

FOREST
GUARDIANS



**LESSER PRAIRIE-CHICKEN:
THE SKY REALLY IS FALLING**

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**REPORT PREPARED BY:
NICOLE J. ROSMARINO, PH.D
CONSERVATION DIRECTOR
FOREST GUARDIANS**

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Lesser Prairie-Chicken Population Declines 1998-2004

The U.S. Fish and Wildlife Service (Service) determined that the lesser prairie-chicken warranted Endangered Species Act listing in 1998, but was precluded from actual listing by higher priority actions.¹ The prairie-chicken has been a candidate for Endangered Species Act listing ever since. Scientific evidence demonstrates that, since the warranted but precluded (WBP) finding by the Service, the species has continued to decline throughout its range and faces increasing threats to its survival. Downward population trends have been documented throughout its five-state range in Colorado, New Mexico, Oklahoma, Texas, and Kansas. In addition, lesser prairie chickens face new threats such as hybridization with greater prairie-chickens and habitat destruction from wind farms. The threats posed by grazing, predation, drought, hunting, and oil and gas exploration have increased throughout the range of the prairie-chicken since 1998.

Colorado

Since the Service made its WBP finding in 1998, there has been new scientific evidence showing that populations in Colorado continue to decline—evidence that the Service has ignored. While historically present in six counties in Colorado, the lesser prairie-chicken’s current range now comprises only four counties: Baca, Kiowa, Cheyenne, and Prowers. Populations within Kiowa and Cheyenne Counties are estimated to be less than 100 individuals and are isolated from other populations in Colorado and adjacent states.² From 1998 through 2004, no more than six active leks were reported from either Kiowa or Cheyenne County in any given year.³

From 1998-2004, total population counts of lesser prairie-chickens in Colorado have ranged from a low of 171 in 2002 to a high of 317 in 2000. There is no clear population trend from these data, however, given the inconsistency of survey effort. What is clear is the very low total population level being detected in the state, with an average total population count across this seven year period amounting to a mere 251.3 birds throughout the current range of this species in Colorado.⁴

Colorado Division of Wildlife (CDOW) reports within this period have clearly underscored a crisis for the birds in the state:

(2002 Report) There is no doubt the number of lesser prairie-chickens in Colorado is significantly less this year than that of the past several years. Reduced count effort and reduced area surveyed cannot alone explain

¹63 Fed. Reg. 31400-31406

²Giesen, Kenneth M. 2000. “Population status and management of lesser prairie-chicken in Colorado.” The Prairie Naturalist 32(3): 137-148.

³Yost, Jeffrey A. 2004. Colorado Lesser Prairie-Chicken Breeding Surveys for 1998- 2004. Reports of the Colorado Division of Wildlife.

⁴Id.

away the reduced number of lesser prairie-chicken’s observed this year. The obvious explanation is the lack of good nesting, brooding, and escape cover as a result of the prolonged and increasingly severe drought Colorado has been experiencing for the past several years. Conditions on the plains of southeast Colorado are similar to, if not worse than, the dust bowl days of the 1930’s. Soil moisture levels are the lowest ever recorded, vegetative cover in many areas is reduced to residual cover from last summer, and insect populations are very much reduced over the majority of LPC range in Colorado.⁵

(2003 Report) Although there was a significant increase in search effort put forth in 2003 the number of Lesser Prairie Chickens counted did not increase correspondingly. Several factors contribute to this count. First there were no counts done in Cheyenne County this year and approximately one half the leks active in Kiowa County in 2002 were not surveyed in 2003 due to time constraints. Second the spring of 2002 was exceptionally dry and windy presumably leading to reduced recruitment of new birds into the 2003 population. Colorado has been experiencing one of the most severe droughts on record.⁶

The dire conditions discussed at the state level are borne out in county-level data. More leks have been found in Baca County from 1998-2004 than any of the other three counties in Colorado in which the lesser prairie-chicken is currently found. CDOW census data indicate that, in Baca County, only seven lek sites have been surveyed every year between 1998-2004 (Table 1).

Table 1. Colorado: population counts for leks in Baca County on which there is data from 1998-2004⁷

	Lek #2	Lek #3	Lek #5	Lek #6	Lek #7	Lek #28	Lek #40	Total across lek sites
1998	8	7	21	7	8	9	13	73
1999	10	8	18	16	9	9	4	74
2000	9	6	27	9	13	9	10	83
2001	6	2	10	13	10	11	8	60
2002	6	1	10	7	6	4	7	41
2003	14	4	8	6	7	8	4	51
2004	13	4	4	7	4	3	7	42
Seven-year mean	9.4	4.6	14	9.3	8.1	7.6	7.6	60.6
Five-year mean	7.8	4.8	17.2	10.4	9.2	8.4	8.4	66.2

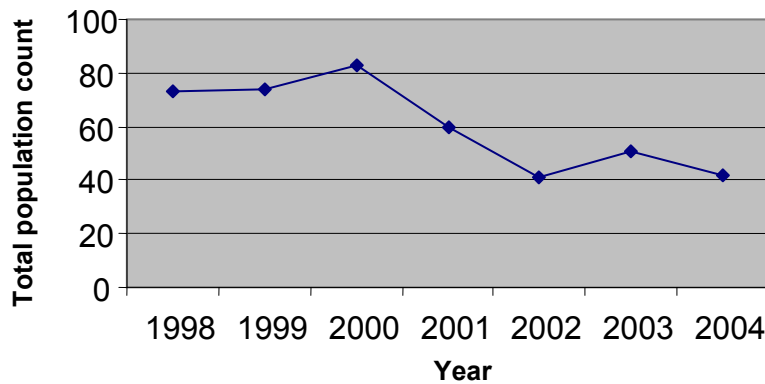
⁵See Colorado Lesser Prairie-Chicken Breeding Survey, 2002, emphasis added.

⁶See Colorado Lesser Prairie-Chicken Breeding Survey, 2003, emphasis added.

⁷Source data: annual census data obtained from the Colorado Division of Wildlife (Yost, Jeffrey A. 2004. Colorado Lesser Prairie-Chicken Breeding Surveys for 1998- 2004. Reports of the Colorado Division of Wildlife.).

Census data for these seven leks indicate that: 1) for six of the seven leks, current populations are lower than their seven-year (1998-2004) mean population (noted in bold); and 2) the five-year mean (1998-2002) across these seven lek sites was 66.2, which is 10% greater than the seven-year mean (1998-2004) across these same lek sites: 60.6. In addition, the total population count across these seven leks is graphed below, demonstrating a significant decline from 1998-2004 (Figure 1).⁸

Figure 1. Colorado: total population across the only seven leks surveyed every year from 1998-2004 in Baca County



In the other county in Colorado with a substantial lesser prairie-chicken population, Prowers County, only four lek sites were consistently mapped from 1998-2002, and only two lek sites were consistently surveyed from 1998-2004. Of the four sites surveyed from 1998-2002, the populations in 2002 were lower than their five-year means across this period (Table 2).

Table 2. Colorado: population counts for leks in Prowers County on which there is data from 1998-2002.⁹

	Lek #7	Lek #8	Lek #9	Lek #17	Total across lek sites
1998	13	21	27	16	77
1999	9	30	22	18	79
2000	17	21	16	21	75
2001	12	19	22	5	58
2002	4	14	18	4	40
Five-year mean	11	21	21	12.8	65.8

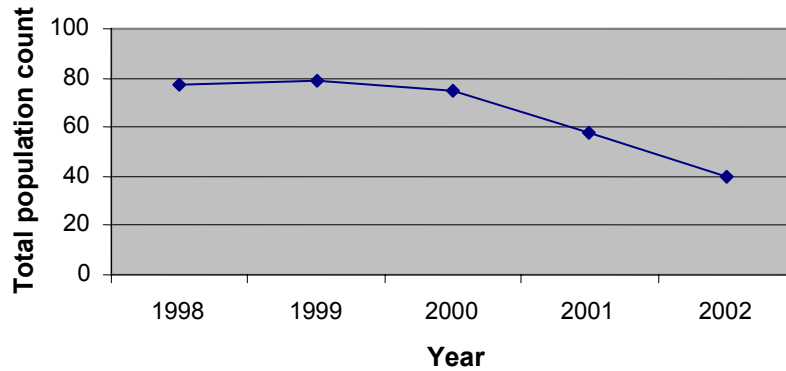
In addition, the total population count across these lek sites declined by 48%

⁸Id.

