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March 30, 2026

Public Comments Processing,
Attn: FWS-R2-ES-2025-1661
U.S. Fish and Wildlife Service
MS: PRB/3W
5275 Leesburg Pike
Falls Church, VA 20041-3803

Re: Comments on the U.S. Fish and Wildlife Service's Request for Information on Status Review for the Lesser Prairie-Chicken, FWS-R2-ES-2025-1661 (February 26, 2026)

To Whom It May Concern:

This letter provides comments from the American Petroleum Institute ("API"), the American Exploration and Production Council ("AXPC"), the Independent Petroleum Association of America ("IPAA"), the Colorado Oil and Gas Association ("COGA"), the New Mexico Oil and Gas Association ("NMOGA"), the Petroleum Alliance of Oklahoma, and the Texas Oil and Gas Association ("TXOGA"), (collectively, "the Associations") on the U.S. Fish and Wildlife Service's (FWS's or "the Service's") request for information pertaining to the Species Status

Assessment of the Lesser Prairie Chicken (LPC). As has been previously outlined in comments filed by the Associations on the Proposed Listing of the Lesser Prairie Chicken (FWS-R2-ES-2021-0015), the Associations believe that the Listing's partition of the range-wide LPC population into two Distinct Population Segments (DPSs) is inconsistent with the Endangered Species Act (ESA), Congress' intent in conferring FWS the authority to designate DPSs, the Service's own policy guidelines, and the best scientific and commercial information available. In 2021, FWS's DPS designation also represents a largely unexplained departure from the range-wide taxonomic classification that the Service has utilized for the LPC for decades.

The Associations further believe that the Species Status Assessment Report ("2021 SSA Report") on which FWS based their proposal did not consider the best and most recent scientific information available, including the most recent survey and conservation data. The best scientific and commercial information available demonstrates that the range-wide LPC population is not at risk of extinction now or in the foreseeable future due to the ongoing and significant conservation efforts, research initiatives, and heightened awareness dedicated to the protection and recovery of this species.

In recent years, the LPC range-wide population estimate has demonstrated a trend of population stability, with some of the ecoregions recording year-on-year population increases.[1] Through a combination of public and private efforts, the LPC is now better protected than at any previous time. The Associations' members alone have voluntarily protected millions of acres of LPC habitat, and contributed tens of millions of dollars in LPC conservation funding and research, as demonstrated by annual reports from the Western Association of Fish and Wildlife Agencies (WAFWA)'s Range-Wide Plan and the Center of Excellent for Hazardous Material Management (CEHMM) Candidate Conservation Agreement with Assurances (CCAA).

Moreover, listing LPCs as threatened or endangered does not provide any additional conservation benefits. To the contrary, we believe that the 2022 decision to list the Southern DPS as endangered and the Proposed Northern DPS as threatened undermined a vast array of voluntary protections that the Associations' members and others have adopted in order to protect and conserve LPCs. Not only did FWS fail to adequately account for these voluntary conservation measures in proposing this listing determination, the Service also failed to consider the broader detrimental impact of such a determination on private stakeholders' willingness to undertake other voluntary measures for the conservation of species.

The Associations applaud the Service's re-examination of the 2022 listing of the LPC and appreciate the opportunity to contribute to the Species Status Assessment. Based on the foregoing facts, the Associations strongly urge FWS to consider all the best available

[1] Nasman, K., Rintz, T., DiDonato, G., & Kulzer, F. (2022). Range-wide population size of the lesser prairie-chicken: 2012 to 2022. Western EcoSystems Technology, Inc. Prepared for Western Association of Fish and Wildlife Agencies.

information and data in this Species Status Assessment. and reach a conclusion strongly rooted in all data. This data supports the conclusion that the listing of the Lesser Prairie Chicken is not warranted through this new Species Status Assessment.

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I. SUMMARY OF ASSOCIATIONS' CONCERNS WITH THE 2022 FINAL LISTING

The following section is an updated excerpt of the Associations' 2021 comments on the Proposed Listing of the Lesser Prairie Chicken. These comments will be resubmitted for the Services' records as Attachment A. The Associations' also incorporate by reference its previously submitted comments (September 1, 2021) on FWS's proposed listing of the Lesser Prairie Chicken[2] (June 1, 2021) that yielded the 2022 Listing of the Lesser Prairie Chicken (November 25, 2022)[3].

The FWS determined that the range-wide LPC population should be denominated as two entirely new taxonomic units: a Southern DPS that FWS contended to be at risk of extinction and a Northern DPS that the Service believed was likely to be placed at risk of extinction within 25 years. The conclusions made in the finalized listing lack factual and scientific support. On the contrary, these are entirely new and largely unexplained conclusions that the Service proposed draw from essentially the same scientific data on which FWS has for decades assessed the status of LPCs and planned for their conservation. Indeed, in the seven years between 2014 and 2021 FWS determined that the range-wide LPC population

[2] 86 Fed. Reg. 29,432
[3] 87 Fed. Reg. 72,674

was likely to be at risk of extinction within the foreseeable future,[4] LPC populations have shown a trend of stabilization,[5] and present and potential future LPC habitat[6] continues to be improved and protected.[7] The vast majority of these improvements occurred without the LPC being listed on the ESA. As such, the Associations believed that FWS determined that listing LPCs range-wide or as the Proposed DPSs is not warranted.[8]

As explained in Attachment A's Section II below, the Associations offered these comments, not only because our members operate within LPC habitat, but because they have been at the forefront of LPC conservation for many years. The Associations' members have helped protect and improve millions of acres of present and potential future LPC habitat. And as relevant here, these conservation actions–undertaken voluntarily and with significant financial investment–have been effective in maintaining LPC populations, improving habitat and connectivity zones, and contributing to much-needed species research to ensure conservation actions are informed by the best available science.

Given our members' longstanding efforts to conserve LPC populations and responsibly operate within LPC habitat, the Associations have constructively engaged with FWS in each of the Service's prior efforts to determine the conservation status of LPCs under the ESA. Those prior efforts are described in Section III below.

[4] This determination was finalized on April 10, 2014. (79 Fed. Reg. 20,074). It was overturned by the U.S. District Court for the Western District of Texas in 2015. *Permian Basin Petroleum Ass'n. v. Dep't of Interior*, 127 F. Supp. 700 (W.D. Tex. 2015) ("*PBPA v. DOI*").

[5] Nasman, K., Rintz, T., DiDonato, G., & Kulzer, F. (2022). *Range-wide population size of the lesser prairie-chicken: 2012 to 2022*. Western EcoSystems Technology, Inc. Prepared for Western Association of Fish and Wildlife Agencies.

[6] Western Association of Fish and Wildlife Agencies. (2025). *The 2024 annual report for the range-wide oil and gas candidate conservation agreement with assurances for the lesser prairie-chicken*.

[7] Center for Environmental Health, Monitoring, and Management (CEHMM). (2025). *2025 annual report: Candidate conservation agreements—Lesser prairie-chicken and dunes sagebrush lizard*.

[8] The Associations' discussion throughout these comments mainly in response to the precise determinations FWS proposes (*i.e.*, designating the range-wide LPC population as a Proposed Northern DPS and a Proposed Southern DPS; determining that the Proposed Northern DPS is threatened; determining that the Proposed Southern DPS is endangered; and providing an over-inclusive Section 4(d) Rule applicable only to the proposed Northern DPS). These comments should, however, be construed more broadly. The Associations do not believe it is appropriate for FWS to use its DPS designation authority to adopt any taxonomic deconstruction of the range-wide LPC population. The best scientific and commercial information available does not allow FWS to credibly determine that the range-wide LPC population, the Proposed Northern DPS, or the Proposed Southern DPS are presently at risk of extinction or likely to become so in the foreseeable future, And should it be necessary for the Service to adopt a Section 4(d) rule in this or any future rulemaking, FWS must assure that is necessary and advisable to provide for the conservation of the species.

The Associations' comments in response to specific aspects of the Service's Proposed Listing are found in Attachment A's Sections IV to VII below. In Attachment A's Section IV below, the Associations explain that it would represent an arbitrary and capricious abuse of agency discretion if FWS were to finalize its proposed determination that the range-wide population of LPCs should now be designated as the Proposed Northern and Southern DPSs. This largely unexplained determination was procedurally flawed, contrary to best available scientific data, and incompatible with the Service's own guidelines.

Indeed, the proposed DPS determination was a stark and unexplained departure from the taxonomic classification that FWS has recognized for over two decades. The Service rejected commenters' requests to designate DPSs the only other time FWS proposed to list LPCs under the ESA[9] and again in the 90-day finding that preceded the 2022 Listing.[10] As a consequence of this latter rejection, FWS did not submit this important taxonomic assessment to the SSA team, and did not request comments or data on the DPS designation at the 90-day finding stage. Moreover, when commenters like the Associations provided data relevant to the taxonomic classification of LPCs, that data and related comments did not appear to have been considered. Since the 2022 listing of the LPC, multiple peer-reviewed genomic studies have provided insight into the species genetic diversity. [11] Analyses indicate that LPC populations have retained moderate levels of heterozygosity, with no evidence of recent or severe genetic bottlenecks supporting the presence of DPSs.[12] Although these studies detect genetic differentiation between ecoregions, overall genomic diversity is comparable across the LPC range[13], indicating the population has not experienced the kind of genetic narrowing that is typical of a species in serious decline.

The Service's conclusion in 2021 that LPCs will be designated as two DPSs was also not based on new data. The same geographic separation and genetic structuring that FWS suggested compelled a designation of a Northern and Southern DPS was already

[9] 79 Fed. Reg. 20,074 (Apr. 10, 2014).

[10] 81 Fed. Reg. 86,315, 86,317 (Nov. 30, 2016).

