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Natural Resources Conservation Service

Conservation Effects Assessment Project (CEAP)
CEAP-Wildlife Conservation Insight

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LPCI Practices Benefit Lesser Prairie-Chickens and Ranchers

Summary of Findings

- Conservation practices applied through the Lesser Prairie-Chicken Initiative (LPCI) are beneficial to lesser prairie-chickens (LPC), the land, and livestock in the Great Plains.
- Even low levels of woodland encroachment into grasslands have negative consequences for LPC. Woody plant removal (mechanical, chemical, or fire) can improve habitat quality for LPC and other wildlife, and it can benefit livestock by improving forage and soil water availability.
- Ranchers using adaptive grazing management with combinations of decreased stocking densities, larger pastures, longer grazing periods, and targeted forage utilization can balance economic and conservation concerns.
- Managing livestock grazing on areas recovering from prescribed burns (known as "patch-burn" grazing) creates the diverse habitat structure and composition needed to support LPCs through different life stages and provides a more sustainable fuels management strategy than fire-only treatments.
- Targeted application of prescribed practices for LPCs provides the greatest initial conservation benefits and improves the likelihood of success in long-term conservation planning. Land managers who focus on woody plant removal, grazing management, and patch-burn grazing methods within LPC habitat can improve habitat quality, facilitate the persistence of LPC, and promote LPC movement into unoccupied habitats. Expansion of these practices into unoccupied grasslands improves the potential for LPC to successfully recolonize areas from which it was extirpated.

Background

Conservation practices emphasized under the Lesser Prairie Chicken Initiative (LPCI) are intended to benefit the lesser prairie-chicken (LPC)—a species of high conservation concern—as well as the land and livestock managed by ranchers and farmers in the southern Great Plains of North America.

This Conservation Insight summarizes findings from five recent studies that assess LPCI practices (woody plant removal, prescribed fire, grazing systems), what these findings mean for the direction of the initiative and its partners, and how those conservation practices can benefit producers and land managers in the Great Plains.

Launched by the Natural Resources Conservation Service (NRCS) in 2010 and folded into the Working Lands for Wildlife Partnership in 2012, the LPCI emphasizes voluntary and incentive-based efforts to conserve LPC habitat while working with partners to improve the long-term sustainability of agricultural systems. As a result, the LPC has become a flagship species for putting ecosystem conservation into operation at scales that are relevant to the people, wildlife, and plants coupled to grassland ecosystems (Miller *et al.* 2017).

The LPCI has become an example of conservation success by guiding the development of forward-thinking conservation and land management practices, honing methods for land improvement and species recovery, and enabling increases in LPC populations after decades of decline (Figure 1). The LPC is a valuable species for conservation because its success or decline is symptomatic of ecosystem health in the southern Great Plains. Studies show that practices enacted to address threats to LPC abundance can have broader ecosystem benefits to other wildlife, to the land, and to agricultural systems by maintaining and even increasing biodiversity, improving habitat quality, reducing habitat fragmentation, and improving soil water availability. Conservation assessments can ensure that the LPCI prescribes the most effective practices and that practices are used in the right places to maximize ecological returns.

Among the greatest conservation concerns addressed by LPCI practices are the compound effects of changes in fire regimes and encroachment of woody plants into grasslands. Woody plants can encroach into grasslands by more than 2% forest cover per year (Briggs *et al.* 2002). Over a century of fire suppression has allowed woody plants to encroach into native grasslands, which, consequently has made the habitat more prone to high intensity fires by reducing soil moisture and increasing aboveground biomass (Bielski 2017). Resource-

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Lesser prairie-chicken.