⁹Id.

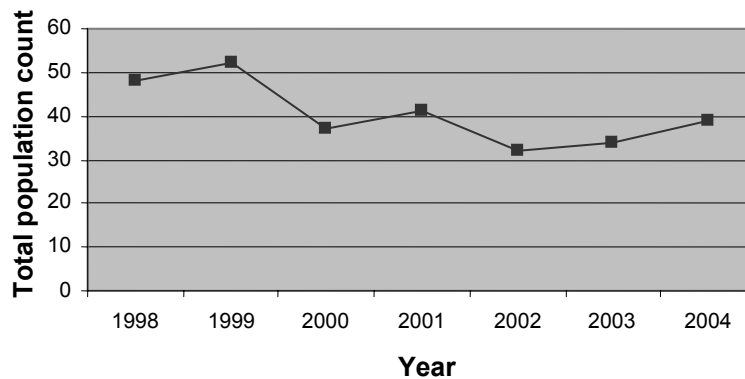
during 1998-2002, from 77 to 40 (Table 2 & Figure 2).¹⁰

Figure 2. Colorado: total population across the only four lek sites consistently surveyed from 1998-2002 in Prowers County



Only two lek sites have been annually surveyed from 1998-2004. The aggregate count of these two leks has generally declined during this period (Figure 3).¹¹

Figure 3. Colorado: total population across the only two lek sites consistently surveyed from 1998-2004 in Prowers County



This scientific evidence shows that the Colorado population of lesser prairie-chicken is facing extirpation of outlying isolates and alarming reduction in densities on core areas, which constitute the last strongholds of the species in Colorado. Yet, in making its annual WBP findings for the lesser prairie chicken, the Service has ignored this evidence.

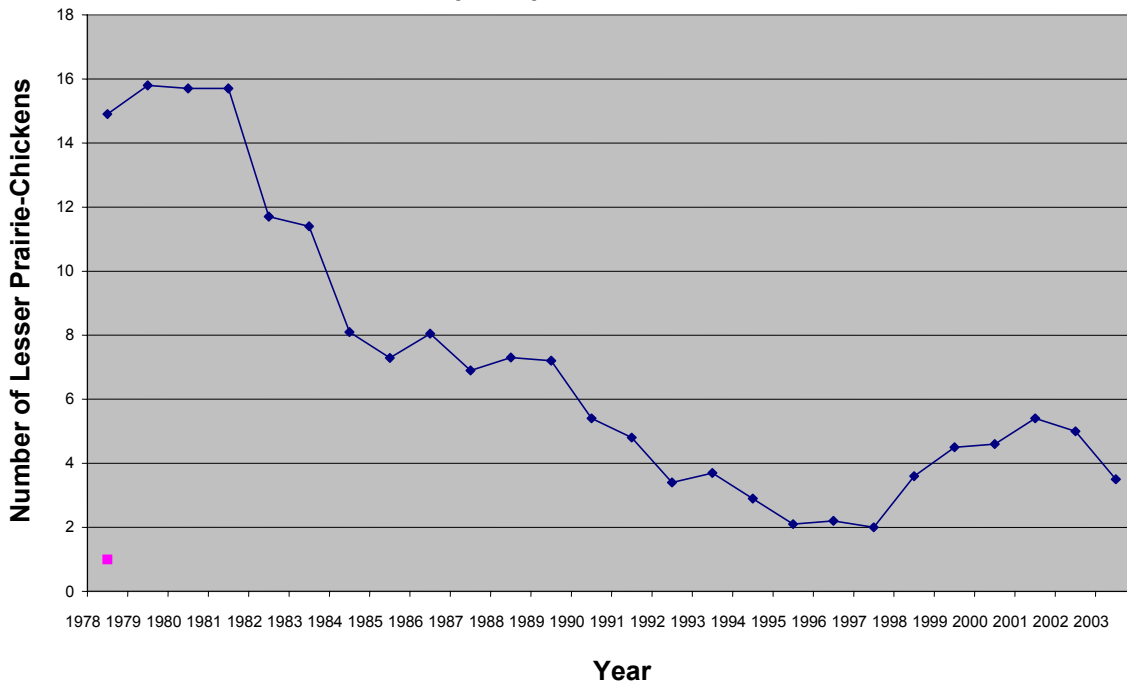
¹⁰Id.

¹¹Id.

Kansas

The Service has also ignored evidence that populations in Kansas have continued to decline, and recent evidence suggesting that the resurgence in recent years has not been sustained. Lesser prairie-chickens occupy 31 of 39 counties they historically occupied in Kansas. From 1964-1998, there has been a downward population trend (according to roadside lek surveys).¹² In addition, lek survey data from Kansas Department of Wildlife and Parks demonstrates a clear decline in the average number of birds per square mile from the 1970s to the present (Figure 4), and statistically significant declines in both 2002 and 2003.¹³

Figure 4. Kansas: Average Number of Lesser Prairie-Chickens per Square Mile



Low juvenile survival seems to be the cause of these declines. In a study conducted in 2000-2003 in southwestern Kansas, juvenile survival was only 17.7%. Survival rates from hatch to 31 March the following year were only 11%. According to the study, if all other vital rates (nest success, brood survival, and mortality) were to

¹²Jensen, William E., Douglas A. Robinson, Jr., and Roger D. Applegate. 2000. “Distribution and population trend of lesser prairie-chicken in Kansas.” *The Prairie Naturalist* 32(3):169-176.

¹³Source data: Kansas Department of Wildlife and Parks annual census data (Rodgers, Randy. 2000. “Prairie chicken lek survey 2000.” Performance report statewide wildlife research and surveys, Kansas Department of Wildlife and Parks; Rodgers, Randy. 2001. “Prairie chicken lek survey 2001.” Performance report statewide wildlife research and surveys, Kansas Department of Wildlife and Parks; Rodgers, Randy. 2002. “Prairie chicken lek survey 2002.” Performance report statewide wildlife research and surveys, Kansas Department of Wildlife and Parks; Rodgers, Randy. 2003. “Prairie chicken lek survey 2003.” Performance report statewide wildlife research and surveys, Kansas Department of Wildlife and Parks).

remain the same, juvenile survival rates must be increased from 11% to 27% for population stability. Overall nest success would need to be increased from 26% (documented in this study) to 65% just for population stability (i.e., recovery would require higher rates).¹⁴ In other recent research, a 2000 study reported juvenile survival rates of only 19%,¹⁵ and a 2003 thesis concluded that “...efforts to increase nesting success and chick survival are paramount.”¹⁶

Since 1998, scientists have identified a new threat to the lesser prairie-chicken— hybridization with greater prairie-chickens. Scientists recently reported on hybridization between lesser and greater prairie-chickens in a 250,000 ha area in western Kansas.¹⁷ Of the 96 lek sites observed in the study, 52 were exclusively inhabited by greater prairie-chickens, 17 contained only lesser prairie-chickens, and 27 lek sites contained males of both species. Twelve hybrid birds were located on nine lek sites. The researchers speculate that hybridization between greater and lesser prairie-chickens may be the result of human land uses, which attract both species to the same areas. Non-native flora on Conservation Reserve Program lands can exacerbate this problem. Hybridization must be considered a new threat to the lesser prairie-chicken and is one more reason to expeditiously list the lesser prairie-chicken under the ESA.