[11] Andrew N Black, Kristin J Bondo, Andrew Mularo, Alvaro Hernandez, Yachi Yu, Carleigh M Stein, Andy Gregory, Kent A Fricke, Jeff Prendergast, Dan Sullins, David Haukos, Michael Whitson, Blake Grisham, Zach Lowe, J Andrew DeWoody, A Highly Contiguous and Annotated Genome Assembly of the Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*), *Genome Biology and Evolution*, Volume 15, Issue 4, April 2023, evad043, https://doi.org/10.1093/gbe/evad043

[12] Andrew N Black, Andrew J Mularo, Jong Yoon Jeon, David Haukos, Kristin J Bondo, Kent A Fricke, Andy Gregory, Blake Grisham, Zachary E Lowe, J Andrew DeWoody, Discordance between taxonomy and population genomic data: An avian example relevant to the United States Endangered Species Act, *PNAS Nexus*, Volume 3, Issue 8, August 2024, pgae298, https://doi.org/10.1093/pnasnexus/pgae298

[13] Lawrence, A.J., Carleton, S.A., Oyler-McCance, S.J., DeYoung, R.W., Nichols, C.T. and Wright, T.F. (2025), Maintenance of Genetic Diversity Despite Population Fluctuations in the Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*). Ecol Evol, 15: e70879. https://doi.org/10.1002/ece3.70879

recognized and frequently discussed when FWS rejected comments requesting designation of DPSs in 2014. The Service's 1.5-page DPS analysis supported its proposed DPS designation with only one scientific paper published after the 2014 final listing decision (Oyler-McCance (2016)).[14] That paper provided additional support for, but was certainly not the first to find, evidence of genetic structuring. Indeed, the authors themselves disclaimed that these analyses were "as reported in previous studies (e.g., Pruett et al. 2011)."[15]

Not only was the Service's proposed DPS designation a new and unexplained conclusion drawn from long-recognized scientific data, but it was also irreconcilable with Congressional intent and the Service's own policy guidelines. When Congress amended the ESA to allow the listing services to designate DPSs, it admonished the listing services to use this authority "sparingly and only when then biological evidence indicates that such action is warranted."[16] The Services' authority to designate DPSs is therefore limited to instances where populations of the species are conspicuously separated from each other and markedly distinct in some way that is important to the taxon as a whole.[17]

None of these factors supported separating the range-wide LPC population into the Northern and Southern DPSs. The LPCs in both of these populations are physiologically, morphologically, and behaviorally identical. The genetic distinctions described in the Service's DPS determination are consistent with the genetic variation one would expect to observe in any widespread species, and in no way indicative of genetic adaptations or other evolutionary distinctions.[18] The DPS designations are not proposed with an intent to obviate the need to list a segment of the LPC population, do not appear designed to focus conservation efforts on a portion of the range-wide LPC population, and seem to lack any conservation purpose at all.

Further, the Service's 1.5-page DPS analysis did not explain why either Proposed DPS was significant to the taxon as a whole. Rather, without explanation, the Proposed Listing

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[14] Oyler-McCance, S.J., DeYoung, R.W., Fike, J.A. *et al*. Range wide genetic analysis of Lesser Prairie-Chicken reveals population structure, range expansion, and possible introgression. Conserv Genet 17, 643–660 (2016).

[15] Oyler-McCance (2016) at 653 (referring to Pruett CL, Johnson JA, Larsson LC *et al* (2011) Low effective population size and survivorship in a grassland grouse. Conserv Genet 12:1205–1214).

[16] S. Rep. No. 95-151, at 7 (1979), reprinted in ESA Legislative History at 1397.

[17] 61 Fed. Reg. 4,722, 4,725 (Feb. 7, 1996).

[18] Oyler-McCance (2016); Ronald A. Van den Bussche *et al.*, Genetic Variation Within and Among Fragmented Populations of Lesser Prairie-Chickens (*Tympanuchus Pallidicinctus*), 12, at 675-683 (Molecular Ecology 2003); Christian A. Hagen *et al.*, Regional Variation in mtDNA of the Lesser Prairie-Chicken, 112, at 29-37 (Condor 2010); C. L. Pruett *et al.*, Low Effective Population Size and Survivorship in a Grassland Grouse, 12, at 1205-1214 (Springer 2011); R. W. DeYoung, and D. L. Williford, Ecology and Conservation of Lesser Prairie-Chickens: Genetic Variation and Population Structure in the Prairie Grouse- Implications for Conservation of the Lesser Prairie-Chicken at 77-97. (David A. Haukos & Clint W. Boal eds., 2016); John A. Crawford, Status, Problems, and Research Needs of the Lesser Prairie-Chicken, 1-7, (1980).

concluded that the northern and southern populations were significant simply because they were discrete populations. FWS also outlined in their 2021 Proposed Listing, again without explanation, that the loss of either the Northern or Southern DPSs would result in a significant gap in the range of the species. This "significant gap" element of the Service's DPS Policy was developed to allow the listing of interstitial populations necessary to maintain connectivity between and among a species range-wide population. As applied to the LPC, the "significant gap" element makes little sense because there is no interstitial population between the Northern and Southern DPSs and because FWS concluded there is no gene flow between the populations.

FWS never discussed the incongruity of its "significant gap" conclusion with the intended purpose of this element. Instead, the Proposed Listing simply asserted that the Proposed Northern and Southern DPSs contain significant portions of the LPC's range and therefore the hypothetical loss of either population would result in a "significant gap." As such, in Attachment A's Section IV, the Associations cautioned that absent any meaningful demonstration of discreteness or significance, FWS should not have finalized its proposed designation of a threatened Northern DPS or an endangered Southern DPS. FWS did not provide a reasonable explanation for, or even acknowledged, this stark and seemingly arbitrary policy shift. It was not supported by data; it was inconsistent with the ESA and the DPS Policy, and it serves no conservation purpose. Attachment A's Section IV therefore concluded with the Associations' request that FWS should have withdrawn its proposed DPS determination.

In Attachment A's Section V, the Associations explain that there is no basis for FWS to conclude that the range-wide LPC population or the Service's proposed DPSs meet the ESA's definitions for either threatened or endangered species. The ESA commands a high standard for listing species, and owing to unprecedented conservation efforts, an ongoing monitoring program, and the LPC's known resiliency to seasonal drought, LPCs face no present or reasonably foreseeable risk of extinction.

The best available science demonstrated the Proposed Listing seemingly recognized that LPCs are well protected through a myriad of conservation efforts. The Service's proposal to list a Northern DPS as threatened and a Southern DPS as endangered is therefore based entirely on the Service's presumption that potential habitat loss over the next 25 years[19] will be so extensive that it will not only undermine the observed stabilization of the LPCs estimated population size, but reverse those trends to such a degree that LPC abundance will plummet to levels never before observed, placing LPCs on the brink of extinction. Once again, the best available scientific information belied this pessimistic conclusion.

[19] The Service's proposal is based on a "foreseeable future" of 25 years. This was the time horizon through which FWS believed it could project future habitat changes with reasonable confidence. *See* 86 Fed. Reg. at 29,461.

WAFWA and CEHMM administer the LPC CCA/CCAAs through well-established and transparent programs that are documented in detailed annual reports. These reports clearly describe how funding is directed toward meaningful, on-the-ground conservation actions, including grassland restoration, research, and monitoring activities. Collectively, the annual reports demonstrate that industry's voluntary participation in these conservation agreements is making sustained, science-based investments that directly support conservation objectives for the LPC. WAFWA is in the process of publishing the latest data in their 2025 Annual Report. CEHMM published their 2025 Annual Report on March 2026.[20] Once WAFWA has published their 2025 Annual Report, the Associations will review them concurrently and file additional comments pertaining to their findings. The Associations firmly believe that the positive results provided in past reports will continue and support the Service's Species Status Assessment.

In addition to documenting implementation and outcomes, WAFWA has historically provided broader scientific context through range-wide population estimates for the LPC issued between 2012 and 2022. [21] While these population estimates represent one component of the overall information base, the Service has also acknowledged a substantial and diverse body of peer-reviewed and grey literature relevant to the Species Status Assessment. Consistent with the ESA's requirement to rely on the best available science, evaluation of the LPC should fully consider both the extensive conservation actions and outcomes documented annually by WAFWA and CEHMM, as well as the broader scientific record. Together, these sources provide important, complementary lines of evidence demonstrating the scale, rigor, and effectiveness of collaborative, science-driven conservation efforts implemented in partnership with industry and private landowners.

The Service's proposed conclusions to the contrary appear to be based on the 2021 SSA Report and the geospatial analysis it employed to model potential future changes to LPC habitat.[22] The Associations view the geospatial modeling in the 2021 SSA Report as a potentially helpful tool for synthesizing data and qualitatively assessing the potential impacts on LPCs of various hypothetical future development scenarios, but it does not present, nor is it capable of providing, the best available information on whether the LPCs range-wide population is at risk of extinction within the 25-year foreseeable future.

The future available habitat projections generated by the Service's geospatial model are the product of the analytical framing decisions and model inputs that FWS used to run the

[20] Center of Excellence for Hazardous Materials Management. (March 2026). *2025 annual report: Candidate conservation agreements: Lesser prairie-chicken and dunes sagebrush lizard*. https://www.cehmm.org/_files/ugd/b96cf9_0e25478b743c488d82b7cbf75b7b6fdf.pdf

[21] Nasman, K., T. Rintz, D. Pham, and L. McDonald. 2020. Range-wide population size of the lesser prairie-chicken: 2012 to 2020. Prepared for: Western Association of Fish and Wildlife Agencies by Western EcoSystems Technology, Inc., Fort Collins, CO. October 12, 2020. 23 pp ("Nasman (2020)").

[22] 86 Fed. Reg. at 29,442.

model. Many of these framing judgements and model inputs are plainly inconsistent with the best available science and others are, at best, highly questionable. Inferior data do not become the best available science simply because they are run through a model.

In Attachment A's Section V.c.3., the Associations describe the Service's geospatial modeling framework and a few of the framing decisions and input parameters that demonstrate why the model's projections of current and future usable habitat are not realistic, data-driven, or amenable for use in listing decisions. For instance, by deciding to analyze only areas currently occupied by LPCs, FWS essentially calibrated the model to prohibit it from identifying any positive impacts from range expansion and population shifts that the best available science shows the potential to occur.

The model's constrained analysis area is also inconsistent with the analysis area FWS used in all previous conservation planning and listing decisions and eliminates from any consideration as usable habitat approximately 20 million acres of potentially suitable habitat– some of which is currently occupied and used by LPCs. This improperly circumscribed analysis area prevented the model from projecting benefits associated with any of the many conservation measures in areas buffering occupied range, including efforts to protect and improve habitat and habitat connectivity across the entire range of the LPC.