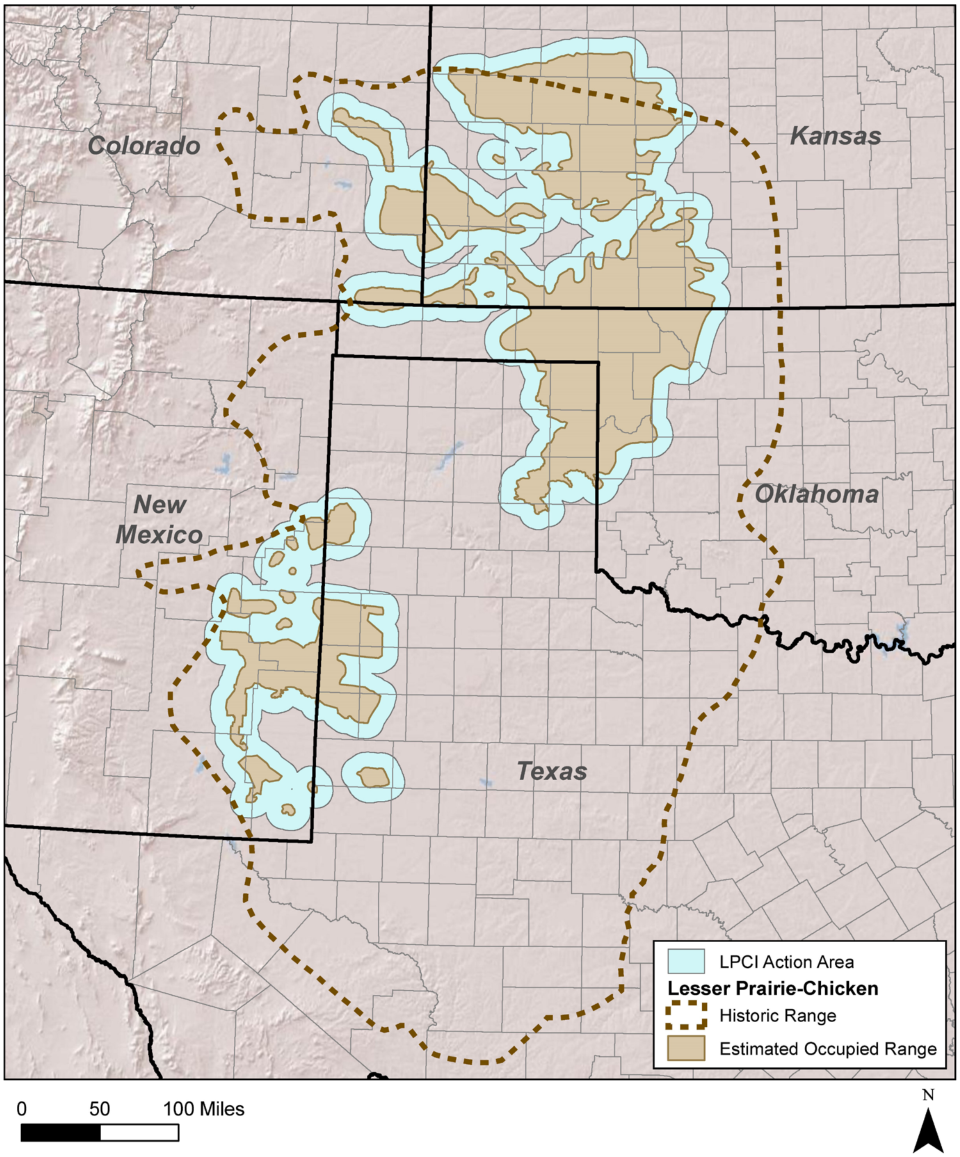

Figure 1. Range map showing historic and contemporary LPC distributions. Figure from the LPCI website (http://lpcinitiative.org/) produced by NRCS.

intensive rangeland management, such as overgrazing and intensive early stocking, can further reduce habitat quality and increase vulnerability to disturbance by reducing the heterogeneity of vegetation (Winder *et al.* 2017). Prairie-chickens need habitat heterogeneity to survive and reproduce because they require different vegetation structure and composition during different parts of the life cycle (e.g., lekking, breeding, nesting, brooding, growth and development, foraging; Hagen *et al.* 2004; Fuhlendorf *et al.* 2017). With that in mind, the LPCI conducts ongoing design and re-evaluation of practices to maintain the diverse, healthy, and resilient vegetation that enables landscapes to support grassland wildlife like the LPC.

Recent studies have assessed LPC response to conservation practices to evaluate effectiveness of the LPCI and inform conservation planning decisions. For instance, using improved methods of occupancy modeling, Hagen *et al.* (2016) showed that adaptive grazing practices increased LPC occupancy at multiple spatial scales. LPCI conservation strategies integrate science with natural resource and economic considerations to direct conservation practices such as woody plant removal, prescribed fire, and sustainable grazing systems. The success of those strategies hinges upon the continual re-evaluation and, if necessary, redesign of practices based on collective analyses of assessment findings.

Assessment Partnerships

The assessments covered in this article involved multiple Conservation Effects Assessment Project (CEAP) and LPCI partners, including NRCS; Bureau of Indian Affairs; Bureau of Land Management; National Park Service; Office of Wildland Fire; U.S. Forest Service; U.S. Geological Survey; U.S. Fish and Wildlife Service, Kansas Department of Wildlife, Parks, and Tourism; New Mexico Department of Game and Fish; Oklahoma Department of Wildlife Conservation; Texas Parks and Wildlife Department; Kansas State University; New Mexico State University; North Dakota State University; Oklahoma State University; Oregon State University; University of Nebraska-Lincoln; The Nature Conservancy; and Western Association of Fish and Wildlife Agencies. Additional details are available from the sources listed in the References, the LPCI website (http://lpcinitiative.org), and the CEAP website (https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/ceap/).

Assessment Approach

Woody Encroachment

LPCI partners working in New Mexico (Boggie *et al.* 2017) and Kansas (Lautenbach *et al.* 2017) examined behavioral responses of LPCs to woody encroachment in grasslands. In both studies, investigators set out to evaluate whether LPCs exhibit differences in habitat use due to the presence of woody plants, such as honey mesquite in southeastern New Mexico and eastern redcedar in the Red Hills region of south-central Kansas.

The investigators in New Mexico sought to understand the relationship between the distribution of mesquite and habitat used by LPCs, as well as whether seasonal change altered that relationship. The study area encompassed 1,147 km^2 of shinnery oak prairie-dominated sandhills and sandy plains with a history of disturbance from herbicidal treatments, wildfire, grazing, and energy development. Investigators tracked the daily movements and habitat use of LPCs through the breeding (March-August) and nonbreeding (September-February) seasons. They then calculated home ranges for each bird to evaluate how mesquite distribution impacted LPC habitat use during breeding and nonbreeding periods.

In the Kansas study, investigators examined effects of eastern redcedar and other tree species on LPC habitat use by evaluating home range selection, nest site selection, and nest survival in areas with differing levels of tree distribution. The study area was located on 14,000 ha (140 km^2) of private land primarily consisting of mixed-grass prairie with a history of livestock grazing, prescribed fire, and interspersed row-crop agriculture. During the breeding season, the investigators tracked female LPCs to evaluate the relationships between tree distributions and habitat use, nest site selection, and nest survival. They conducted spatial analyses to identify individual trees on the landscape, estimate home ranges, and calculate distances between trees and tracking locations, which enabled the assessment of impacts of woody encroachment on LPC habitat use from the scale of individuals to a broader landscape scale.

Heterogeneity-Based Grazing

In the most in-depth investigation of grazing management effects on the LPC to date, investigators examined habitat use, nest site selection, and survival in relation to components of heterogeneity-based grazing management on ranches in western Kansas where LPC are abundant (Kraft 2016). The lands at the study sites have histories of livestock grazing, energy development, and interspersed row-crop agriculture. Of three areas studied, two had forage utilization goals targeted at 40-50% of annual forage production and experienced dormant season grazing as a common practice. The third area had forage utilization goals targeted between 20 and 50% but had no dormant season grazing.