Another threat to lesser prairie-chickens in Kansas and other states is loss of habitat and disturbance due to wind farms. Indeed, the Service recommended in 2003 that wind turbines not be placed within 5 miles of known prairie grouse leks. The Service underscored in 2004 that this was a voluntary guidance, despite the biological threat posed by wind farms in lesser prairie-chicken habitat.¹⁸

Continued threats to the species in Kansas are oil and gas development, habitat degradation, and hunting. On the Cimarron National Grassland in southwest Kansas, a recent report discussed avoidance by lesser prairie-chickens of oil and gas structures and potential disturbance from noise generated by oil and gas machinery.¹⁹ Yet, recent lease

¹⁴Pittman, James C. 2003. “Lesser prairie-chicken nest site selection and nest success, juvenile gender determination and growth, and juvenile survival and dispersal in southwestern Kansas.” M.S. Thesis, Kansas State University, June 2003.

¹⁵Jamison, Brent E. 2000. “Lesser prairie-chicken chick survival, adult survival, and habitat selection and movement of males in fragmented rangelands of southwestern Kansas.” M.S. Thesis, Kansas State University.

¹⁶Hagen, Christian A. 2003. “A demographic analysis of lesser prairie-chicken populations in southwestern Kansas: survival, population viability and habitat use.” Ph.D. Thesis, Kansas State University.

¹⁷Bain, Matthew R., and Greg H. Farley. 2002. “Display by Apparent Hybrid Prairie-Chickens in a Zone of Geographic Overlap.” *The Condor* 104:683-687.

¹⁸Manville, A.M., II. 2004. “Prairie grouse leks and wind turbines: U.S. Fish and Wildlife Service justification for a 5-mile buffer from leks; additional grassland songbird recommendations.” Division of Migratory Bird Management, USFWS, Arlington, VA, peer-reviewed briefing paper. 17 pp.

¹⁹Elson, Mike. 2000. “Movements and habitat selection of lesser prairie-chickens on Cimarron National Grassland.” Report to USDA Forest Service and Kansas Dept. of Wildlife and Parks. November 2000.

sales by the U.S. Bureau of Land Management have included parcels on the Cimarron with potential lesser prairie-chicken habitat.²⁰ A 2003 doctoral dissertation also documented lesser prairie-chicken avoidance of human activity and structures and suggested that, “Future impact assessments and conservation plans should consider the construction or presence of anthropogenic features as a potential detriment to habitat suitability for lesser prairie-chickens.” That study reported that the majority of mortality was due to predation (which is exacerbated by habitat degradation), powerline collisions, and hunting.²¹ Despite the lesser prairie-chicken’s ESA candidacy, hunting of the species is still legal in Kansas, with the annual kill from 1990-2001 averaging 456 birds.²² Jensen et al. (2000) note the need to restore sand sagebrush in Kansas to benefit lesser prairie-chickens. Walker (2000) similarly recommends conservation of sand sagebrush in Kansas to facilitate prairie chicken recovery, warning against the destruction or overgrazing of this habitat.²³

Despite the mounting evidence that lesser prairie-chickens are faltering in their only remaining stronghold, Kansas, the Service is ignoring this evidence in recycling warranted but precluded petition findings year after year for this species, and failing to provide statutory protection.

New Mexico

Once abundant throughout their range in eastern New Mexico, the lesser prairie-chicken has been extirpated from 56% of its former range in the state and persists only as sparse and scattered populations in another 28% of that range. The core of the remaining populations occupies only 16% of its former range.²⁴ The sparse and scattered populations of prairie-chickens in New Mexico are more vulnerable to extinction from genetic or environmental factors.²⁵

Pittman (2003) also documented prairie-chicken avoidance of oil and gas structures and buildings.

²⁰Lease Sale Notices are viewable at www.nm.blm.gov. Forest Guardians has protested the lease of these parcels, due to the perils oil and gas development presents to lesser prairie-chickens.

²¹Hagen 2003.

²²Source data: annual harvest reports for Kansas Department of Wildlife and Parks.

²³Walker, Thomas L. Jr. 2000. “Final report: movements and productivity of lesser prairie chickens in southwestern Kansas.” Report to Kansas Department of Wildlife and Parks. July 1, 2000.

²⁴Bailey, J.A. and S. Williams III. 2000. “Status of the Lesser Prairie-Chicken in New Mexico, 1999.” *The Prairie Naturalist* 32(3): 157-168; and Bailey, J.A. 2002. “Status of the Lesser Prairie-Chicken in southeast New Mexico and southeast Chaves County, 2001.” Unpublished report, at 5, Santa Fe, NM.

²⁵Bailey and Williams 2000.

The New Mexico populations of lesser prairie-chicken are thought to have increased in numbers during the 1980s, before declining to all time lows in the 1990s.²⁶ The New Mexico Department of Game and Fish (“NMDGF”) surveyed hunters to estimate the numbers of birds harvested from 1983-1993 and found that the number of harvested birds declined sharply from a high of 4,000 in 1988 to a low of 244 birds in 1993.²⁷

Survey results from the U.S. Bureau of Land Management (“BLM”) Caprock Wildlife Area by both BLM and New Mexico Natural Heritage Program biologists have shown that lesser prairie-chicken numbers in this management area have declined from population counts recorded in the 1971-1981 period. Morrissey reported that the estimated population within the Caprock Wildlife Area declined from 2,600 in 1983 to 935 by 1995.²⁸ Recent data collected within the Caprock Wildlife Area north of Highway 380 indicate that the populations in this area may have stabilized, with active leks/lek site visited being 0.18 in 2000, 0.25 in 2001 and 0.26 in 2002.²⁹ Data from the Roswell Field Office for 2002 also supports this conclusion. BLM personnel surveyed 34 active leks with an estimated 365 birds. The number of active leks in the period 1999-2002 increased from 16-34.³⁰ This trend of population stabilization is encouraging, but the numbers are still far below the population levels of the 1970’s, a period with comparable moisture.

Additional survey data from BLM biologists collected in west-central Lea County on lands managed by the Carlsbad Field Office (“CFO”) during the period 1985-1998 have shown dramatic declines in lesser prairie-chicken populations. These surveys reported a high of 160 birds on 20 leks in 1987, a figure which by 1998 had declined to only six birds on one active lek and by 2001 had declined to only two birds on one active lek. CFO personnel reported one active lek in 2002 with seven males, northeast of Eunice.³¹ The CFO personnel also audibly detected lesser prairie-chickens near an historic lek site in 2002.³²

²⁶Bailey, J.A. 1999. “Status and Trend of the Lesser Prairie-Chicken in New Mexico and Recommendation to List the Species as Threatened under the New Mexico Wildlife Conservation Act.” Report to the New Mexico Department of Game and Fish. Santa Fe, NM; and Bailey and Williams 2000.

²⁷Morrissey, M. 1995. “Petition for a rule to list the lesser prairie chicken, Tympanuchus pallidicinctus as “threatened” within its known historic range under the Endangered Species Act, 16 U.S.C. § 1531 et seq. (1973) as amended.” Biodiversity Legal Foundation. Report to the Office of Endangered Species, Fish and Wildlife Service, United States Department of the Interior; and Bailey and Williams 2000.

²⁸Morrissey 1995.

²⁹J. Bailey, personal communication.

³⁰Davis, D. 2002. “Survey for Active Lesser Prairie-Chicken Leks: Spring 2002.” Federal Aid Report W-104-R-42. New Mexico Department of Game and Fish, Santa Fe, NM.

³¹Davis 2002.

³²Id.