From this unscientifically delineated analysis area, FWS then excluded "unusable areas" as large buffer zones around various natural and anthropogenic features. In doing so, FWS misconstrued data on features that LPCs generally avoid as describing areas that LPCs cannot use in any way. Lawrence, Carelton, Gould, and Nichols found that power poles could be a strong predictor of LPC mortality (used as perches by predators), but that proximity to well pads and roads were not strong predictors of mortality.[23]Lebeau et al[24] found that LPCs can still persist near infrastructure and that movement between infrastructure was recorded, demonstrating that infrastructure is not a hard barrier to movement (and there for potential gene flow).[25] And in the case of oil and natural gas wells, the model ignored that LPCs avoid

[23] LAWRENCE, A.J., Carleton, S.A., Gould, W.R. and Nichols, C.T. (2021), Lesser Prairie-Chicken Survival in Varying Densities of Energy Development. Jour. Wild. Mgmt., 85: 1256-1266. https://doi.org/10.1002/jwmg.22084
[24] LeBeau, C., Smith, K. and Kosciuch, K. (2023), Lesser prairie-chicken habitat selection and survival relative to a wind energy facility located in a fragmented landscape. Wildlife Biology, 2023: e01091. https://doi.org/10.1002/wlb3.01091
[25] LeBeau, C., Sattler, R., Ebenhoch, K., Crane, M. and Pugh, a.S. (2025), Patterns in lek persistence and attendance by lesser prairie-chicken (Tympanuchus pallidicinctus) near a wind energy facility in southern Kansas. Wildlife Biology, 2025: e01438. https://doi.org/10.1002/wlb3.01438

wells at lower levels and by smaller distances than most other anthropogenic structures.[26] The model also did not recognize that, unlike other types of development, many of the impacts from oil and gas development are temporary.

The Service's geospatial model also artificially excluded a large amount of potentially suitable (and even currently occupied) habitat using a "near-neighbor" analysis that deemed unusable any area unless it was grouped within a block of at least 60 percent potential usable, un-impacted land cover within one mile.[27] Here again, FWS misconstrued the well-established conception that LPC abundance is positively correlated with larger and less fragmented grassland areas[28] to suggest that LPCs could not use or occupy any area with less than 60 percent un-impacted land cover. Indeed, none of the studies cited in the 2021 SSA Report's description of the "near neighbor analysis" support this proposition.

In Attachment A's Section V.c.4., the Associations explained how each of the aforementioned programming decisions (as well as many other questionable parameters) prohibited the geospatial model from projecting the potential benefits of many present and future conservation efforts. As a result, the model's projections of "future conditions," and in fact, the Service's entire geospatial modeling effort, fail to capture even a fraction of the unprecedented conservation efforts that have been devoted to LPCs, and have been ongoing for many years.

The preamble to FWS's Proposed Listing likewise failed to provide this mandatory analysis of conservation actions that could positively affect LPCs, either range-wide or as the DPSs. Indeed, the Proposed Listing contains no PECE analysis at all. This is a surprising and pernicious oversight given that the Service's 2014 decision to list range-wide LPCs at threatened was vacated by the Western District of Texas for failing to conduct a proper PECE analysis. Thus, on this matter alone, that Associations believe that FWS's Proposed Listing was unlawful.

Finally, in Attachment A's Section VI, the Associations provided comment on the Service's proposed Section 4(d) rule for the proposed threatened Northern DPS. While these comments are necessarily only directly applicable to the proposed Northern DPS, these comments should be more broadly construed to apply to any effort to adopt a Section 4(d) rule in this or any future rulemaking (*e.g.*, if the Service were to propose to list LPCs as threatened range-wide or within the Proposed Southern DPS).

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[26] *See* Patten, M.A., Barnard, A.A., Curry, C.M. *et al.* Forging a Bayesian link between habitat selection and avoidance behavior in a grassland grouse. Sci. Rep. 11, 2791 (2021). https://doi.org/10.1038/s41598-021-82500-0; *See also* Peterson, J. M. *et al.* Estimating response distances of Lesser Prairie-Chickens to anthropogenic features during long-distance movements. Ecosphere 11, e03202 (2020).

[27] 2021 SSA Report at 22

[28] Spencer, D., Haukos, D., Hagen, C., Daniels, M. and Goodin, D. 2017. Conservation Reserve Program mitigates grassland loss in the lesser prairie-chicken range of Kansas. Global Ecology and Conservation 9:21–38.

With respect to the Proposed Section 4(d) rule, the Associations are concerned that FWS had not provided a reasonable explanation for the restrictions the Service proposes to impose if it finalized a threatened listing for the Proposed Northern DPS. Instead, without any meaningful explanation, FWS proposed to exercise its Section 4(d) authority to "extend the standard section 9 prohibitions for endangered species to the Northern DPS of the lesser prairie-chicken in order to conserve the species."[29]

The Service's proposed to conclude that "there is no potential for a section 9 violation" when undertaking habitat restoration because these efforts "occur on lands already impacted or altered in ways that they no longer represent lesser prairie-chicken habitat and thus there is no potential for a section 9 violation."[30] This conclusion made little sense because it ignored that LPCs are likely to be present in many areas that may not be sufficient to support all the life stages of LPCs.

The Service's proposed 4(d) rule, which purported to "promote conservation of the Northern DPS of the lesser prairie-chicken by encouraging management of the landscape in ways that meet the conservation needs of the lesser prairie-chicken,"[31] also did not mention, much less discuss, the WAFWA Range-wide Plan, the Natural Resources Conservation Service's LPC Initiatives, or any conservation program or effort that was excluded from Section 9 take liability in the Service's 2014 Section 4(d) Rule.[32] As such, the Service's proposed 4(d) rule contained no justification or reasonable basis for this profoundly important policy change. Nor did the proposed Section 4(d) rule indicate even a basic recognition that FWS was changing this longstanding approach. The final listing decision also reflected these omissions.

The Associations believed that the Service's proposed Section 4(d) rule largely ignored and potentially undermined current and future efforts to voluntarily protect and conserve LPCs and their habitat. If FWS proposes a new LPC listing in the future, at a minimum, the Service must propose and take comment on a new proposed 4(d) rule that is in accord with the ESA, the Service's own regulations, and the well-recognized need for FWS to more fully support and incentivize state and private conservation.[33]

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[29] 86 Fed. Reg. at 29,475.
[30] 86 Fed. Reg. at 29,475.
[31] 86 Fed. Reg. at 29,475.
[32] *See* 69 Fed. Reg. at 20,074.
[33] Although the Associations believe that FWS cannot lawfully finalize the current proposed DPS designation and listing determination, if FWS proceeds to finalize this proposal with changes to either the taxonomic classification or the listing status, those changes will also require a reassessment under Section 4(d) of the protections necessary and advisable for the conservation of LPCs. For instance, if FWS determines that the range-wide LPC population or Proposed Southern DPS should be listed as threatened, the Service must reassess and take comment on the Section 9 prohibitions necessary and advisable for those populations.

In sum, the Associations found substantial scientific and policy discrepancies within the 2021 Proposed Listing and 2022 Final Listing. We welcome the opportunity for FWS to consider the best available science in this new Species Status Assessment, including that which we submitted in 2021 and did not believe was considered by the Service.

II. THE INTERESTS OF THE ASSOCIATIONS

API is the national trade association representing America's oil and natural gas industry. Our industry supports more than 11 million U.S. jobs and accounts for approximately 8 percent of U.S. Gross Domestic Product ("GDP"). API's nearly 600 members, from fully integrated oil and natural gas companies to independent companies, comprise all segments of the industry. API's members are producers, refiners, suppliers, retailers, pipeline operators, and marine transporters, as well as service and supply companies, providing much of our nation's energy. API was formed in 1919 as a standards-setting organization and is the global leader in convening subject matter experts across the industry to establish, maintain, and distribute consensus standards for the oil and natural gas industry. API has developed more than 700 standards to enhance operational safety, environmental protection, and sustainability in the industry.

API and its members are dedicated to safely and responsibly developing, transporting, and supplying critical energy resources to the nation and are committed to doing so in a manner that protects species and their habitats. Our upstream and midstream industry sectors have actively participated in significant conservation efforts to protect many species across millions of acres of habitat.

The American Exploration and Production Council (AXPC) is a national trade association representing the leading independent oil and natural gas exploration and production companies in the United States. AXPC companies produce some of the cleanest and safest oil and natural gas in the world, while supporting millions of Americans in high-paying jobs and investing a wealth of resources in our communities. Dedicated to safety, science, and technological advancement, our members strive to deliver affordable, reliable energy while positively impacting the economy and the communities in which we live and operate. As part of this mission, AXPC members understand and promote the importance of ensuring positive environmental and public-welfare outcomes and responsible stewardship of the nation's natural resources. It is important that regulatory policy enables us to support continued progress on both fronts through innovation and collaboration. AXPC works with regulators and policymakers to create sound, fact-based public policies that enable responsible development of America's vast oil and natural gas resources in order to meet domestic and global energy demands.

The Independent Petroleum Association of America (IPAA) is a national upstream trade association representing thousands of independent oil and natural gas producers and service companies across the United States. Independent producers operate 95 percent of the nation's oil and natural gas wells and are responsible for 85 percent of US oil production and 90 percent of natural gas production onshore.

Western Energy Alliance (the Alliance) is the leader and champion for independent oil and natural gas companies in the western United States. Working with a vibrant membership base for over 50 years, the Alliance stands as a credible leader, advocate, and champion of industry. Alliance members engage in all aspects of environmentally responsible exploration and development of oil and natural gas. Our expert staff, active member committees, and committed board members form a collaborative and welcoming community of professionals dedicated to abundant, affordable energy and a high quality of life for all.

Founded in 1984, the Colorado Oil & Gas Association's (COGA) mission is to foster and promote the beneficial, efficient, responsible and environmentally sound development, production and use of Colorado oil and natural gas. COGA serves as the unified political and regulatory voice for the oil and natural gas industry in Colorado by supporting our members through advocacy, partnerships, education and stakeholder engagement.

NMOGA is a coalition of oil and natural gas companies and community partners dedicated to promoting the safe, sustainable, and environmentally responsible development of energy through advocacy, collaboration, and education. We envision a New Mexico where every resident recognizes the benefit of its oil and gas industry and is invested in its future. We are committed to representing the industry with integrity, dedication, collaboration, and trust through advocacy, collaboration, and trust. NMOGA members are producing affordable, reliable, and sustainable energy options through continuous innovation and environmental stewardship.