At ranching operations in each study area, the investigators made recordings of grazing periods in one grazing year (April-March), grazing pressure, stocking density, and deferment (days a pasture was rested during a grazing period). They also calculated forage utilization using the average of estimated forage production (kg/ha) across each pasture versus estimates of forage consumption. During the breeding season, the investigators tracked female LPCs to monitor habitat use, nest site selection, adult survival, and nest survival and to estimate the effects of grazing management components, presence of shrubs, and proximity to lek sites. The grazing management components that were evaluated included grazing pressure, forage utilization, stocking density, pasture area, and deferment.

Patch-Burn Grazing

In two of the first studies to evaluate the effects of prescribed fire on LPC ecology, investigators in Texas and Oklahoma (Elmore *et al.* 2017) and in Kansas (Lautenbach 2017) examined the impacts of patch-burn grazing on LPC behavior and habitat structure. Patch-burn grazing (also known as "pyric herbivory") is a practice that integrates prescribed fire with grazing management, allowing large grazers to selectively graze on new vegetation in recently burned patches and reduce grazing on patches as time progresses after a fire (Starns *et al.* 2017; Elmore *et al.* 2017). In this practice, land managers burn a portion of a pasture and allow livestock to select a grazing patch within that pasture, which serves to reconnect the interaction between fire and grazing that drove the structure and composition of the landscape before human interference (Fuhlendorf and Engle 2001; Lautenbach 2017).

In coordination with the Joint Fire Science Program, the investigators in Texas and Oklahoma assessed the efficacy of patch-burn grazing to promote landscape heterogeneity that is needed to support grassland-dependent wildlife like the LPC while improving fuel management and reducing wildfire risk (Elmore *et al.* 2017). They used four study sites (Table 1), within which patches of fire-only treatments and patch-burn grazing treatments were sampled at various times after fire from June 2014 through August 2016 to record vegetation structure and composition as well as fuel properties. They then used those data to create customized dynamic fuel models to simulate fire behavior characteristics.

The investigators in Kansas evaluated how patch-burn grazing affects LPC habitat use through different life stages (e.g., nesting, brooding, non-breeding periods) and whether the practice promotes the vegetation structure and composition that LPCs need across those life stages (Lautenbach 2017). The study area was in the Red Hills region of south-central Kansas on private lands primarily used for cattle production and some row-crops. The study site was divided into 17 main pastures (mean size = 700 ha), 8 of which were managed using patch-burn grazing and 9 grazed with no prescribed fire. A portion (~¼ to ⅓) of each patch-burn grazing pasture was burned during spring on a rotational basis, and the pastures were then grazed the following October.

To examine the effects of patch-burn grazing on vegetation and LPC habitat use, the investigators divided the pastures into patches according to time since fire. In spring (April–May), summer (June–August), and winter (November–February), they conducted surveys within each patch to evaluate vegetation structure and composition. The investigators tracked female LPCs to monitor habitat use during the spring (lekking and nesting periods), summer (brooding and post-breeding), winter (non-breeding), and at nest sites, and they conducted vegetation surveys at tracking locations to determine habitat characteristics used by LPCs.

Assessment Findings

Woody Encroachment

In both studies, LPCs avoided areas with woody encroachment. In New Mexico (Boggie *et al.* 2017), LPCs tended to maintain home ranges closer to leks and avoid areas with mesquite (Figure 2). That aversion did not differ significantly between the breeding season (360.8 ± 69.3 m from the nearest mesquite bush) and the nonbreeding season (420.9 ± 71.3 m), and it was stronger in areas with higher densities

Table 1. Summary descriptions of plant communities, climate, ownership, and grazing regimes for each study site in the patch-burn grazing assessment. Table modified from Elmore *et al.* (2017).

<table>
<tr><td>Plant community</td><td colspan="2">Gulf coastal prairie</td><td>Sand shinnery</td><td>Sand sagebrush</td><td>Tallgrass prairie</td></tr>
<tr><td>Study site*</td><td>ANWR</td><td>APCNWR</td><td colspan="2">PSWMA</td><td>TGPP</td></tr>
<tr><td>Size (ha)</td><td>46,000</td><td>4,200</td><td colspan="2">7,900</td><td>16,000</td></tr>
<tr><td>State</td><td>Texas</td><td>Texas</td><td colspan="2">Oklahoma</td><td>Oklahoma</td></tr>
<tr><td>Entity**</td><td>USFWS</td><td>USFWS</td><td colspan="2">ODWC</td><td>TNC</td></tr>
<tr><td>Herbivore type</td><td>none</td><td>cattle</td><td colspan="2">cattle</td><td>cattle, bison</td></tr>
<tr><td>Mean annual precipitation (cm)***</td><td>105</td><td>111</td><td colspan="2">66</td><td>113</td></tr>
<tr><td>Growing season length (days above 0°C)****</td><td>338</td><td>251</td><td colspan="2">198</td><td>203</td></tr>
<tr><td>Dominant herbaceous vegetation</td><td>little bluestem, Indiangrass, gulf cordgrass</td><td>little bluestem, Indiangrass, switchgrass</td><td colspan="2">little bluestem, big bluestem, sideoats grama</td><td>big bluestem, little bluestem, Indian-grass</td></tr>
<tr><td>Dominant woody vegetation</td><td>honey mesquite, southern live oak</td><td>NA</td><td>shinnery oak</td><td>sand sagebrush</td><td>blackjack oak, post oak</td></tr>
<tr><td>Reference</td><td>USFWS 2010</td><td>USFWS 2010</td><td colspan="2">Carroll et al. 2017</td><td>Hamilton 2007</td></tr>
<tr><td>Ag-ACIS station #</td><td>48057</td><td>48089</td><td colspan="2">40045</td><td>40113</td></tr>
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*ANWR = Aransas National Wildlife Refuge; APCNWR = Attwater's Prairie-Chicken National Wildlife Refuge; PSWMA = Packsaddle Wildlife Management Area; TGPP = Tallgrass Prairie Preserve.
**USFWS = U.S. Fish & Wildlife Service; ODWC = Oklahoma Department of Wildlife Conservation; TNC = The Nature Conservancy.
***Based on 30-yr average (1986-2015) obtained from USDA-NRCS Agricultural Applied Climate Information System (Ag-ACIS).
****Also from USDA-NRCS Ag-ACIS, stations nearest study site when data available.