In 2004, the BLM documented two active booming grounds in the CFO.³³ Agency staff noted noise from unmuffled pump jacks and compressor stations. They further reported that, “During the survey, the compressor engine shut off. Moments later, LPC [lesser prairie-chicken] began vocalizing. It was the first time since 1988 that LPC were recorded being in that area.”³⁴ We suggest that, with the continual din of compressors in the lesser prairie-chicken’s range in southeastern New Mexico, female lesser prairie-chickens are as unlikely to hear male booming as the humans who are surveying for these birds. This noise and disturbance therefore constitutes an important biological threat to the species, by severely interfering with their breeding.

Data reporting reproductive success supports the conclusions of survey data suggesting that prairie-chicken population trends are declining. Age ratios (juveniles/hen) for the period 1958-1968 averaged 3.7 juveniles/hen, but had declined to an average of 0.65 juveniles/hen in 1989 and 0.59 juveniles/hen in 1995.³⁵

Current data indicate that lesser prairie-chicken abundance is most stable on prairie-chicken areas (“PCAs”) managed by the NMDGF. Surveys of 10 of these sites have reported low but stable or increasing population numbers for the years 1996-1998. Active numbers of leks in these areas increased from 11 in 1996 to 32 in 1998, as did the estimated number of birds (29 in 1996 to 181 in 1998).³⁶ The most recent data from the PCAs show this trend continuing. Survey data from 2002 found a total of 132 active leks, with an estimated 533 birds.³⁷ In contrast, NMDGF surveys on randomly located roadside routes in east-central New Mexico during 1998-2002 suggest declining overall populations, although the trend is not statistically significant.³⁸ This evidence suggests the effectiveness of grazing exclosures in affecting the recovery of lesser prairie-chicken populations. However, the PCAs in this area are small and isolated patches of habitat totaling just 87.9 sq. km.

Based on these data, it is evident that the lesser prairie-chicken has been extirpated from its historic range in northern New Mexico and nearly extirpated from its

³³Ty Allen, Biological Technician, BLM-CFO, memo to Noe Gonzalez, Area Field Manager, BLM-CFO, dated July 29, 2004.

³⁴*Id.* at p. 3.

³⁵Bailey 1999.

³⁶Johnson, K., Smith, H., and K. Score. 1998. “Lesser prairie chicken surveys: New Mexico Department of Game and Fish prairie chicken management areas radio telemetry study: Caprock Wildlife Management Area.” at 18, Unpublished Report. New Mexico Natural Heritage Program, Department of Biology, University of New Mexico.

³⁷Davis 2002.

³⁸*Id.*

historic range south of 33° N. Prairie-chickens persist in sparse and isolated populations in Curry and north Roosevelt County and in southeast Chaves County. Thus the remaining “core” populations of lesser prairie-chicken in New Mexico occupy only 16% of the species’ historic range, and are found within south Roosevelt and north Lea counties as well as east-central Chaves County, on private lands, BLM lands (including part of the Caprock Wildlife Area) and NMDGF PCAs.³⁹

As in other states, decline of lesser prairie-chickens in New Mexico can be traced to compromised habitat. Bailey et al. (2000) have found that the majority of areas surveyed in east-central and se NM have poor habitat (4% good potential nesting habitat, 16% fair, and 80% poor or zero potential).⁴⁰ These researchers noted, “the preponderance of poor lesser prairie-chicken nesting habitat observed in our study supported a hypothesis that lack of quality nesting habitat presently limits lesser prairie-chicken numbers and has been involved in the historic and recent declines of the species in New Mexico.”⁴¹ Bailey and Williams (2000) report threats to lesser prairie-chickens in the state from livestock grazing of nesting habitat (particularly given that livestock grazing rates are not being significantly decreased during drought), and loss of sagebrush and shinnery oak habitat.

Oil and gas is a major factor harming lesser prairie-chicken habitat in New Mexico.⁴² In 1988, the BLM’s Carlsbad Field Office identified five townships in its Resource Management Plan (“RMP”) where stipulations regarding lesser prairie-chickens were in effect. In 1997, an amendment to the RMP authorized prairie-chicken stipulations in all lesser prairie-chicken habitat. These stipulations came in the form of Surface Use and Occupancy Restrictions (“SUORs”), which were a condition for Approvals for Permits to Drill (“APDs”). These SUORs state that no drilling or 3-D geophysical exploration is allowed during the period of March 15 to June 15, while maintenance that requires human presence such as non 3-D exploration, pipeline, road and well pad construction is not allowed from 3am-9am during that period. However, “normal vehicle use” during these times is allowed. Operators were allowed to request exceptions from the lesser prairie-chicken stipulations on an individual basis, and these exceptions were granted if the CFO did not find any active lek sites within two miles of the area for which the exception was requested.

In 1999, no exceptions to prairie-chicken waivers were granted because of the 1998 WBP determination for the lesser prairie-chicken and because of low rainfall over much of the prairie-chicken’s range. However, in 2000, some 88 exceptions were granted, with approximately 7-10 additional exceptions with incomplete information. Of

³⁹Bailey, J.A. 2002. “Status of the Lesser Prairie-Chicken in southeast New Mexico and southeast Chaves County, 2001.” at 5, Unpublished report, Santa Fe, NM.

⁴⁰Bailey, James A., Jon Klingel, and Charles A. Davis. 2000. “Status of nesting habitat for lesser prairie-chicken in New Mexico.” *The Prairie Naturalist* 32(3):149-156.

⁴¹*Id.* at p. 154.

⁴²Bailey and Williams (2000).

these 88, 71 were exceptions to the drilling requirement for new wells, while 17 were exceptions to the 3am-9am restrictions on maintenance for existing wells. Further, in 2001, 237 exceptions were granted, again with a few additional exceptions with incomplete information. Of these 237, 134 were exceptions to the drilling requirements for new wells, while 103 were exceptions to the 3am-9am restrictions on maintenance for existing wells.

The protections for lesser prairie-chicken’s from oil and gas in the Carlsbad area has further disintegrated as a result of new guidelines issued by the Carlsbad Field Office on March 11, 2002, wherein certain areas were designated “blanket” exception areas (See attached maps). In these areas, companies no longer have to request individual exceptions but can operate at will, with the condition that if active leks were found, a contingency plan that could include shutdown of the well go into effect. This policy has recently been suspended, but there is no guarantee that it has been terminated.

In 2002, 92 exceptions to lesser prairie-chicken stipulations were granted, 91 of which were exceptions to the drilling requirement for new wells, while one was an exception to the 3am-9am restriction on maintenance for existing wells. This reduction in the number of exceptions appears to be linked to the introduction of blanket exception areas.

For nearly all the exceptions we have reviewed, the lesser prairie-chicken protective stipulations were suspended for the entire booming period. There are 10 instances in which an extension was granted for a period of two days to a week past the March 15 cutoff date, for drilling that had already been started and was not completed by March 15. In cases where wells were within two miles of a historical lek, no exception was granted until surveys of the historical lek at the beginning of the booming season (March/April) were conducted, and the lek was determined to be inactive.

In addition to the waiving of stipulations which were supposed to safeguard lesser prairie-chickens in southeastern New Mexico, the Bureau of Land Management continues to lease prairie-chicken habitat in the state. For example, in its October 2004 lease sale, the BLM offered 20 parcels which contained lesser prairie-chicken habitat. These parcels totaled 8,335 acres. In every one of the past five quarterly lease sales, the agency has leased lesser prairie-chicken habitat for oil and gas drilling.⁴³ Since April 2001, the Bureau of Land Management has leased nearly 500,000 acres in New Mexico for drilling, much of which is located in the southeastern part of the state, within lesser prairie-chicken range.⁴⁴

While the New Mexico State Land Office recently announced the withdrawal of 109,000 acres of lesser prairie-chicken habitat from oil and gas leasing, 59,000 acres of

⁴³Lease Sale Notices are viewable at www.nm.blm.gov. Forest Guardians has protested the lease of these parcels, due to the perils oil and gas development presents to lesser prairie-chickens.