The Alliance is the largest oil and gas trade association in the Mid-Continent and the only trade association in Oklahoma to represent all sectors of the state's oil and natural gas industry. Representing more than 1,700 individuals and member companies, The Alliance's membership includes oil and natural gas producers, service providers to the oil and natural gas industry, midstream companies, refiners, and other associated businesses. Our members include companies of all sizes, ranging from small, family-owned companies to large, publicly traded corporations. Our members are responsible for 83% of all operated crude oil and natural gas production in Oklahoma. When non-operated production is considered, we estimate our members produce, transport, process, and refine more than 97% of Oklahoma's crude oil and natural gas. Additionally, our members have operations, assets, or interests in most of the United States' oil and natural gas producing regions as well as internationally. Our members develop private, state, and federal minerals and operate on federal lands in Oklahoma and in other states.

The Texas Oil & Gas Association is a statewide trade association representing every facet of the Texas oil and gas industry including small independents and major producers. Collectively, the membership of TXOGA produces approximately 90 percent of Texas' crude oil and natural gas, operates the vast majority of the state's refineries, LNG export capacity and pipelines, and includes a broad array of service companies integral to the industry. In fiscal year 2025, the Texas oil and natural gas industry supported over 495,000 direct jobs and paid $27 billion in state and local taxes and state royalties, funding our state's schools, roads and first responders.

III. INDUSTRY COMMITMENT TO CONSERVATION

Given our industry's operations in areas utilized by the Lesser Prairie Chicken, the Associations and their members have meaningfully engaged in commenting on the prior proposals to list the LPC as a threatened species in December 201234and in June 2021.35
The Associations' members, joined by hundreds of organizations, landowners, private sector companies, universities, and state wildlife experts also have undertaken monumental efforts to protect LPC habitat and avoid a listing by expanding their already robust conservation efforts to unprecedented levels. Following the publication of the Proposed Listing in December 2012, each of the many preexisting LPC conservation efforts continued to expand, and important new initiatives were finalized and implemented.

Among these measures was the Western Association of Fish and Wildlife Agencies ("WAFWA") Range-Wide Plan36 and the Center of Excellent for Hazardous Material Management (CEHMM) Candidate Conservation Agreement with Assurances (CCAA)37, both of which the FWS endorsed as providing a comprehensive framework for habitat conservation and mitigation. With the substantial voluntary participation of the Associations' member companies, through their 2024 Annual Report, WAFWA reported over 5 million acres were enrolled for LPC habitat conservation under the Range-Wide Plan. In their 2025 Annual Report, CEHMM reported over 3.53 million acres enrolled from oil and gas participants. Both entities anticipate their 2025 Annual Reports to be published soon.

These actions, together with industry best practices and technology advances further detailed below, demonstrate the industry's commitment to conduct their activities in an environmentally responsible manner. API's primary interest is to continue providing critical energy resources in ways that minimize impacts to species and habitat, while avoiding unwarranted restrictions that could be a hinderance to national energy security objectives and divert industry and government resources away from other, higher-priority biodiversity conservation needs.

[34] 77 Fed. Reg. 73,828
[35] 86 Fed. Reg. 29,432
[36] 79 Fed. Reg. 19,990
[37] 82 Fed. Reg. 31,612

A. Industry Practices and Technological Advancements

Irrespective of where our members operate, our industry employs a wide variety of protective and/or beneficial practices and technologies during all phases of our operations to enable the safe and responsible development of the nation's oil and natural gas resources while reducing and/or mitigating potential impacts to species, habitats, land, water, and other natural resources. These conservation measures and technologies have helped our industry minimize its impacts on wildlife and the environment while still providing much-needed resources to the American public.

- **Conservation Measures:** API members often employ a variety of best practices when they construct, operate, maintain, reclaim, or repair facilities or other sites near protected species or their habitat. Some measures utilized when conditions and regulatory requirements allow are:

    - Pre-Construction Habitat Evaluations and the Consideration of Habitat in Siting Decisions: The oil and natural gas industry utilizes rigorous pre-construction habitat evaluations to help identify and potentially avoid protected species habitat and areas like native prairieland that contain critical habitat resources for species.

    - Construction Timing and Seasonal Considerations: Many API members protect a variety of species by scheduling construction and operational activities outside of the species' breeding season whenever possible. These efforts help minimize or significantly abate any potential adverse impacts our operations may have on species during their most vulnerable life stages.

- **Technological Advancements:** API members employ a variety of advanced technologies that can significantly reduce surface disturbances and minimize the impacts of our operations on wildlife and habitat. The following technological advances benefit numerous listed and unlisted species and represent just one part of a continuously improving evolution of industry's capability to operate in proximity to species and their supporting habitats:

    - Horizontal and Directional Drilling: Through technological advancements like horizontal and directional drilling, our industry has taken significant steps to minimize its impacts on wildlife and the environment while still providing much-needed resources to the American public. The shift to horizontal drilling has changed modern oil and gas development's disturbance, fragmentation, and

activity profiles. It provides for a 70 percent reduction in the surface footprint associated with our members' operations.[38]

- Use of Closed-Loop Drilling Fluid Systems: To further minimize our operations' potential adverse impacts on protected species and habitat, the oil and natural gas industry has adopted closed-loop drilling fluid systems that recycle drilling fluids, thereby decreasing water consumption and the risk of contamination to nearby water sources.

- Advanced Well Control Systems: The oil and natural gas industry's development of advanced well control systems, including automated shutdown mechanisms and real-time monitoring, has significantly reduced the risk of spills and blowouts in the upstream sector. These systems protect habitat areas around drilling sites by allowing operators to promptly identify and address any anomalies in real-time to make our drilling operations safer and more protective of ecological resources.

B. Examples of Member Company Engagement in Conservation of the LPC

Some specific examples of our members' involvement with the conservation of the LPC are provided below. Many of our member companies have been involved with CCA/CCAAs for the LPC as early as 2008. These efforts are part of a broader, multi-agency approach to conserve and recover the lesser prairie chicken and its habitat, with our member companies playing a role through compliance, partnership, and implementation of conservation measures.

- Implementation of Rangeland Conservation Practices: Devon, through its involvement with the BLM Carlsbad Field Office, has worked to slow the effects of cattle grazing and minimize habitat degradation. This includes working closely with industry representatives to use BMPs and to locate projects away from sensitive areas and resources of concern, thereby minimizing impacts to special status species like the lesser prairie chicken.

- Timing Stipulations and Activity Restrictions: Specific timing stipulations have been created to protect the lesser prairie chicken during critical periods. For example, oil and gas activities, including 3-D geophysical exploration and drilling, are not allowed in lesser prairie chicken habitat from March 1 through June 15 annually. Additional restrictions on noise and human activity are also imposed during this period to avoid disrupting mating and nesting. Devon has held strict compliance with these stipulations on federal lands.

[38] D. Applegate & N. Owens, *Oil and Gas Impacts on Wyoming's Sage grouse: Summarizing the Past and Predicting the Foreseeable Future*, HUMAN-WILDLIFE INTERACTIONS, Vol. 8, Iss. 2, Article 15 (2014).

- National Fish and Wildlife Foundation (NFWF) Grant: In October 2024, the Pecos Watershed Conservation Initiative, a public-private partnership that leverages resources from its corporate partners such as Apache Corporation, Chevron, ConocoPhillips, Oxy, and XTO Energy, an ExxonMobil Subsidiary, announced a $3.7m conservation grant from NFWF. The grant slate focused on grassland restoration in New Mexico and Texas. Although the Lesser Prairie Chicken wasn't a focal species with the vast amount of money already spent through the CCAAs, these measured occurred in areas that overlap with the LPC EOR and thus provide benefits to the species.[39]

- Ongoing Environmental Assessments and Partnerships: Devon continues to conduct field assessments on all land types to classify and protect habitat areas for the LPC, and to update plans and agreements as new scientific data becomes available. The focus is on partnerships with agencies and industry to develop innovative ecosystem management strategies.

IV. EFFICIACY OF CCAAS AND DATA AVAILABILITY

The Annual Report for 2025 from WAFWA is forthcoming, and the CEHMM Annual Report was published this month The Associations will provide the latest scientific information and file additional comments to the Service once this data has been made public.

V. CONCLUSION

The Associations appreciate the opportunity to provide these comments and the Service's reconsideration of all best available scientific information, including data that was not considered in the 2022 Listing of the Lesser Prairie Chicken. We believe that through our members continued commitment to the conservation of the species and the best scientific information available, range-wide the LPC have been growing in abundance and are a success story of voluntary conservation efforts. Based on the foregoing, we strongly urge FWS to consider all the best available information in this Species Status Assessment and reach a conclusion strongly rooted in all data. If you have any questions or would like to discuss these comments, please feel free to contact Katherine Clement at API.

Thank you again for your consideration of our comments.

Sincerely,

[39] National Fish and Wildlife Foundation. (2024, October 16). *NFWF announces $3.7 million in conservation grants to restore rivers and grasslands in Pecos River watershed*. https://www.nfwf.org/media-center/press-releases/nfwf-announces-3-7-million-conservation-grants-restore-rivers-and

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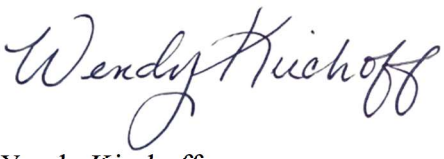

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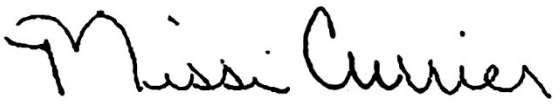

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Appendix A

September 1, 2021

Via Regulations.gov

Public Comments Processing, Attn: FWS-R2-ES-2021-0015
U.S. Fish and Wildlife Service
MS: PRB/3W
5275 Leesburg Pike
Falls Church, VA 22041-3803

Re: Comments on the U.S. Fish and Wildlife Service's Proposal to List Two District Population Segments of the Lesser Prairie Chicken under the Endangered Species Act (FWS-R2-ES-2021-0015)
86 Fed. Reg. 29,432 (June 1, 2021)

Dear U.S. Fish and Wildlife Service:

This letter provides comments from the American Petroleum Institute ("API"), the American Exploration and Production Council ("AXPC"), and the Texas Oil & Gas Association ("TXOGA"), (collectively, "the Associations") on the U.S. Fish and Wildlife Service's (FWS's or "the Service's") proposed determination under the Endangered Species Act ("ESA" or "the Act") that the Lesser Prairie Chicken ("LPC") consists of an endangered "Southern" distinct population segment ("DPS") and a threatened "Northern" DPS ("Proposed Listing").[1] As outlined in these comments, the Associations believe that Service's proposed partition of the range-wide LPC population into two DPSs is inconsistent with the ESA, Congress' intent in conferring FWS the authority to designate DPSs, the Service's own policy guidelines, and the best scientific and commercial information available. FWS's proposed DPS designation also represents a largely unexplained departure from the range-wide taxonomic classification that the Service has utilized for the LPC for decades.