of LPCs. The only seasonal difference in habitat use was that home ranges were smaller in the breeding season (8.3 ± 1.4 km^2, mean ± SE) than in the nonbreeding season (15.9 ± 1.8 km^2), which is consistent with seasonal differences in habitat requirements based on LPC biology (Hagen *et al.* 2004).

Similar to the New Mexico study, LPC females in Kansas avoided areas where trees were present (Figure 3), using areas 282.5 ± 0.96 m from trees on average and establishing nests 292.7 ± 19.7 m from the nearest tree (Lautenbach *et al.* 2017). Statistical models showed that tree density and distance to the nearest trees were important factors in LPC habitat selection. LPC presence increased with greater distance from the nearest tree (nine times more likely 1,000 m away than adjacent to trees) and with lower tree density (40 times more likely without trees than in areas with at least 4 trees/ha (400 trees/km^2)). Similarly, the likelihood of nesting increased with distance from trees (10 times more likely 1,000 m away than adjacent to trees) and with lower tree density (30 times more likely without trees than in areas with 2 trees/ha). In fact, no nest was found in areas with greater than 2 trees/ha (200 trees/km^2).

Heterogeneity-Based Grazing
Results indicate that decreased stocking density, targeted forage utilization, and larger pastures can produce diverse grassland structures that benefit LPC. Increased grazing pressure decreased LPC habitat use, and the effect was realized at a lower threshold in rangelands that lacked sand sagebrush cover (~1.0 animal unit months per hectare, AUM/ha) versus those with shrubs (~2.0 AUM/ha) (Figure 4A). LPCs used habitat grazed at low to moderate stocking densities, whereas high stocking density (especially at values ≥ ~0.3 AU/ha) decreased habitat use (Figure 4C). Habitat use decreased under high grazing pressure (>0.75 AUM/ha) with greater deferment during a season (in other words, fewer grazing days) (Figure 4D), indicating that LPC used pastures that were grazed under lower grazing pressure or shorter deferment periods. Increased pasture size can begin to offset impacts of higher grazing pressure (Figure 4B).

Nest site selection, nest survival, and adult survival were all negatively impacted by increased grazing pressure, and nesting consistently occurred within 2 km of the nearest lek site. Further analyses showed that decreased stocking density (<0.26 AU/ha) can increase the heterogeneity of grassland vegetation, which can serve to benefit grassland-dependent wildlife such as the LPC. The findings of this study confirm that when adaptive grazing practices are applied, LPC habitat is improved.

Patch-Burn Grazing

The findings of both the Texas/Oklahoma and the Kansas studies demonstrate that patch-burn grazing can maintain the vegetation structure and composition needed to support different LPC life stages. In Texas and Oklahoma (Elmore et al. 2017), patch-burn grazing maintained moderate forb and grass cover necessary for brood success and LPC diets and increased bare ground patches important to chick movement (Figure 5), creating more favorable habitat than fire-only treatments. Patch-burn grazing also kept herbaceous vegetation within preferred heights for nesting, while fire-only treatments enabled herbaceous vegetation to quickly grow too tall (exceeding preferred heights within 6 months post-fire). These differences in vegetation structure lasted for more than 24 months post-fire, illustrating the lasting benefits of patch-burn grazing for LPC habitat quality.

Patch-burn grazing in Texas and Oklahoma extended fuel management benefits compared to strategies that solely use prescribed fire. Sites treated with patch-burn grazing accumulated fine fuel more slowly, extending the period after prescribed burning for reduced flame lengths and slower rates of fire spread. After the fire-only treatments, fuel accumulated so rapidly that standard firefighting techniques become ineffective within just 4 months, whereas the fuel management benefits of patch-burn grazing could last for at least twice as long even under extreme weather conditions (Figure 6) and even longer under milder conditions (less wind and greater fine fuel moisture).