⁴⁴BLM leasing data on file with Forest Guardians.

the “withdrawn” area are currently leased and 30,000 acres of that subset is in production.⁴⁵ Moreover, since January 2000, the State Land Office has leased 1.5 million acres for oil and gas production, much of which is within the lesser prairie-chicken’s range.⁴⁶

The overall picture in New Mexico for the prairie-chicken is bleak. The little remains of lesser prairie-chicken’s historic range in the state continues to be assaulted by land uses, such as oil and gas and livestock grazing, that are harming lesser prairie-chicken reproduction and threatening the species’ very survival. The Service is ignoring this evidence in recycling warranted but precluded petition findings year after year, and failing to provide statutory protection for this species.

Oklahoma

In 2002, the Oklahoma Department of Wildlife Conservation (“ODWC”) reported that,

A summary of data collected to date illustrates an alarming downward trend in population indices in all counties. These data suggest not only the necessity of continuing to monitor prairie chicken populations, but also suggest a need to refine prairie chicken management objectives on a range-wide basis.⁴⁷

ODWC has stated that populations in Oklahoma have declined more consistently than in Texas or New Mexico.⁴⁸

The most recent lesser prairie-chicken monitoring report from ODWC documented prairie-chickens on only six of ten historic lek sites. Only one of those six lek sites contained more than ten birds. The total count on these six lek sites, of both male and female birds, was only 72 birds. This is in contrast to counts in 1988-1991, with average annual counts of over 100 males.⁴⁹ There is, thus, a pattern of extirpation and decline in Oklahoma.

⁴⁵New Mexico State Land Office press release, dated October 15, 2004.

⁴⁶State leasing data on file with Forest Guardians.

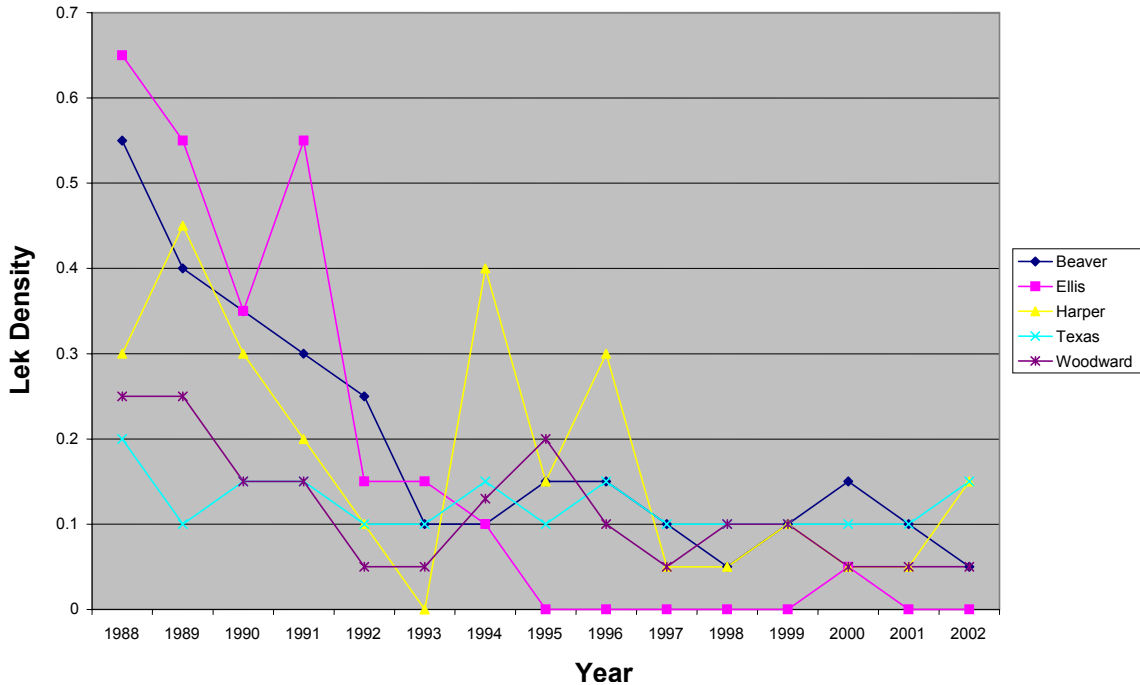
⁴⁷Horton, R. 2002. “Performance Report, Upland Game Investigations, July 1, 2001 - June 30, 2002, Monitoring Greater and Lesser Prairie Chickens.” Grant Number W-82-R-41. Oklahoma Department of Wildlife Conservation. Oklahoma City, Oklahoma.

⁴⁸Oklahoma Department of Wildlife Conservation (ODWC). 1998b. “Landscape-level evaluation of the decline of the lesser prairie chicken in Oklahoma, Texas, and New Mexico. Grant No. AP-96-201W.

⁴⁹Horton, R. “Distribution and abundance of lesser prairie-chicken in Oklahoma” at 189-195, The Prairie Naturalist 32(3) (2002).

Based on lek density data from ODWC annual reports 1997/1998 – 2001/2002, there is a significant downward trend across counties (Figure 5).⁵⁰

Figure 5. Oklahoma: Lesser Prairie-Chicken lek density

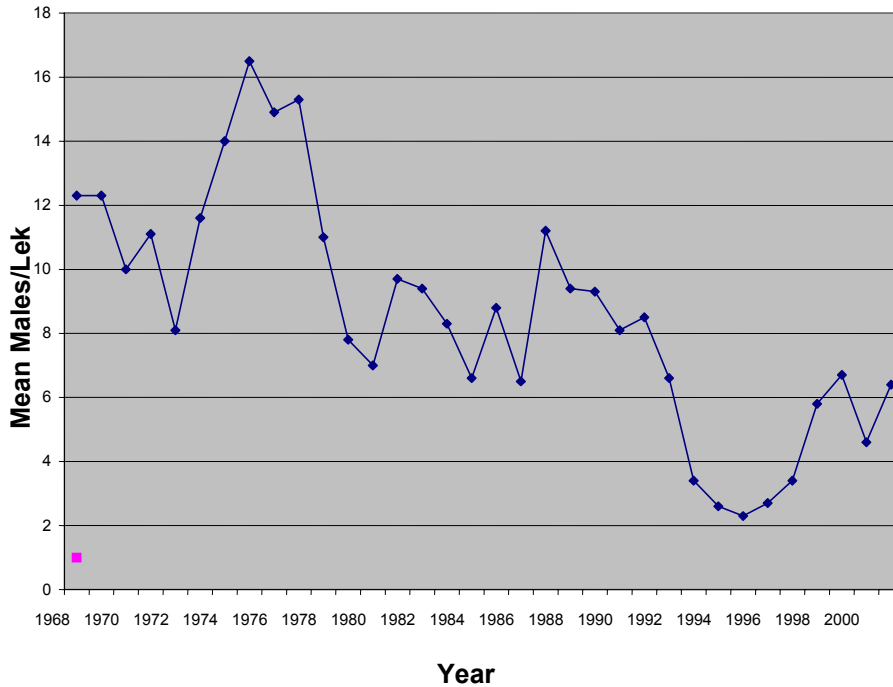


There is also a clear pattern of decline in mean numbers of males/lek data from ODWC annual reports 1997/1998 – 2001/2002 (Figure 6).⁵¹

⁵⁰Source data: Oklahoma Department of Wildlife Conservation annual lesser prairie-chicken surveys (Oklahoma Department of Wildlife Conservation (ODWC). 1998. “Upland Game Investigations: monitoring Greater and Lesser Prairie Chickens.” Grant Number W-82-R-37; Oklahoma Department of Wildlife Conservation (ODWC). 1999. “Upland Game Investigations: monitoring Greater and Lesser Prairie Chickens.” Grant Number W-82-R-38; Oklahoma Department of Wildlife Conservation (ODWC). 2000. “Upland Game Investigations: monitoring Greater and Lesser Prairie Chickens.” Grant Number W-82-R-39; Oklahoma Department of Wildlife Conservation (ODWC). 2001. “Upland Game Investigations: monitoring Greater and Lesser Prairie Chickens.” Grant Number W-82-R-40; Oklahoma Department of Wildlife Conservation (ODWC). 2002. “Upland Game Investigations: monitoring Greater and Lesser Prairie Chickens.” Grant Number W-82-R-41; Oklahoma Department of Wildlife Conservation (ODWC). 2003. “Upland Game Investigations: monitoring Greater and Lesser Prairie Chickens.”).