The Associations further believe that the best scientific and commercial information available demonstrate that neither the range-wide LPC population nor FWS's Proposed Southern and Northern DPSs meet the ESA's definitions of either threatened or endangered species. The Species Status Assessment Report ("2021 SSA Report") on which FWS based this proposal did not consider the best and most recent scientific information available, including the most recent survey and conservation data. The best scientific and commercial information available demonstrate that neither the range-wide LPC population nor either of the proposed DPSs are at risk of extinction now and they are highly unlikely to become so in the foreseeable future.

[1] 86 Fed. Reg. 29,432 (June 1, 2021).

In recent years, LPC abundance has rebounded from historic lows, and through a combination of public and private efforts, the LPC is now better protected than at any previous time. The Associations' members alone have voluntarily protected millions of acres of LPC habitat, and contributed tens of millions of dollars in LPC conservation funding and research.

Moreover, listing LPCs as threatened or endangered either range-wide or as two DPSs will not provide any additional conservation benefits. To the contrary, we believe that listing the Proposed Southern DPS of LPCs as endangered and the Proposed Northern DPS as threatened will undermine a vast array of voluntary protections that the Associations' members and others have adopted in order to protect and conserve LPCs. Not only did FWS fail to adequately account for these voluntary conservation measures in proposing this listing determination, it also failed to consider the broader detrimental impact of such a determination on private stakeholders' willingness to undertake other voluntary measures for the conservation of species.

The Associations therefore respectfully urge FWS to refrain from impermissibly disaggregating the range-wide LPC population into two DPSs and instead finalize a determination that listing LPCs as threatened or endangered under the ESA is not warranted. Further, as with the Service's proposed DPS designations and proposed listing determinations, FWS has provided no reasoned explanation why it believes its proposed Section 4(d) rule's prohibitions are necessary and advisable. Indeed, without any explanation, FWS proposes to adopt a Section 4(d) Rule that is wholly inconsistent with the approach the Service utilized in its prior Section 4(d) Rule for LPCs, and which appears to reflect a new policy against tailoring Section 9 take prohibitions in order to support and promote voluntary conservation efforts. As such, although the Associations believe FWS cannot lawfully finalize the DPS designations and listing determinations as proposed, we continue to urge that any future Section 4(d) Rule[2] reasonably explain the protections FWS believes to be "necessary and advisable to provide for the conservation of [the] species,"[3] and meaningfully tailor Section 9 prohibitions in a way that prohibits harmful conduct while promoting voluntary conservation.[4]

[2] The Associations' recommendations with respect to "any future Section 4(d) Rule" are intended to encompass any potential subsequent listing proposals as well as the various potential outgrowths of the current listing proposal *(e.g.*, reassessment of the listing status of the range-wide LPC population, changing the proposed listing status of the Proposed Southern DPS from endangered to threatened). Although the Associations believe that FWS cannot lawfully finalize the current proposed DPS designation and listing determination, if FWS proceeds to finalize this proposal with changes to either the taxonomic classification or the listing status, those changes will also require a reassessment under Section 4(d) of the protections necessary and advisable for the conservation of LPCs. For instance, if FWS determines that the range-wide LPC population or Proposed Southern DPS should be listed as threatened, the Service must reassess and take comment on the Section 9 prohibitions necessary and advisable for those populations.

[3] 16 U.S.C. § 1533(d).

[4] The Associations support the Service's decision to refrain from designating critical habitat at this time. *See* 86 Fed. Reg. at 29,479. Among other reasons, the Associations do not believe that critical habitat is prudent or determinable because we do not believe that FWS has properly determined that the range-wide population of LPCs can be designated as DPSs or that those Proposed DPSs qualify for listing under the ESA.

American Petroleum Institute, American Exploration and Production Council, and Texas Oil & Gas Association Comments on the U.S. Fish and Wildlife Service's Proposal to List Two District Population Segments of the Lesser Prairie Chicken under the Endangered Species Act (FWS-R2-ES-2021-0015)

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I. SUMMARY

FWS is proposing to determine that the range-wide LPC population should now be denominated as two entirely new taxonomic units: a Proposed Southern DPS that FWS contends to be presently at risk of extinction and a Proposed Northern DPS that the Service believes is likely to be placed at risk of extinction within 25 years. These proposed conclusions lack factual and scientific support. To the contrary, these are entirely new and largely unexplained conclusions that the Service is proposing to draw from essentially the same scientific data on which FWS has for decades assessed the status of LPCs and planned for their conservation. Indeed, in the seven years since FWS determined that the range-wide LPC population was likely to be at risk of extinction within the foreseeable future,[5] LPC abundance has increased, occupied range has expanded, and present and potential future LPC habitat continues to be improved and protected. The vast majority of these improvement occurred without the LPC being listed on the ESA. As such, the Associations believe that FWS must withdraw this Proposed Listing and determine that listing LPCs range-wide or as the Proposed DPSs is not warranted.[6]

As explained in Section II below, the Associations offer these comments, not only because our members operate within LPC habitat, but because they have been at the forefront of LPC conservation for many years. The Associations' members have helped protect and improve millions of acres of present and potential future LPC habitat. And as relevant here, these conservation actions – undertaken voluntarily and at great expense – have been effective in bring LPC populations back from historic lows and protecting habitat at levels more than sufficient to assure continued growth throughout the foreseeable future.

Given our members' longstanding efforts conserve LPCs and responsibly operate within LPC habitat, the Associations have constructively engaged with FWS in each of the Service's prior efforts to determine the status of LPCs under the ESA. Those prior efforts are described in Section III below.

The Associations' comments in response to specific aspects of the Service's Proposed Listing are found in Sections IV to VII below. In Section IV below, the Associations explain that it would represent an arbitrary and capricious abuse of agency discretion if FWS were to finalize its proposed determination that the range-wide population of LPCs should now be designated as the Proposed Northern and Southern DPSs. This largely-unexplained proposed determination is

[5] This determination was finalized on April 10, 2014. (79 Fed. Reg. 20,074). It was overturned by the U.S. District Court for the Western District of Texas in 2015. *Permian Basin Petroleum Ass'n. v. Dep't of Interior*, 127 F. Supp. 700 (W.D. Tex. 2015) ("*PBPA v. DOI*").

[6] The Associations' discussion throughout these comments mainly in response to the precise determinations FWS proposes (*i.e.*, designating the range-wide LPC population as a Proposed Northern DPS and a Proposed Southern DPS; determining that the Proposed Northern DPS is threatened; determining that the Proposed Southern DPS is endangered; and providing an over-inclusive Section 4(d) Rule applicable only to the proposed Northern DPS). These comments should, however, be construed more broadly. The Associations do not believe it is appropriate for FWS to use its DPS designation authority to adopt any taxonomic deconstruction of the range-wide LPC population. The best scientific and commercial information available does not allow FWS to credibly determine that the range-wide LPC population, the Proposed Northern DPS, or the Proposed Southern DPS are presently at risk of extinction or likely to become so in the foreseeable future, And should it be necessary for the Service to adopt a Section 4(d) rule in this or any future rulemaking, FWS must assure that is necessary and advisable to provide for the conservation of the species.

procedurally flawed, contrary to best available scientific data, and incompatible with the Service's own guidelines.

Indeed, the proposed DPS determination is a stark and unexplained departure from the taxonomic classification that FWS has recognized for over two decades. The Service rejected commenters' requests to designate DPSs the only other time FWS proposed to list LPCs under the ESA[7] and again in the 90-day finding that preceded this Proposed Listing.[8] As a consequence of this latter rejection, FWS did not submit this important taxonomic assessment to the SSA team, and did not request comments or data on the DPS designation at the 90-day finding stage. Moreover, when commenters like the Associations did provide data relevant to the taxonomic classification of LPCs, that data and related comments do not appear to have been considered.

The Service's new proposed conclusion that LPCs must be designated as two DPSs is also not based on new data. The same geographic separation and genetic structuring that FWS now suggests compels designation of a Northern and Southern DPS was already recognized and frequently discussed when FWS rejected comments requesting designation of DPSs in 2014. The Service's 1.5-page DPS analysis supports its proposed DPS designation with only one scientific paper published after the 2014 final listing decision - (Oyler-McCance (2016)).[9] That paper provided additional support for, but was certainly not the first to find, evidence of genetic structuring. Indeed, the authors themselves disclaimed that these analyses were "as reported in previous studies (e.g., Pruett et al. 2011)."[10]

Not only is the Service's proposed DPS designation a new and unexplained conclusion drawn from long-recognized scientific data, it is also irreconcilable with congressional intent and the Service's own policy guidelines. When Congress amended the ESA to allow the listing services to designate DPSs, it admonished the listing services to use this authority "sparingly and only when then biological evidence indicates that such action is warranted."[11] The Services' authority to designate DPSs is therefore limited to instances where populations of the species are conspicuously separated from each other and markedly distinct in some way that is important to the taxon as a whole.[12]

None of these factors support separating the range-wide LPC population into the Proposed Northern and Southern DPSs. The LPCs in both of these populations are physiologically, morphologically, and behaviorally identical. The genetic distinctions described in the Service's DPS determination are consistent with the genetic variation one would expect to observe in any widespread species, and in no way indicative of genetic adaptations or other evolutionary distinctions.[13] The DPS designations are not proposed with an intent to obviate the need to list a

[7] 79 Fed. Reg. 20,074 (Apr. 10, 2014).
[8] 81 Fed. Reg. 86,315, 86,317 (Nov. 30, 2016).
[9] Oyler-McCance, S.J., DeYoung, R.W., Fike, J.A. *et al*. Rangewide genetic analysis of Lesser Prairie-Chicken reveals population structure, range expansion, and possible introgression. Conserv Genet 17, 643–660 (2016).
[10] Oyler-McCance (2016) at 653 (referring to Pruett CL, Johnson JA, Larsson LC *et al* (2011) Low effective population size and survivorship in a grassland grouse. Conserv Genet 12:1205–1214).
[11] S. Rep. No. 95-151, at 7 (1979), reprinted in ESA Legislative History at 1397.
[12] 61 Fed. Reg. 4,722, 4,725 (Feb. 7, 1996).
[13] Oyler-McCance (2016); Ronald A. Van den Bussche *et al.*, Genetic Variation Within and Among Fragmented Populations of Lesser Prairie-Chickens (*Tympanuchus Pallidicinctus*), 12, at 675-683 (Molecular Ecology 2003); Christian A. Hagen *et al.*, Regional Variation in mtDNA of the Lesser Prairie-Chicken, 112, at 29-37 (Condor 2010); C. L. Pruett *et al.*, Low Effective Population Size and Survivorship in a Grassland Grouse, 12, at 1205-1214 (Springer

segment of the LPC population, do not appear designed to focus conservation efforts on a portion of the range-wide LPC population, and seem to lack any conservation purpose at all.