In the Kansas study (Lautenbach 2017), patch-burn grazing created a

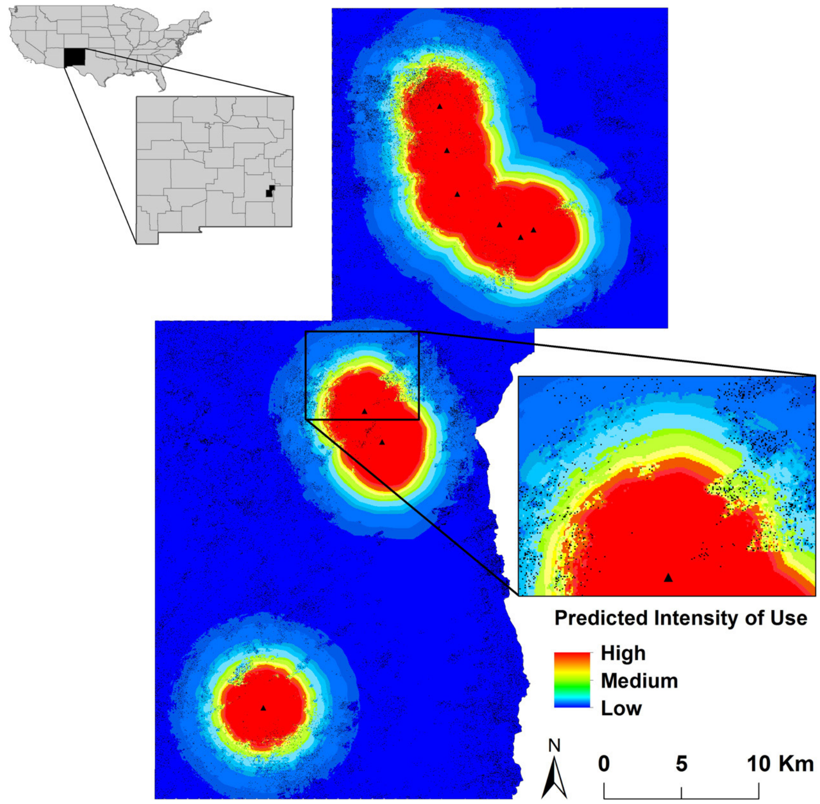

Figure 2. Predicted intensity of LPC habitat use throughout their annual cycle in southeastern New Mexico is heavily influenced by mesquite distribution (shown as black dots on the inset at right) and centered around lek sites (triangles). Figure from Boggie *et al.* (2017).

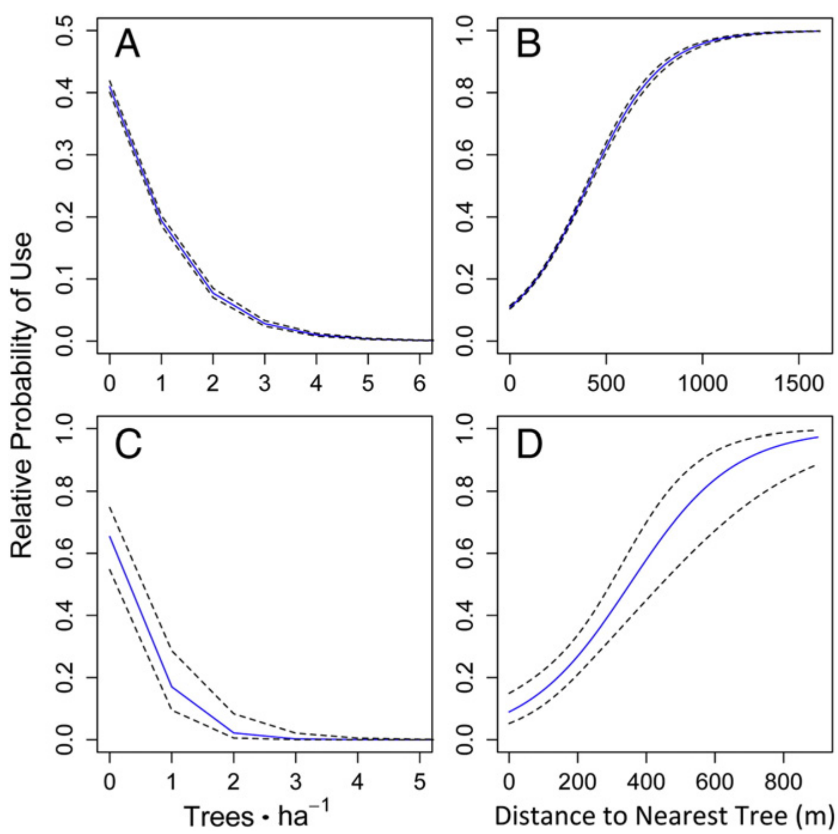

Figure 3. Relative probability of female LPC habitat use in relation to tree density (A) and distance to the nearest tree (B), as well as relative probability of nest site in relation to tree density (C) and distance to the nearest tree (D) in Kiowa and Comanche counties, Kansas. Dashed lines represent 95% confidence intervals. Figure from Lautenbach *et al.* (2017).