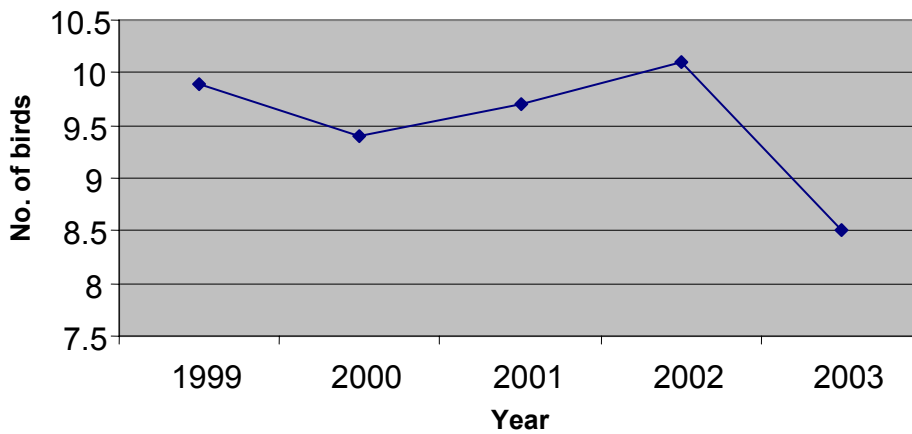
⁵¹Id.

Figure 6. Oklahoma: Mean Number of Male Prairie-Chickens per Lek



In 1999, ODWC began transitioning to a count of all birds on the leks, not just males. From 1999-2003, birds/lek has demonstrated the following trend:⁵²

Figure 7. Oklahoma: Lesser Prairie-Chickens per Lek



Overall, the lesser prairie-chicken’s range in Oklahoma has decreased by 63.6% and prairie-chickens occur in only eight of 22 counties where they historically occurred. As of 2000, it was estimated that less than 3,000 prairie-chickens occur in the state during

⁵²Id.

breeding season.⁵³

Threats to lesser prairie-chickens in the state include oil and gas activities. Oklahoma lek survey reports indicate that noise from gas compressors is audible at some booming grounds and those reports also note vehicular traffic from oil activities.⁵⁴ In a recent publication by the Oklahoma Cooperative Extension Service for the greater prairie-chicken, one recommendation is to muffle pumpjacks and other sources of noise and not allow habitat fragmentation from wind farms, coal bed methane development, roads, powerlines, and other anthropogenic structures.⁵⁵ Strangely, this same recommendation was not made for lesser prairie-chickens.⁵⁶ Regardless, the BLM continues to lease habitat for oil and gas drilling within the range of the lesser prairie chicken in Oklahoma.⁵⁷

Another threat to prairie-chickens in Oklahoma is loss of native shrub habitat, which ODWC regards as especially significant in the state, relative to other states within the species’ range. In a study conducted in western Oklahoma, the Oklahoma and Texas panhandles, and east-central New Mexico, the agency reported that a loss of shrub habitat was correlated with a negative population trend. The agency found that native prairie may not be sustaining lesser prairie-chickens due to overgrazing.⁵⁸ The report states that,

Because the historic leks that we studied were selected for their long-term population data, they may represent those areas thought to be the best habitat in each state. If so, the observation of only a single increasing lek [out of 12] is disturbing.⁵⁹

In this research, dense ungrazed Conservation Reserve Program land was the primary new habitat observed near new leks and the report’s authors stated that it was unclear whether this habitat was benefiting prairie-chickens. Stable lesser prairie-chicken leks were found to have a mean cover of shrub-dominated habitat of 82.9% versus 62.5% for declining lesser prairie-chicken leks. Total landscape change (especially of shrub

⁵³Horton 2002.

⁵⁴See Oklahoma Department of Wildlife Conservation lek survey data sheets, on file with Forest Guardians.

⁵⁵“Ecology and Management of the Greater Prairie-Chicken.” Oklahoma Cooperative Extension Service. Report #E-969.

⁵⁶“Ecology and Management of the Lesser Prairie-Chicken.” Oklahoma Cooperative Extension Service. Report #E-970.

⁵⁷Lease Sale Notices are viewable at www.nm.blm.gov. Forest Guardians has protested the lease of these parcels, due to the perils oil and gas development presents to lesser prairie-chickens.

⁵⁸Oklahoma Department of Wildlife Conservation (ODWC). 1998b. “Landscape-level evaluation of the decline of the lesser prairie chicken in Oklahoma, Texas, and New Mexico. Grant No. AP-96-201W.

⁵⁹Id at p. 13.

dominated habitats) was measured at a nearly 2% decline per year at some leks, particularly in Oklahoma. The researchers further expressed concern that mechanical and herbicidal control of shrubs will reduce availability of desirable forbs and associated invertebrates.⁶⁰

Oklahoma lek survey data sheets also indicate the presence of ring-necked pheasants behaving aggressively toward lesser prairie-chickens. This has been noted to be a conservation concern.⁶¹

The Service is ignoring the above evidence demonstrating the lesser prairie-chicken is losing ground in Oklahoma, and is instead recycling warranted but precluded petition findings year after year, and failing to provide statutory protection for this species.

Texas

In Texas, the lesser prairie-chicken continues to decline outside of the Northeastern panhandle area. Decline is evident throughout the rest of the Texas range of the lesser prairie-chicken as well. Historically, the species was found in two discernable regions of the panhandle, the Northeastern section and the Permian Basin region of the Western panhandle. Range contraction and population decline in all populations is evident in the data gathered outside of Wheeler and Hemphill Counties by the Texas Parks and Wildlife Department. Lesser prairie-chickens are present in twelve counties within the Texas panhandle in habitat considered to be ecologically and geographically fragmented. In sixty years, approximately 60% of lesser prairie-chicken habitat in Texas has been lost.⁶²

The situation is dire in the Texas panhandle. Researchers recently warned that,

Based on declining populations and elimination of critical habitat, the long-term status of the lesser prairie-chicken in the Texas Panhandle is alarmingly reminiscent of the status of the Attwater’s prairie-chicken (*Tympanuchus cupido attwateri*) in south Texas during the 1960s...⁶³

Of greatest concern is the continued negative trend in the counties located in the Permian Basin. Three indices of population measure are reported annually by Texas Parks and Wildlife Department; males per lek, lesser prairie-chicken per lek, and leks per

⁶⁰Id.

⁶¹Mote, K.D., R.D. Applegate, J.A. Bailey, K.E. Giesen, R. Horton, J.L. Sheppard, Technical Editors. 1998. “Assessment and Conservation Strategy for the Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*).” Emporia, KS: Kansas Department of Wildlife and Parks.

