWP, Wheatland has taken the approach that these areas will be restored primarily using native species of grasses and forbs, though some alfalfa may also be included in the seeding mixtures. By all indications, Wheatland Electric is doing a first rate job in this restoration and has plans for sound long-term management. Over the last year (2006), Wheatland has spent about $1 million on the restoration alone, exclusive of the land purchases. Currently, there are 47 center pivot circles in various stages of restoration. While the new power plants will negatively impact 2 to 3 mi^2 of sandsage prairie, eliminating any further use of these lands by LPC, the expected benefits to LPC on the restored areas should greatly outweigh these losses.

(6) Working primarily through the Comanche Pool Prairie Resource Foundation (Pool), the U.S. Fish & Wildlife Service's Partners for Wildlife (PFW) program has removed invasive trees (primarily eastern red cedar) from 23,388 acres of grassland in the Red Hills region of southern Kansas in the past year. In 2006, the Pool obtained private stewardship grants totaling $123,317 for tree removal. PFW biologist Greg Kramos has spent 65 days coordinating this work over the past year. Since this work was first begun in 1999, a total of $1,875,600 has been spent reclaiming almost 120,000 acres.

(7) Over the past year, KDWP biologists and biotechs have spent about 190 hours in developing management plans for about 53,000 acres of grassland within the LPC range. Through joint KDWP/NRCS administration of the federal Wildlife Habitat Incentive Program, KDWP biologists have removed about 1,000 acres of invasive eastern red cedars positively affecting roughly

3,000–4,000 acres of grassland within the LPC range. This latter effort involved about 100 hours of biologist time and about 500 hours of temporary help.

(8) In 2006, the KDWP was granted $500,000 in operational funding, in addition to 180,000 for staff, from the USFWS to administer a Landowner Incentive Program (LIP) aimed at conservation of high-priority wildlife habitats. The species identified as high priority include the LPC. This funding will be preferentially targeted toward 4 ecoregions which, taken together, are essentially identical to the Kansas LPC range. This work will focus on removing invading trees from grasslands, pasture/grazing improvements, and native grass seedings.

(9) Biologists with the KDWP have spent about 100 hours in 2006 working with developers and/or federal regulators on such issues as power line routes and the siting of wind power facilities in an effort to minimize negative impacts that could occur to LPC, other wildlife, or their habitats.

Educational Activities:

(1) The KDWP, in cooperation with state wildlife agencies in New Mexico, Texas, Oklahoma, and Colorado, produced a video on the conservation needs of LPC in 2005. A total of 4,000 copies (3,400 DVD's and 600 VHS cassettes) of this video were reproduced in 2006 at a cost of about $4,000, funded primarily by grants from the Playa Lakes Joint Venture and the Grasslans Foundation. In Kansas, 1,050 copies of the video have been distributed in or near the state's LPC range through a variety of channels including: 31Conservation Districts, the Finnup Conservation Education Center in Garden City, KDWP biologists and biotechs, Kansas State University Extension, the Comanche Pool Prairie Resource Foundation, and through many individual requests. In addition, the video was provided to USDA officials in the FSA (regionally, Kansas state office, Washington DC), the Association of Fish & Wildlife Agencies, the Midwest Private Lands Working Group, and Fort Hays State University. About 45 hours were spent by the coordinating biologist in distributing this video.

(2) An article on the Patch-Burn Grazing system was written in January 2007 and published in Kansas Wildlife and Parks magazine in March 2007. While much of this article was geared toward the Flint Hills ecoregion, the PBG system is being applied on a trial basis within the LPC range in Kansas. About 35 hours were spent researching, writing, and revising this article.

(3) A one-day tour of CP25 (Rare & Declining Habitats) CRP stands was conducted for key USDA officials (FSA & NRCS) in northern portions of the Kansas LPC range in August 2006. Emphasis was placed on using appropriate seeding mixtures most beneficial to grassland birds. About 30 hours were spent by the coordinating biologist in organizing and conducting this tour.

Research:

No research specifically on LPC has been conducted in Kansas over the past year. However, a large study is being conducted by researchers at Kansas State University on the effects of wind power development on greater prairie chickens. Funding for this study is being provided by several wind power developers, the KDWP, and the National Fish & Wildlife Foundation. Limited field work was begun in 2006, but full-scale field work is underway at this writing. While this study is not specifically directed at LPC, it will have significant implications for the species.

Species Status, Trends, and Potential Threats:

Lesser prairie chicken populations appear to generally stable at this time in Kansas, weather-related annual fluctuations notwithstanding. Populations have recovered fully from the rangewide decline that occurred during the 1990's. Range expansion associated with the extensive CRP grasslands present in western Kansas appears to have stabilized.

At this time, potential new threats to the species include the possibility that significant losses of CRP grasslands could occur as a result of high grain prices and proposed early termination of CRP contracts. This is largely being driven by a new national emphasis on production of biofuels (see attached biofuels assessment for the LPC range). Inappropriate siting of wind power facilities and/or electrical transmission lines remains a threat. However, wind farms currently located in western Kansas are located on appropriate cropland sites and at least some wind power developers appear sensitive to concerns over siting such facilities in LPC occupied range. The federal government's Western Area Power Administration has been made aware of concerns relative to directing power lines away from occupied LPC habitats.

Literature:

Rodgers, R. D. and R. W. Hoffman. 2005. Prairie Grouse Population Response to Conservation Reserve Grasslands: An Overview. Pgs. 120-128 *in* A. W. Allen and M. W. Vandever, eds. The Conservation Reserve Program–Planting for the Future: Procedings of the National Conference, Fort Collins, Colorado, June 6-9, 2004. U. S. Geological Survey, Biological Resources Division, Scientific Investigation Report 2005-5145. 248 pp.