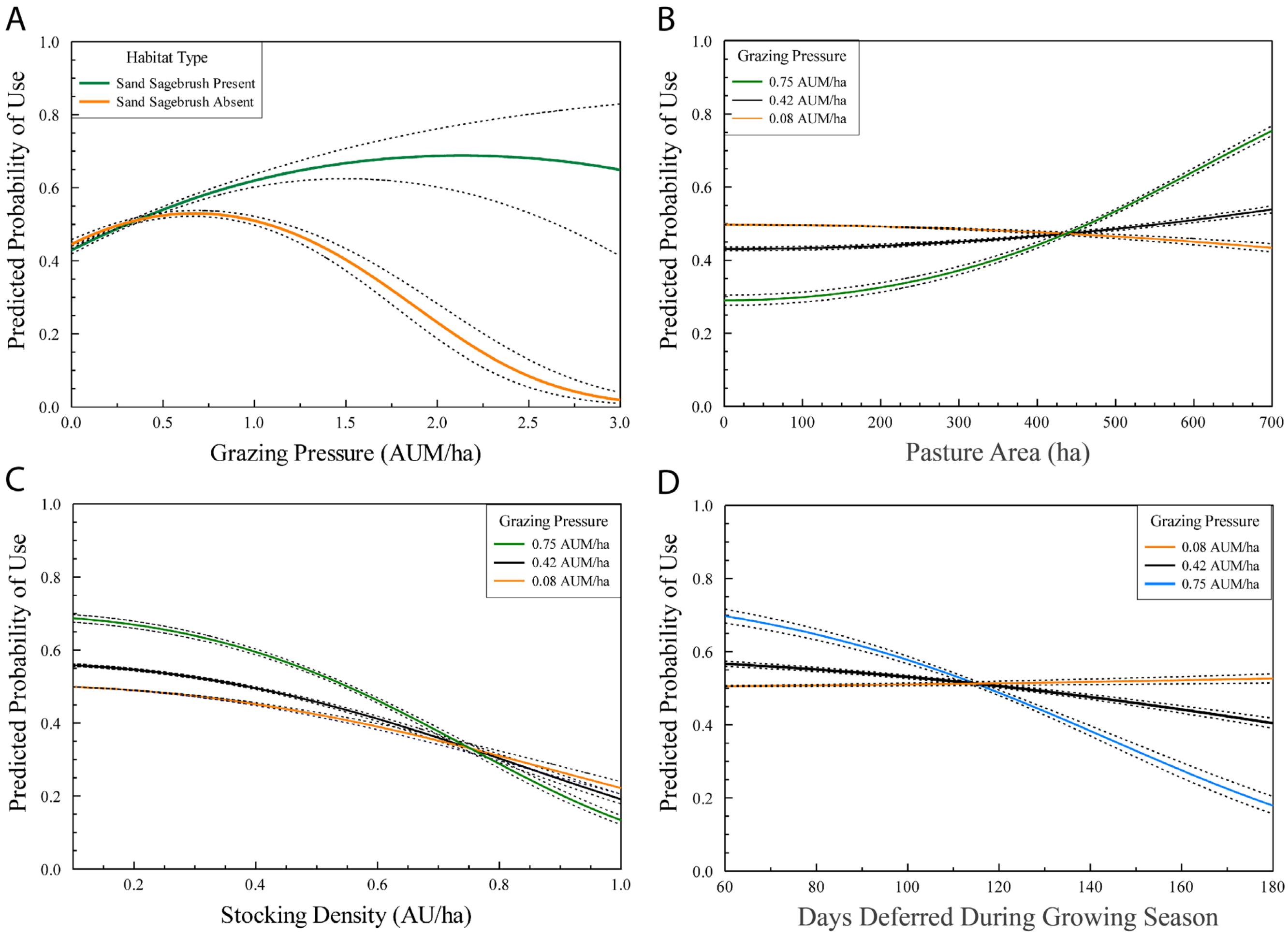

Figure 4. Predicted probability of use of non-breeding female LPCs in monitored rangelands from 2013-2015 in western Kansas. Probability of use is shown in relation to grazing pressure and ecological sites with the presence (>1% mean shrub cover within a site) or absence of sand sagebrush (A), as well as pasture area (B), stocking density (C), and grazing deferment (D) with three levels of grazing pressure. Dashed lines represent 95% confidence intervals. Figure modified from Kraft (2016).

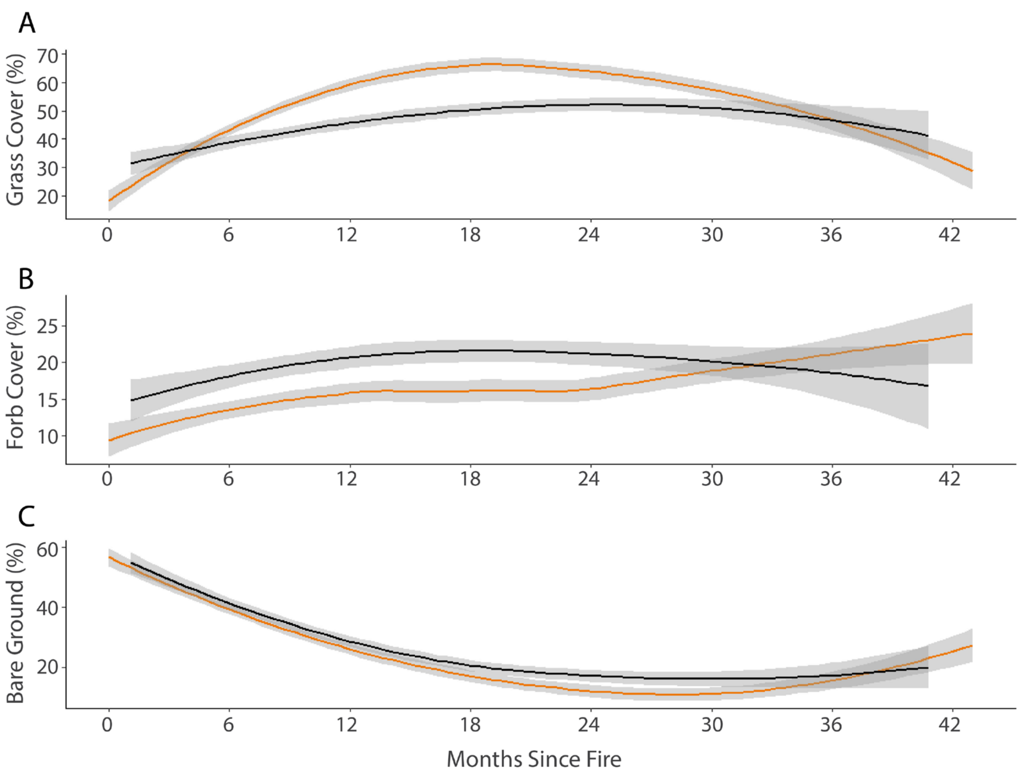

Figure 5. Percent cover of grasses (A), forbs (B), and bare ground (C) as time increases since fire. The orange lines represent fire-only treatments and black lines represent patch-burn grazing treatments. Shaded areas represent 95% confidence intervals. Figure from Elmore *et al.* (2017).