⁶²Sullivan, R.M., J.P. Hughes, and J.E. Lionberger. 2000. “Review of the historical and present status of the lesser prairie-chicken (*Tympanuchus pallidicinctus*) in Texas.” at 177-188, The Prairie Naturalist 32(3).

⁶³Id at p. 178.

square mile. The coarse measure of annual population change, the number of lesser prairie-chicken per lek visited, was either zero, or significantly lower, in 2001 as compared to 2000. This cannot be explained by dispersal of the population across more leks, as leks/square mile was not significantly different between years. For two years, 2000 and 2001, no birds were detected in Gaines County. In Bailey County, lesser prairie-chicken per lek was down by 33% in 2001, a decrease from 15 per lek to 10 per lek. Yoakum County surveys report a decline in lesser prairie-chicken per lek from 13.4 in 2000 to 8.8 in 2001.⁶⁴

Survey efforts, by county, in the Permian Basin were reduced by half in 2001. Substantial percentages of Terry and Hockley Counties were historically suitable for breeding lesser prairie-chicken, although surveys have been discontinued, but recent results suggest the lesser prairie-chicken is nearly extirpated from this eastern portion of the Permian basin population. There were no data for Cochran County reported in 2001, where males per lek and lesser prairie-chickens per lek were well below the state mean in 2001.⁶⁵

The Service acknowledged the potential for extirpation of lesser prairie-chicken populations from the Permian Basin and western panhandle of Texas in the October 2001 and June 2002 Candidate Notices of Review. Although there was no mention of this in the most recent CNOR in May, 2004, the threat is still present. The Service assured the public that “The impending loss of these populations is of major concern to us and efforts to address this are ongoing.”⁶⁶ Notwithstanding the Service’s cryptic promises, extirpation and further decline appears imminent for the lesser prairie-chicken throughout this region without the Service’s action.

Despite the lesser prairie-chicken’s precarious status in Texas, its range in the state continues to be heavily exploited for oil and gas and agriculture, and the species is still hunted. From 1997-2002, there was an average annual kill of 121 birds.⁶⁷ A 2000 review of the prairie-chicken’s status in the state found that there has been a decrease in

⁶⁴Lionberger, James E. 1998. “Performance report: lesser prairie chicken harvest recommendations.” Report to Texas Parks and Wildlife Department, April 21, 1998; Lionberger, James E. 1999. “Performance report: lesser prairie chicken harvest recommendations.” Report to Texas Parks and Wildlife Department, April 19, 1999; Lionberger, James E. 2000. “Performance report: lesser prairie chicken harvest recommendations.” Report to Texas Parks and Wildlife Department, April 19, 2000; Lionberger, James E. 2001. “Performance report: lesser prairie chicken harvest recommendations.” Report to Texas Parks and Wildlife Department, April 18, 2001; Lionberger, James E. 2002. “Performance report: lesser prairie chicken harvest recommendations.” Report to Texas Parks and Wildlife Department, April 15, 2002; Lionberger, James E. 2003. “Performance report: lesser prairie chicken harvest recommendations.” Report to Texas Parks and Wildlife Department, April 29, 2003.

⁶⁵Id.

⁶⁶66 Fed. Reg. 54807, 54818; 67 Fed. Reg. 40657, 40667

⁶⁷Supra note 63.

occupied range due to crop conversion, overgrazing, and oil and gas development.⁶⁸ In addition, a 2001 report to the Texas Parks and Wildlife Department found that there are currently only two meta-populations in the state, the eastern/northeastern Panhandle and the southwestern Panhandle. These populations contain approximately 5-10,000 birds and extend over approximately 573,200 ha. LPC habitat reduction in High Plains in Texas panhandle (southwestern Panhandle) is occurring due to crop conversion, while habitat reduction in Rolling Plains (northeastern Panhandle) is due to brush encroachment and grassland fragmentation.⁶⁹

The Service is ignoring the above evidence demonstrating the lesser prairie-chicken is suffering further declines and continued threats in Texas, and is instead recycling warranted but precluded petition findings year after year, and failing to provide statutory protection for this species.

Conclusions

We have documented continued declines and enduring threats to lesser prairie-chickens in each state within their five-state range. In addition, there are several range-wide threats of note. First, a danger on the horizon is west Nile virus, which is considered a “pending crisis” for other grouse species.⁷⁰ There is little reason to suspect the lesser prairie-chicken will be spared harm from this disease. Second, a significant threat is from drought. Rangelwide, the lesser prairie-chicken has suffered from a six-year drought since it has been a candidate species. Research suggests that the current drought is the beginning of a multi-decadal period of low precipitation.⁷¹ Given the Service’s acknowledgement that drought exacerbates threats to the species from such factors as livestock grazing and habitat destruction, the drought underscores the need to provide prompt federal protection to the lesser prairie-chicken.

There is no time to lose in granting the lesser prairie-chicken listed status under the Endangered Species Act. A 2004 report documented that, in the period from

⁶⁸Sullivan et al. 2000.

⁶⁹Wu, X. Ben, Nova J. Silvy, Fred E. Smeins, and Robert C. Maggio. 2001. “Landscape changes in lesser prairie chicken habitat in the Texas panhandle.” Report to the Texas Parks and Wildlife Department, October 2001.

⁷⁰Naugle, David E., Cameron L. Aldridge, Brett L. Walker, Todd E. Cornish, Brendan J. Moynahan, Matt J. Holloran, Kimberly Brown, Gregory D. Johnson, Edward T. Schmidtman, Richard T. Mayer, Cecilia Y. Kato, Marc R. Matchett, Thomas J. Christiansen, Walter E. Cook, Terry Creekmore, Roxanne D. Falise, E. Thomas Rinkes, and Mark S. Boyce. 2004. “West Nile virus: pending crisis for greater sage-grouse.” *Ecology Letters* (2004) 7: 704-713. See also Walker, Brett L., David E. Naugle, Kevin E. Doherty, and Todd E. Cornish. 2004. “From the Field: Outbreak of West Nile virus in greater sage-grouse and guidelines for monitoring, handling, and submitting dead birds.” Unpublished paper. This paper documented substantial declines in greater sage-grouse survival – 25% in some locations – due to West Nile outbreaks.

⁷¹Betancourt, J.L. 2004. “The Current Drought (1999-2003) in Historical Perspective.” Unpublished paper, Desert Laboratory, U.S. Geological Survey & University of Arizona.