Further, the Service's 1.5 page DPS analysis does not explain why either Proposed DPS is significant to the taxon as a whole. Rather, without explanation, the Proposed Listing concludes that the northern and southern populations are significant simply because they are discrete populations.

FWS goes on to explain, again without explanation, that the loss of either the Proposed Northern or Southern DPSs would result in a significant gap in the range of the species. This "significant gap" element of the Service's DPS Policy was developed to allow the listing of interstitial populations necessary to maintain connectivity between and among a species range-wide population. As applied to the LPC, the "significant gap" element makes little sense because there is no interstitial population between the Proposed Northern and Southern DPSs and because FWS has concluded there is no gene flow between the populations.

FWS never discusses the incongruity of its "significant gap" conclusion with the intended purpose of this element. Instead, the Proposed Listing simply asserts that the Proposed Northern and Southern DPSs contain significant portions of the LPC's range and therefore the hypothetical loss of either population would result in a "significant gap."

As such, in Section IV, the Associations caution that absent any meaningful demonstration of discreteness or significance, FWS cannot finalize its proposed designation of a threatened Northern DPS or an endangered Southern DPS. FWS has provided no reasoned explanation for, or even acknowledged, this stark and seemingly arbitrary policy shift. It is not supported by data; it is inconsistent with the ESA and the DPS Policy, and it serves no conservation purpose. Section IV therefore concludes with the Associations' request that FWS withdraw its proposed DPS determination.

In Section V, the Associations explain that there is no basis for FWS to conclude that the range-wide LPC population or the Service's proposed DPSs meet the ESA's definitions for either threatened or endangered species. The ESA commands a high standard for listing species, and owing to unprecedented conservation efforts, an ongoing monitoring program, and the LPC's known resiliency to seasonal drought, LPCs face no present or reasonably foreseeable risk of extinction.

The best available evidence demonstrates and the Proposed Listing seemingly recognizes that LPCs are well protected through myriad conservation efforts, that their abundance is increasing, and that their range is expanding. The Service's proposal to list a Northern DPS as threatened and a Southern DPS as endangered is therefore based entirely on the Service's presumption that potential habitat loss over the next 25 years[14] will be so extensive that it will not only end the LPC's recent observed increases in abundance, but reverse those trends to such a degree that LPC

2011); R. W. DeYoung, and D. L. Williford, Ecology and Conservation of Lesser Prairie-Chickens: Genetic Variation and Population Structure in the Prairie Grouse- Implications for Conservation of the Lesser Prairie-Chicken at 77-97. (David A. Haukos & Clint W. Boal eds., 2016); John A. Crawford, Status, Problems, and Research Needs of the Lesser Prairie-Chicken, 1-7, (1980).

[14] The Service's proposal is based on a "foreseeable future" of 25 years. This was the time horizon through which FWS believed it could project future habitat changes with reasonable confidence. *See* 86 Fed. Reg. at 29,461.

abundance will plummet to levels never before observed, placing LPCs on the brink of extinction. Once again, the best available scientific information belies this pessimistic conclusion.

The best available evidence on the current condition of LPCs comes from the annual WAFWA range-wide LPC surveys, which began in 2012 and provide the first ever statistically valid range-wide survey for the species.[15] That survey data shows that LPCs continue to rebound from population declines observed following an historic and prolonged drought throughout the Southern Great Plains. In fact, the most recent survey data show that LPCs in the Proposed Northern DPS and Proposed Southern DPS are experiencing the highest abundance ever surveyed. LPC abundance in the Proposed Southern DPS has nearly doubled since 2016 and populations in the Proposed Northern DPS have increased by nearly 70 percent during the same time. And although FWS has not proposed to list the range-wide population of LPCs, the best available data (WAFWA's surveys) demonstrate that range-wide abundance has nearly doubled since the Service's 2014 determination that the LPC was a "threatened" species.

The best available evidence of whether these favorable population trends will continue comes from Hagen (2017)[16] and an earlier population viability analysis that was validated in Hagen (2017) - (Garton (2016)).[17] These studies project likely future probabilities of LPC persistence range-wide and in each of the ecoregions by assessing the likelihood that LPC populations would fall below certain "quasi-extinction" risk thresholds. The results of these studies should be viewed as highly conservative because the projection of future risks is extrapolated from survey data from an era (1964 – 2016) associated with significant development/habitat fragmentation, only a portion of which included meaningful efforts to protect and conserve habitat.

Nonetheless, far from indicating that the Proposed Southern DPS is on the brink of extinction or that the Proposed Northern DPS is likely to be pushed to the brink of extinction within the foreseeable future, Hagen (2017) and Garton (2016) demonstrate that those risks are highly unlikely, and in most scenarios, incredibly remote. In fact, the risk to LPCs (range-wide and as the Proposed DPSs) will even each "quasi-extinction" levels remains effectively *de minimis* regardless of the impacts of the historic drought and regardless of whether there is ongoing connectivity and genetic exchange between the Proposed Northern and Southern DPSs.

The Service's proposed conclusions to the contrary appear to be based on the 2021 SSA Report and the geospatial analysis it employed to model potential future changes to LPC habitat.[18] The Associations view the geospatial modeling in the 2021 SSA Report as a potentially helpful tool for synthesizing data and qualitatively assessing the potential impacts on LPCs of various

[15] Nasman, K., T. Rintz, D. Pham, and L. McDonald. 2020. Range-wide population size of the lesser prairie-chicken: 2012 to 2020. Prepared for: Western Association of Fish and Wildlife Agencies by Western EcoSystems Technology, Inc., Fort Collins, CO. October 12, 2020. 23 pp ("Nasman (2020)").

[16] Hagen, C.A., E.O. Garton, G. Beauprez, B.S. Cooper, K.A. Fricke and B. Simpson. 2017. Lesser Prairie-Chicken population forecasts and extinction risks: an evaluation 5 years post–catastrophic drought. Wild. Soc. Bull. 41(4):624–638.

[17] Garton, E.O., C.A. Hagen, G.M. Beauprez, S.C. Kyle, J.C. Pitman, D.D. Schoeling and W.E. Van Pelt. 2016. Population Dynamics of the Lesser Prairie-Chicken. Pp 49–76 in D.A. Haukos and C.W. Boal (editors), Ecology and conservation of lesser prairie-chickens. Studies in Avian Biology (no. 48), CRC Press, Boca Raton, FL. ("Garton (2016)").

[18] 86 Fed. Reg. at 29,442.

hypothetical future development scenarios, but it does not present, nor is it capable of providing, the best available information on whether LPCs range-wide or as the Proposed Northern or Southern DPSs are at risk of extinction within the 25-year foreseeable future.

The future available habitat projections generated by the Service's geospatial model are the product of the analytical framing decisions and model inputs that FWS used to run the model. Many of these framing judgements and model inputs are plainly inconsistent with the best available evidence and others are, at best, highly questionable. And inferior data does not become the best available evidence simply because it is run through a model.

In Section V.c.3., the Associations describe the Service's geospatial modeling framework and a few of the framing decisions and input parameters that demonstrate why the model's projections of current and future usable habitat are not realistic, data-driven, or amenable for use in listing decisions. For instance, by deciding to analyze only areas currently occupied by LPCs, FWS essentially calibrated the model to prohibit it from identifying any positive impacts from range expansion and population shifts that the best available evidence show to be occurring.

The model's constrained analysis area is also inconsistent with the analysis area FWS used in all previous conservation planning and listing decisions, and eliminates from any consideration as usable habitat approximately 20 million acres of potentially suitable habitat – some of which is currently occupied and used by LPCs. This improperly circumscribed analysis area prevented the model from projecting benefits associated with any of the many conservation measures in areas buffering occupied range, including efforts to protect and improve habitat and habitat connectivity between the northern and southern populations of LPCs.

From this unscientifically delineated analysis area, FWS then excluded as "unusable areas" large buffer zones around various natural and anthropogenic features. In doing so, FWS misconstrued data on features that LPCs generally avoid as describing areas that LPCs cannot use in any way. And in the case of oil and natural gas wells, the model ignored that LPCs avoid wells at lower levels and by smaller distances that most other anthropogenic structures.[19] The model also did not recognize that, unlike other types of development, the majority of oil and gas development impacts on habitat are temporary.

The Service's geospatial model also artificially excluded a large amount of potentially suitable (and even currently occupied) habitat using a "near-neighbor" analysis that deemed unusable any area unless it was grouped within a block of at least 60 percent potential usable, un-impacted land cover within one mile.[20] Here again, FWS misconstrued the well-established conception that LPC abundance is positively correlated with larger and less fragmented grassland areas[21] to suggest that LPCs could not use or occupy any area with less than 60 percent un-impacted land cover. Indeed,

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[19] *See* Patten, M.A., Barnard, A.A., Curry, C.M. *et al.* Forging a Bayesian link between habitat selection and avoidance behavior in a grassland grouse. Sci. Rep. 11, 2791 (2021). https://doi.org/10.1038/s41598-021-82500-0; *See also* Peterson, J. M. *et al.* Estimating response distances of Lesser Prairie-Chickens to anthropogenic features during long-distance movements. Ecosphere 11, e03202 (2020).