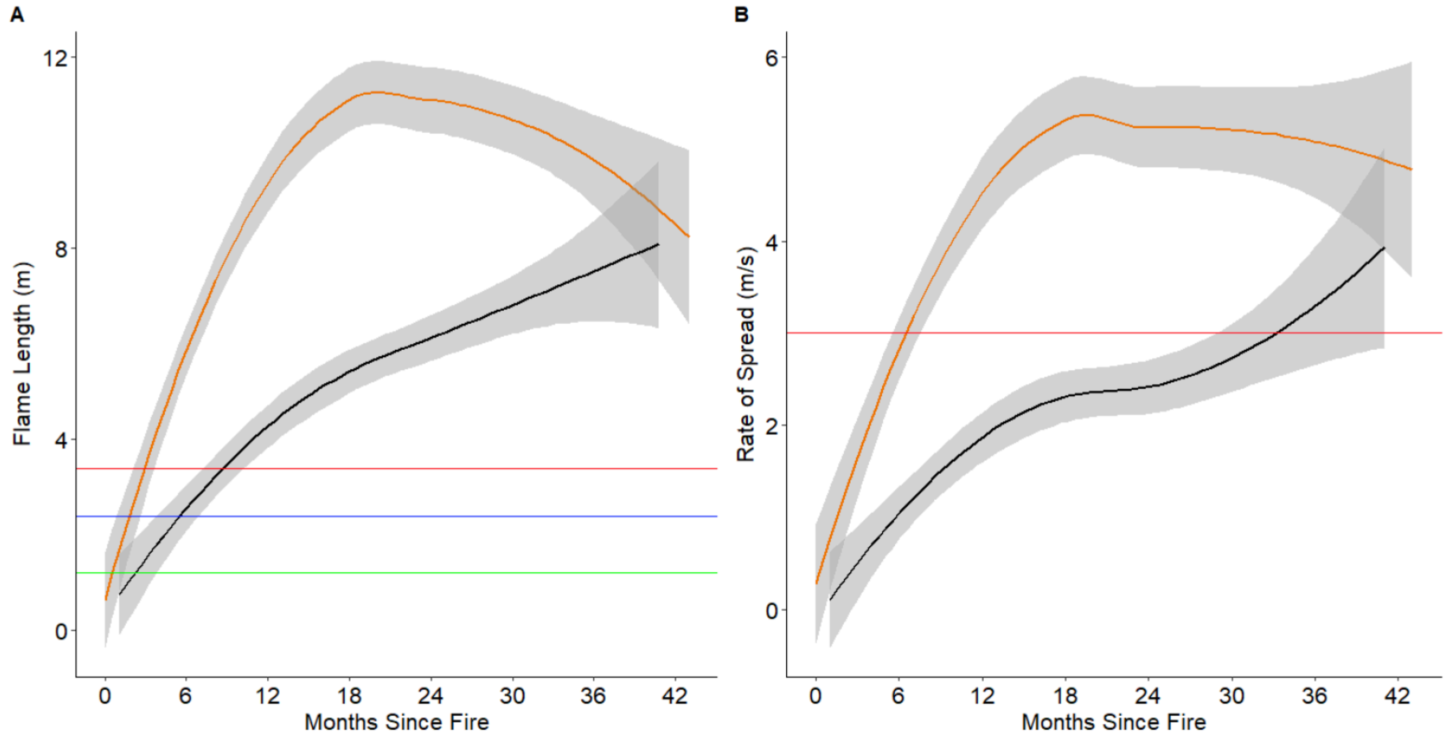

Figure 6. Simulated flame lengths (A) and spread rates (B) in patch-burn grazing and fire-only treatments for fires simulated with extreme weather conditions of high wind (40 km/h) and low fine fuel moisture (5%). On panel A, the green horizontal line indicates the maximum threshold (1.4 m) at which hand tools are effective for fighting wildland fires. The blue horizontal line indicates flame length at which aerial and heavy equipment effectiveness diminishes (2.4 m). The red horizontal line indicates the threshold at which standard wildland firefighting techniques become ineffective (3.4 m). The orange lines represent fire-only treatments and black lines represent patch-burn grazing treatments. Shaded areas represent 95% confidence intervals. Figure from Elmore *et al.* (2017).

patchy landscape where LPC habitat use was influenced by season and LPC life stage as well as variation in time since fire within pastures. Within a pasture, brood-rearing occurred in areas of short vegetation (year-of-fire patches) adjacent to patches with vegetation at intermediate heights (1 and 2 years post-fire), and areas with taller vegetation (>2 years post-fire) provided patches for LPCs to nest. During the summer, females tended to use patches that were 1 and 2 years post-fire with intermediate visual obstruction, more forbs, and intermediate bare ground cover, whereas during the nesting period, they selected nest sites in patches with the greatest visual obstruction to conceal their nests (Figure 7). Thus, the practice of patch-burn grazing promoted heterogeneity of vegetation structure and composition across the landscape that varied across seasons and enabled LPCs to vary their habitat use as needed at different life stages.

Putting Findings into Practice

The LPCI's conservation strategies are designed to improve LPC habitat, an approach that also benefits other grassland wildlife and fosters sustainable agricultural operations. The conservation approaches are developed for individual ranch conditions and land management and are based on thorough scientific analyses of conservation practices. Under the guidance and funding of NRCS CEAP and LPCI partnerships, investigators carrying out assessments gain knowledge that forms the science base for practices prescribed by the LPCI. Some of the most recent analyses are highlighted in this article. This approach enables prescribed practices to be refined to continually improve strategies for conservation and sustainable land management.

The findings of Boggie *et al.* (2017) and Lautenbach *et al.* (2017) show that even low levels of woody encroachment into grasslands can constrain LPC habitat use, further emphasizing vulnerability to ongoing habitat loss and fragmentation. Land managers can remove woody plants from encroached areas to improve habitat quality, facilitate the persistence of LPC, and even promote dispersal into unoccupied habitats. Additionally, woody plant removal can help improve soil water availability (Kormos *et al.* 2017), which is beneficial to wildlife, plants, livestock, and people using the landscape.