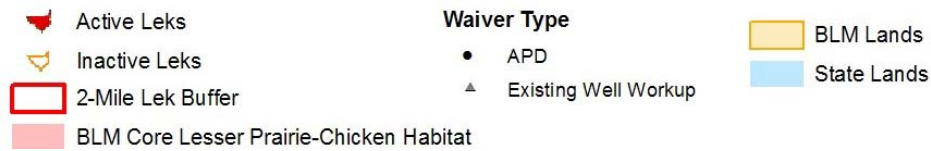
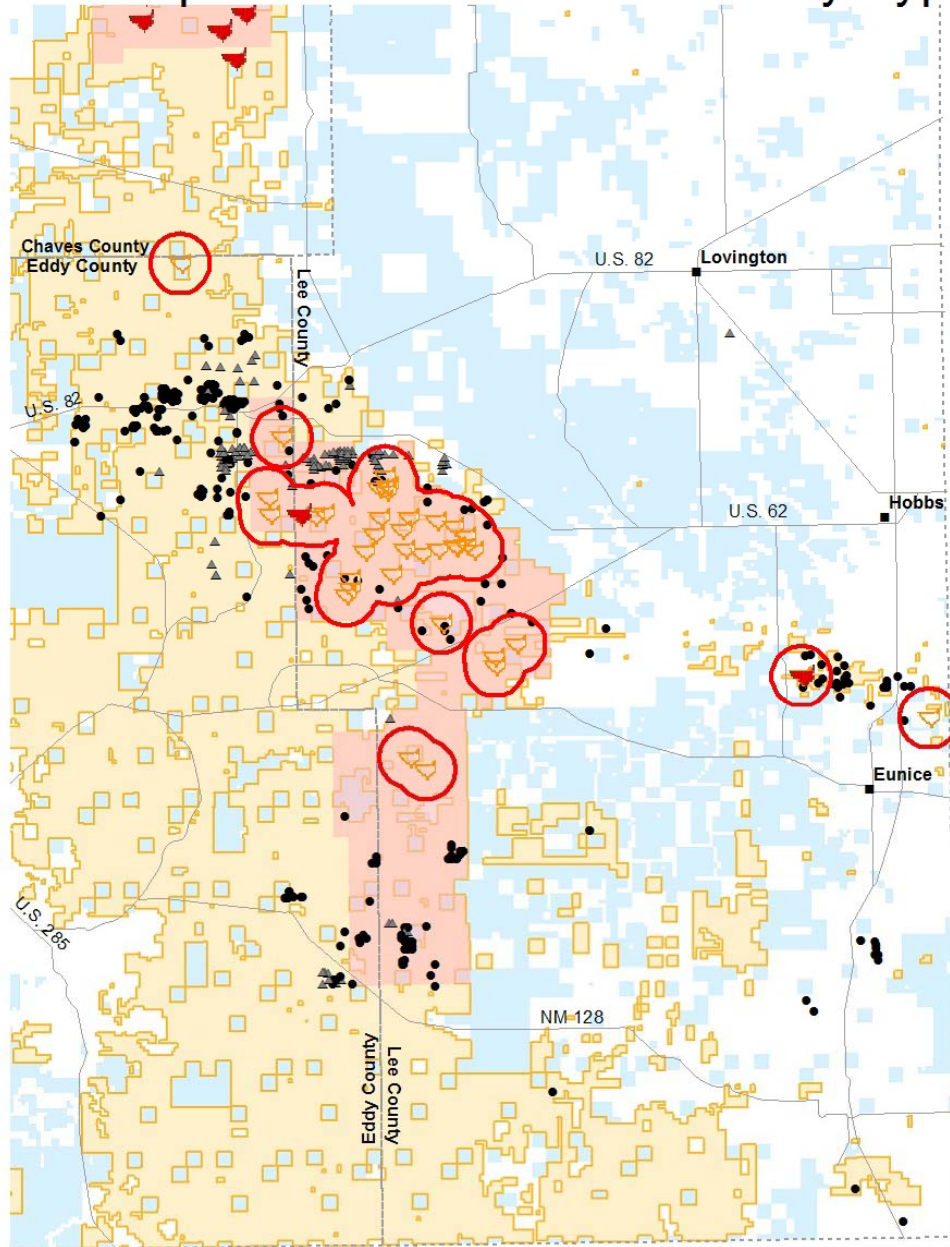
December 1973 through January 1995, 108 species went extinct in the U.S. For 83 of these species (77%), extinction can be traced to long listing delays.⁷²

Looking back further in history, we should draw lessons from other grouse. While the Heath hen was protected at the time of its extinction in 1932, that protection was belated and the small remaining population could not withstand the events of habitat loss, disease, and predation which lead to its vanishing forever. The Attwater’s prairie-chicken is presently at the very brink of extinction, numbering fewer than 100 birds. Its recovery is shrouded in doubt due to its precariously low numbers. We must have foresight when it comes to the lesser prairie-chicken. Federal protection for the lesser prairie-chicken, which has been dangled in front of this declining bird for over six years now, must be granted swiftly.

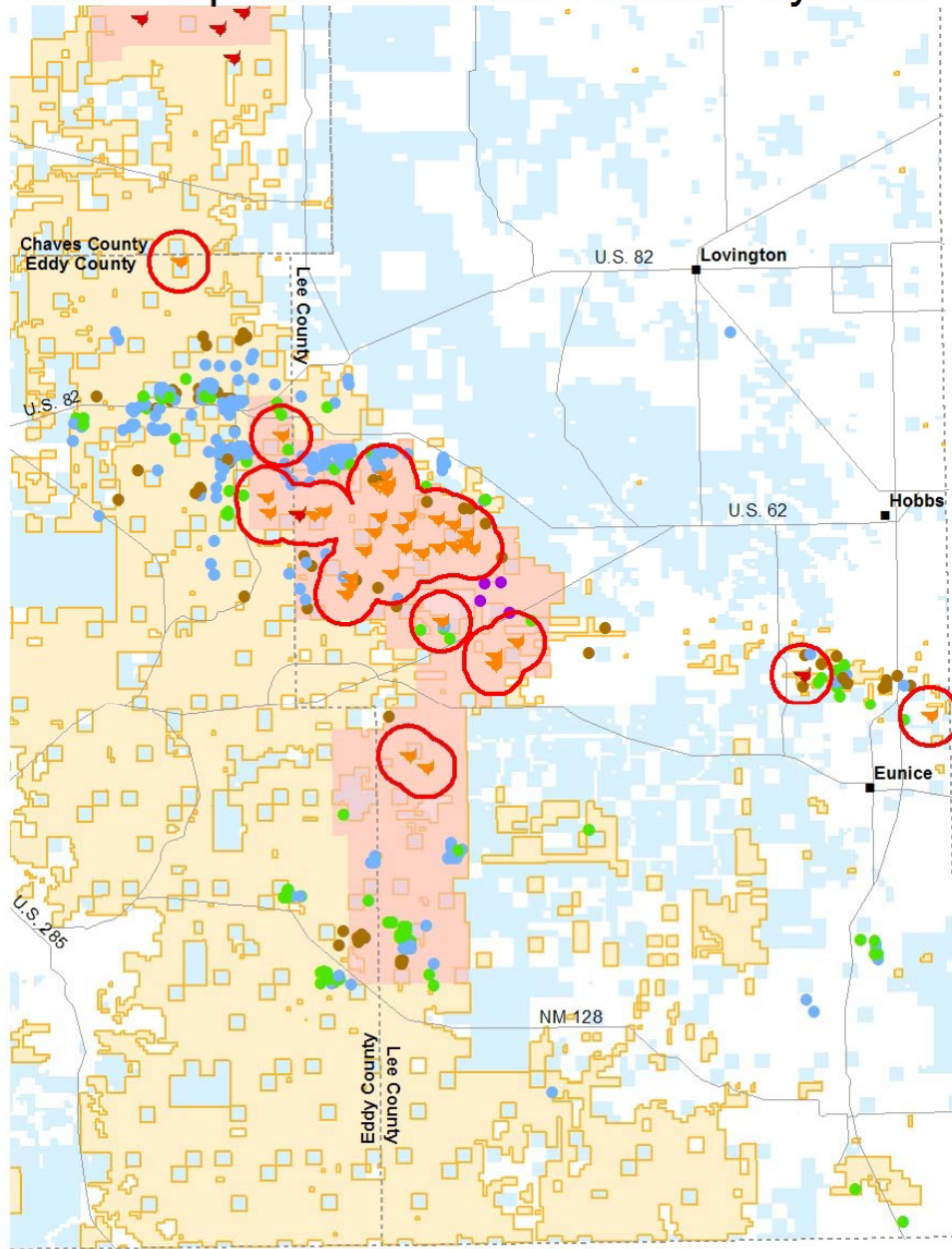
⁷²Suckling, Kieran, Rhiwena Slack, and Brian Nowicki. 2004. “Extinction and the Endangered Species Act.” Report issued May 1, 2004.

Attached Maps: Waivers of Protective Stipulations for Lesser Prairie-Chickens from Oil and Gas Activities in Southeastern New Mexico

RMP Stipulation Waivers Granted by Type



RMP Stipulation Waivers Issued by Year



Well Waivers Issued by Year