[20] 2021 SSA Report at 22.

[21] Spencer, D., Haukos, D., Hagen, C., Daniels, M. and Goodin, D. 2017. Conservation Reserve Program mitigates grassland loss in the lesser prairie-chicken range of Kansas. Global Ecology and Conservation 9:21–38.

none of the studies cited in the 2021 SSA Report's description of the "near neighbor analysis" support this proposition.

In Section V.c.4., the Associations explain how each of the aforementioned programming decisions (as well as many other questionable parameters) prohibited the geospatial model from projecting the potential benefits of many present and future conservation efforts. As a result, the model's projections of "future conditions," and in fact, the Service's entire geospatial modeling effort, fail to capture even a fraction of the unprecedented conservation efforts that have been devoted to LPCs, and have been ongoing for many years.

The preamble to FWS's Proposed Listing likewise failed to provide this mandatory analysis of conservation actions that could positively affect LPCs, either range-wide or as the Proposed Northern or Southern DPSs. Indeed, the Proposed Listing contains no PECE analysis at all. This is a surprising and pernicious oversight given that the Service's 2014 decision to list range-wide LPCs at threatened was vacated by the Western District of Texas for failing to conduct a proper PECE analysis. Thus, on this matter alone, that Associations believe that FWS should withdraw its proposed listing.

Finally, in Section VI, the Associations provide comment on the Service's proposed Section 4(d) rule for the proposed threatened Northern DPS. While these comments are necessarily only directly applicable to the proposed Northern DPS, these comments should be more broadly construed to apply to any effort to adopt a Section 4(d) rule in this or any future rulemaking (*e.g.*, if the Service were to propose to list LPCs as threatened range-wide or within the Proposed Southern DPS).

With respect to the Proposed Section 4(d) rule, the Associations are concerned that FWS has not provided a reasoned explanation for the restrictions the Service proposes to impose if it finalizes a threatened listing for the Proposed Northern DPS. Instead, without any meaningful explanation, FWS has proposed to exercise its Section 4(d) authority to "extend the standard section 9 prohibitions for endangered species to the Northern DPS of the lesser prairie-chicken in order to conserve the species."[22]

The Service's proposes to conclude that "there is no potential for a section 9 violation" when undertaking habitat restoration because these efforts "occur on lands already impacted or altered in ways that they no longer represent lesser prairie-chicken habitat and thus there is no potential for a section 9 violation.[23] This conclusion makes little sense because it ignores that LPCs are likely to be present in many areas that may not be sufficient to support all the life stages of LPCs.

The Service's proposed 4(d) rule, which purports to "promote conservation of the Northern DPS of the lesser prairie-chicken by encouraging management of the landscape in ways that meet the conservation needs of the lesser prairie-chicken,"[24] also does not mention, much less discuss, any conservation measures, agreements, or practices (other than prescribed fire).

[22] 86 Fed. Reg. at 29,475.
[23] 86 Fed. Reg. at 29,475.
[24] 86 Fed. Reg. at 29,475.

Remarkably, the proposed 4(d) rule does not discuss or even mention the WAFWA RWP, the Natural Resources Conservation Service's LPC Initiatives, or any conservation program or effort that was excluded from Section 9 take liability in the Service's 2014 Section 4(d) Rule.[25] As such, the Service's proposed 4(d) rule contains no justification or reasonable basis for this profoundly important policy change. Nor does proposed Section 4(d) rule indicate even a basic recognition that FWS is changing this longstanding approach.

The Associations believe that the Service's proposed Section 4(d) rule largely ignores and potentially undermines current and future efforts to voluntarily protect and conserve LPCs and their habitat. As such, we conclude Section VI by urging FWS to withdraw this proposed 4(d) rule. If FWS persists in finalizing this Proposed Listing or proposes a new LPC listing in the future, at a minimum, the Service must propose and take comment on a new proposed 4(d) rule that is in accord with the ESA, the Service's own regulations, and the well-recognized need for FWS to more fully support and incentivize state and private conservation.[26]

II. INTERESTS OF THE ASSOCIATIONS

API is a nationwide, non-profit trade association that represents all facets of the natural gas and oil industry, which supports 10.3 million U.S. jobs and nearly eight percent of the U.S. economy. API's nearly 600 member companies include large integrated companies, as well as exploration and production, refining, marketing, pipeline and marine businesses, and service and supply firms. API was formed in 1919 as a standards-setting organization, and API has developed more than 700 standards to enhance operational and environmental safety, efficiency, and sustainability. API and its members are dedicated to the safe and responsible development and supply of energy resources to consumers and are committed to doing so in a way that conserves and protects species and their habitat.

AXPC is a national trade association representing 25 of the largest independent oil and natural gas exploration and production companies in the United States. AXPC companies are among leaders across the world in the cleanest and safest onshore production of oil and gas, while supporting millions of Americans in high-paying jobs and investing a wealth of resources in our communities. Dedicated to safety, science, and technological advancement, our members strive to deliver affordable, reliable energy to consumers while positively impacting the economy and the communities in which we live and operate.

TXOGA is a statewide trade association representing every facet of the Texas oil and gas industry including small independents and major producers. Collectively, the membership of TXOGA produces in excess of 80 percent of Texas' crude oil and natural gas, operates over 80 percent of the state's refining capacity, and is responsible for the vast majority of the state's pipelines. In fiscal year 2020, the oil and natural gas industry supported more than 400,000 direct jobs and paid

[25] *See* 69 Fed. Reg. at 20,074.

[26] Although the Associations believe that FWS cannot lawfully finalize the current proposed DPS designation and listing determination, if FWS proceeds to finalize this proposal with changes to either the taxonomic classification or the listing status, those changes will also require a reassessment under Section 4(d) of the protections necessary and advisable for the conservation of LPCs. For instance, if FWS determines that the range-wide LPC population or Proposed Southern DPS should be listed as threatened, the Service must reassess and take comment on the Section 9 prohibitions necessary and advisable for those populations.

$13.9 billion in state and local taxes and state royalties, funding our state's schools, roads and first responders.

As relevant here, the Associations' members explore for and develop essential energy resources on federal, state, and private oil and natural gas leases within the five-state range of the LPC, including in the Permian, Anadarko, and Barnett Basins. Because of the proximity of oil and gas operations in and around areas identified as LPC habitat, the Associations' members have undertaken unprecedented efforts to protect the LPC, preserve and improve its habitat, and minimize any potential adverse impacts associated with oil and gas development. Indeed, the Associations' member companies have undertaken significant voluntary conservation efforts to protect the lesser prairie-chicken. These member companies have enrolled nearly ten million acres in conservation plans and committed more than 50 million dollars to fund habitat conservation and restoration programs.

Moreover, irrespective of where our members operate, our industry employs a wide variety of operational practices during all phases of exploration and production to enable the safe and responsible development of the nation's oil and natural gas resources while reducing and/or mitigating potential impacts to species, habitats, land, water, and other natural resources. Our industry's continually evolving technological capabilities has allowed operators to reduce their surface disturbance area 70 percent from when operations used less advanced drilling practices.[27] These advances represent just one part of a continuously improving evolution of industry's capability to operate in proximity to species and their supporting habitats.

III. LPC LISTING AND CONSERVATION BACKGROUND

The Associations and their members have also meaningfully participated in each of the Service's prior efforts to determine the status of LPCs under the ESA. When FWS proposed to list the LPC listing as a "threatened species" on December 11, 2012,[28] the Associations and their members fully participated in the ensuing comment period, which was extended by six months based on "substantial disagreement among scientists knowledgeable about the species regarding the sufficiency or accuracy of the available data relevant to the determination."[29] During that period, the Associations and their members continued their previous engagement with FWS to apprise the Service of the various state and voluntary conservation efforts in existence and in development that would make listing the LPC unwarranted.[30]

The Associations' members, joined by hundreds of organizations, landowners, and private sector companies, universities, and state wildlife experts also undertook a monumental effort to protect LPC habitat and avoid a listing by expanding their already robust conservation efforts to unprecedented levels. Following the publication of the proposed LPC listing in December 2012, each of the many preexisting LPC conservation efforts continued to expand and important new initiatives were finalized and implemented. Among these measures was the Western Association of Fish and Wildlife Agencies ("WAFWA") Range-Wide Plan, which the FWS endorsed as

[27] Applegate, David & Owens, Nicholas. (2014). *Oil and Gas Impacts on Wyoming's Sage grouse: Summarizing the Past and Predicting the Foreseeable Future. Human-Wildlife Interactions*. 8. 284-290. 10.26077/m4xb-jq73.
[28] 77 Fed. Reg. 73,828.
[29] 78 Fed. Reg. 41,022 (July 9, 2013).
[30] 78 Fed. Reg. 26,302 (May 6, 2013).

providing a comprehensive framework for habitat conservation and mitigation.[31] With the substantial voluntary participation of the Associations' member companies, on the eve of the final listing, WAFWA reported over 3.6 million acres were enrolled and nearly $21 million in fees were raised for LPC habitat conservation under the Range-Wide Plan.[32]

While the Service seemingly recognized the WAFWA Range-Wide Plan and some of the many other LPC conservation efforts in finalizing a special rule under ESA Section 4(d) ("4(d) Rule"), which excluded from the ESA's prohibitions certain activities that are conducted in conjunction with enrollment in a conservation program,[33] FWS still listed the range-wide LPC population as a threatened species on April 10, 2014.[34]

On June 8, 2014, the Associations challenged the LPC listing decision in the Northern District of Oklahoma as arbitrary and capricious in violation of the Administrative Procedure Act ("APA") (5 U.S.C. § 551 *et seq*.).[35] The Permian Basin Petroleum Association and several counties filed suit a day later in the Western District of Texas.[36]

The Western District of Texas was ultimately the only court to review the 2014 LPC Listing Decision. On September 1, 2015, the court vacated the Service's 2014 decision to list the range-wide LPC populations as "threatened" holding that FWS failed to adequately consider the impact of these historic voluntary and state conservation efforts in its evaluating whether LPCs were likely to be placed on the brink of extinction within the foreseeable future.[37] More specifically, the court held that FWS improperly concluded that participation in the Range-Wide Plan would significantly erode, and that the Range-Wide Plan would cease to effectively protect LPCs in the future, if the threat of a listing were removed.[38] Not only was this conclusion unsupported by the record before the Service, it has since been proven to be incorrect. Voluntary conservation efforts have continued and expanded more long after the Western District of Texas vacated the Service's 2014 decision to list the range-wide LPC population as a threatened species.