Conservation practices can help to restore the range of LPC through targeted removal of woodland encroachment in areas currently occupied by LPC, followed by treatment in unoccupied grasslands to improve the potential for recolonization. After trees are removed (using mechanical, chemical, and/or fire methods), a prescribed fire program promoting

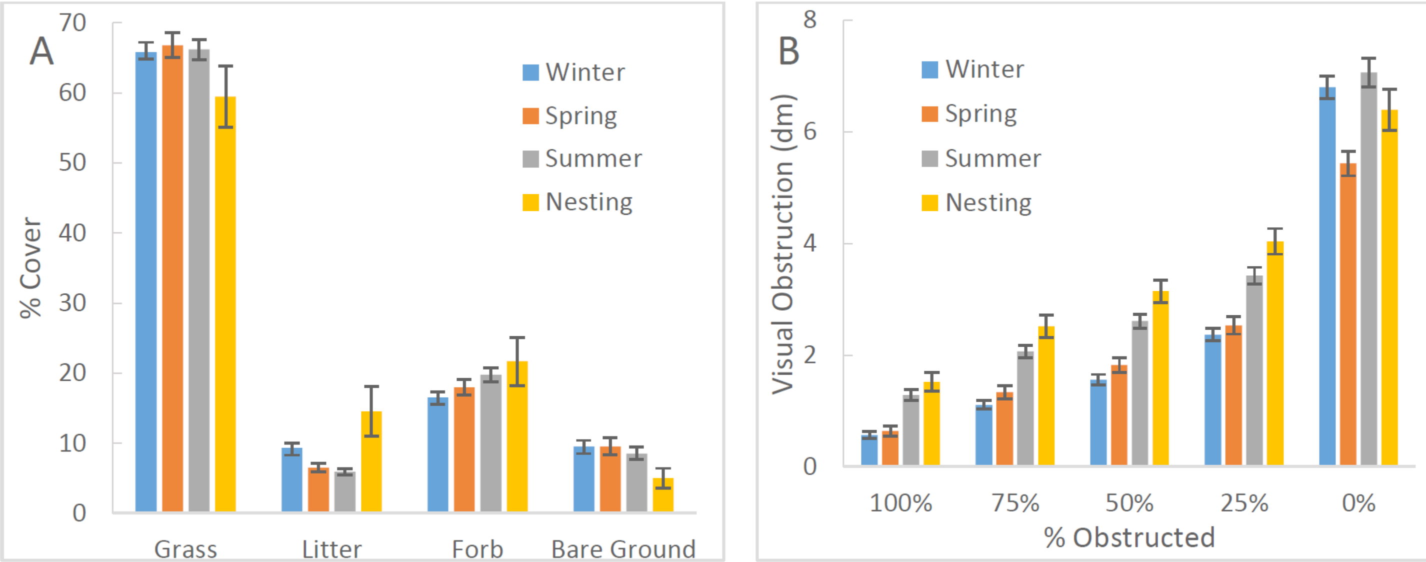

Figure 7. Comparison of vegetation characteristics among seasons for (A) percent cover of grass, litter, forbs, and bare ground and (B) visual obstruction (heights in decimeters at which vegetation density achieves 100%, 75%, 50%, 25%, and 0% obstruction from a distance of 4m and observer height of 1 m) at locations used by LPCs in the Red Hills of Kansas, 2014-2016. Figure from Lautenbach (2017).

vegetation heterogeneity can then help prevent reestablishment of woody plants (Lautenbach *et al.* 2017). The combination of targeted tree removal with prescribed fire thus serves to prevent repeated woodland encroachment and increase LPC abundance (Ortmann *et al.* 1998, Fuhlendorf *et al.* 2017, Lautenbach *et al.* 2017).

Findings also indicate that combining grazing management with prescribed fire benefits LPC and the functionality of the grassland habitat on which LPC depend. Patch-burn grazing can maintain vegetation structure and composition within the recommended guidelines for suitable LPC habitat for longer periods than outdated strategies of intensive grazing or fire-only treatments (Elmore *et al.* 2017, Lautenbach 2017, Starns *et al.* 2017). Additionally, patch-burn grazing serves as a viable fuels management strategy and yields good livestock performance—such as leading to livestock weight gains equal to or exceeding those seen with more resource-exhaustive practices such as intensive early stocking (Fuhlendorf *et al.* 2012, Winder *et al.* 2017)—which provides land managers the opportunity to balance conservation and economic goals. Finally, past studies show that patch-burn grazing helps create grassland mosaics that, in addition to benefitting LPCs, provide livestock with grazing choices that enable them to thrive despite changes in temperature and precipitation (Fuhlendorf and Engle 2004, Allred *et al.* 2014).

Ranchers practicing adaptive grazing management according to the most recent assessment findings can enhance the benefits of patch-burn grazing. Using grazing practices that improve heterogeneity (Kraft 2016), land managers can balance the needs of agricultural operations with conservation concerns. While a one-size-fits-all management prescription is not feasible, the findings outlined in the heterogeneity-based grazing assessment described above provide informed options to improve the efficacy of grazing management on pastures and ranches. Targeted grazing treatments within areas occupied by LPC and containing active lek sites will provide the greatest initial conservation benefits, which can then lead to LPC dispersal into unoccupied sites. These strategies, when combined with properly planned burn intervals within a patch-burn grazing framework, can significantly improve habitat quality for LPCs and provide benefits to the land and those it supports.

Conservation Effects Assessment Project: Translating Science into Practice

The Conservation Effects Assessment Project (CEAP) is a multi-agency effort to build the science base for conservation. Project findings help to guide USDA conservation policy and program development and help farmers and ranchers make informed conservation choices.

One of CEAP's objectives is to quantify the environmental benefits of conservation practices for reporting at the national and regional levels. Because wildlife is affected by conservation actions taken on a variety of landscapes, the CEAP-Wildlife National Component complements the CEAP national assessments for cropland, wetlands, and grazing lands. The Wildlife National Assessment works through numerous partnerships to support relevant assessments and focuses on regional scientific priorities.

For more information, visit www.nrcs.usda.gov/technical/NRI/ceap/, or contact Charlie Rewa at charles.rewa@wdc.usda.gov.

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