The Western District of Texas further held that FWS improperly held the Range-Wide Plan to a standard that seemingly required that the plan demonstrate that it would eliminate or reduce threats to the species at the time of the listing – rather than in the future.[39] The court held that this standard was inconsistent with the Service's own policy guidelines, which were developed to provide a

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[31] 79 Fed. Reg. at 19,990.

[32] *See* http://www.eenews.net/stories/1059996772 (accessed July 7, 2021). The WAFWA Range-Wide Plan was only one of many different state, regional, and range-wide conservation programs that were put in place prior to and following the Service's December 2012 proposed listing. For a more extensive description of these efforts, please refer to the Associations January 20, 2017 comments on the Service's 90-day finding on a petition to list the LPC as endangered (FWS-R2-ES-2016-0133/81 Fed. Reg. 86,315 (Nov. 30, 2016)).

[33] 79 Fed. Reg. 20,074 (April 10, 2014).

[34] 79 Fed. Reg. 19,973.

[35] *Oklahoma Indep. Petroleum Ass'n. et al. v. Dep't of the Interior, et al.*, 4:14-CV-307-JHP-PJC (June 8, 2014).

[36] 127 F.Supp. 3d. 700

[37] *Permian Basin Petroleum Ass'n. v. Dep't of Interior*, 127 F. Supp. 700 (W.D. Tex. 2015) ("*PBPA v. DOI*").

[38] While the court's decision related to the Range-wide Plan specifically, the analytical flaws identified by the court would apply equally to each of the voluntary conservation efforts undertaken to protect LPCs. In fact, these analytical flaws are more prevalent relative to many other voluntary conservation efforts, for which FWS conducted little or no PECE analysis at all.

[39] *See PBPA v. DOI* at 722.

framework for assessing the future value of voluntary conservation efforts that have not yet been fully implemented or demonstrated to be effective.[40] Indeed, the Service's standard was particularly inappropriate when applied to the LPC, which FWS concluded was not presently at risk of extinction, but at risk of becoming so at some point in the future.

Roughly a year after the Western District of Texas's decision, FWS was petitioned to act quickly to avert the LPC's "dire risk of extinction."[41] Instead of requesting that FWS list the range-wide LPC population, the petition requested that the Service list three proposed DPSs: (1) a Shinnery Oak Prairie DPS; (2) a Sand Sagebrush Prairie DPS; and, (3) a Mixed-Grass and Shortgrass Prairie/CRP DPS).[42]

On November 30, 2016, FWS published a 90-day finding that the petition to list LPCs as endangered presented evidence sufficient to show that listing may be warranted, but it otherwise ignored petitioners' request to designate the range-wide LPC population as DPSs.[43] On January 30, 2017, the Associations once again provided FWS extensive comments and detailed analysis on the status of LPCs.

As the Associations noted in our previous comments and reiterate in the subsections that follow, the LPC did not meet the ESA's definition of a "threatened species" in 2014, and there is less basis to now list LPCs, either as a range-wide population or as the DPSs that FWS has proposed. In the years since FWS last assessed the status of LPCs, populations have become more stable, its range has expanded, and its habitat protections have continued. There is no credible risk that LPCs, range-wide or as proposed DPSs, will be driven to the brink of extinction within the foreseeable future. In fact, as discussed throughout these comments, the likelihood that LPCs will be driven to the brink of extinction within the foreseeable future is incredibly remote even under tremendously pessimistic and relatively unrealistic scenarios.

IV. THE SERVICE'S PROPOSED DPS DETERMINATION IS AN UNSUPPORTED AND INSUFFICIENTLY EXPLAINED POLICY CHANGE

FWS is proposing to designate the range-wide population of LPCs as two DPSs: (1) a Southern DPS consisting of the Shinnery Oak Ecoregion in eastern New Mexico and the South Plains of Texas ("Southern DPS")[44], and; (2) a Northern DPS consisting of the Mixed Grass Prairie Ecoregion that spans northeastern panhandle of Texas, the northwestern panhandle of Oklahoma and south-central Kansas; the Shortgrass/Conservation Reserve Program ("CRP") Ecoregion in central and western Kansas; and the Sand Sagebrush Ecoregion in southwest Colorado, Southeast Kansas, and a small portion of Western Oklahoma ("Northern DPS").[45] While the Associations agree that LPCs range throughout these diverse ecoregions, we believe that the Service's proposed

[40] *See PBPA v. DOI* at 723.
[41] *See* September 8, 2016 Listing Petition from WildEarth Guardians, Defenders of Wildlife, and the Center for Biological Diversity ("LPC Listing Petition") at 2.
[42] LPC Listing Petition at 2.
[43] 81 Fed. Reg. 86,315, 86,317 (Nov. 30, 2016).
[44] 86 Fed. Reg. at 29,437.
[45] 86 Fed. Reg. at 29,438.

DPS determination is so procedurally flawed, contrary to best available scientific data, and incompatible with the Service's own guidelines that it cannot be finalized.

Indeed, the Service's present proposal to divide the range-wide LPC population into two DPSs represents a stark and unexplained departure from the taxonomic classification that FWS has recognized for over two decades. From the Service's first 90-day finding in 1997,[46] to the first classification of the LPC as a candidate for listing in 1998,[47] and in the 11 species status reviews the Service conducted over more than a decade, FWS only recognized and analyzed the LPC as a range-wide species, and never indicated that that the LPC could be divided into DPSs.[48]

Similarly, when FWS first proposed the LPC for listing in 2012, its entire listing analysis was based on the range-wide status of the LPC.[49] Notably, FWS received comments on the proposed listing requesting that the Service divide the range-wide LPC population into DPSs, but FWS expressly *rejected those requests to designate DPSs as unsupported* when it finalized the listing in 2014.[50] Critically, when FWS made this decision in 2014, it was based on the same physical separation and the same type of genetic data FWS is proposing to rely on here, and because the 2014 listing decision followed significant drought-induced declines in population and occupied range, the physical separation between the meta-populations was likely larger than it is today.[51]

The Service's 2013 proposed and 2014 final Section 4(d) rules for the LPC were similarly based on a range-wide LPC population, and made no mention of the potential for DPS disaggregation.[52] Likewise with the Service's 2012 Technical Whitepaper on LPC conservation needs,[53] 2014 Guidelines for the Establishment, Management, and Operation of Permanent Lesser Prairie-Chicken Mitigation Lands,[54] 2014 Public Scoping Report for the LPC Conservation Strategy,[55] and, in fact, every public record in the FWS's LPC documents archive.[56]

Perhaps more than other FWS record or decision, the 90-day finding that triggered this Service's current proposed determination illustrates how abruptly and absolutely FWS is now proposing to undue the taxonomic classification it has relied on for over two decades in dozens of rules,

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[46] *See* 62 Fed. Reg. 36,482 (July 8, 1997).
[47] *See* 63 Fed. Reg. 31,400 (June 9, 1998).
[48] *See* 66 Fed. Reg. 1,295 (Jan, 8, 2001); 66 Fed. Reg. 54,808 (Oct 30, 2001); 67 Fed. Reg. 40,657 (June 13, 2002); 69 Fed. Reg. 24,876 (May 4, 2004); 70 Fed. Reg. 24,870 (May 11, 2005); 71 Fed. Reg. 53, 756 (Sept. 12, 2006); 72 Fed. Reg. 69,034 (Dec. 6, 2007); 73 Fed. Reg. 75,176 (Dec. 10, 2008); 74 Fed. Reg. 57,804 (Nov. 9, 2009); 75 Fed. Reg. 69,222 (Nov. 10, 2010); 76 Fed. Reg. 66,370 (Oct. 26, 2011). The LPC was first classified as a candidate for listing under the ESA in 1998 and assigned a Listing Priority Number ("LPN") of 8 on a 12-point scale under which "1" represents the highest priority and "12" represents the lowest priority. (63 Fed. Reg. 31,400). FWS continued to assign the LPC an LPN of 8 until 2008, when FWS drastically changed the LPN from 8 to 2, in response to presumed threats to LPC habitat from various types of development, including wind energy structures, transmission lines, grassland conversion, and oil and gas development. (73 Fed. Reg. 75,176 (Dec. 10, 2008)).
[49] 77 Fed. Reg. 73,828 (Dec. 11, 2012).
[50] 79 Fed. Reg. 19,974, 19,976, 19,986 (Apr. 10, 2014).
[51] *See* 79 Fed. Reg. at 20,004 – 20,006; 20,058 – 20,060.
[52] *See* 78 Fed. Reg. 26,302 (May 6, 2013); *See also* 79 Fed. Reg. 20,074 (Apr. 10, 2014).
[53] https://www.fws.gov/southwest/es/Documents/R2ES/LPC_White_Paper_final.pdf.
[54] https://www.fws.gov/southwest/es/Documents/R2ES/LPC_Guidelines_for_LPC_Mitigation_Lands_Dec2014.pdf.
[55] https://www.fws.gov/southwest/es/Documents/R2ES/LPC_AHC_HCP_ScopingReport_Final_July2014.pdf.
[56] https://www.fws.gov/southwest/es/LPC_DocArchive_20210520.html.

proposals, notices, and records. Indeed, the Service's 90-day finding[57] that preceded this Proposed Listing *rejected* petitioners' recommendation that FWS divide the range-wide LPC population into three DPSs. [58]

A 90-day finding is based on a fairly minimal examination into whether a petitioned action "may be warranted."[59] As such, one of the Service's most basic threshold inquiries is whether the petitioner has properly identified a species, subspecies, or DPS.[60] Therefore, the Petition Review Form that FWS used for the LPC 90-day finding includes the question "Does the petition identify an entity that may be eligible for listing (i.e., is the entity a species, subspecies, or DPS)?".[61] In response, FWS answered "yes" and then identified the "entity that may be eligible for listing" as:

> Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*)
> Historical Range: New Mexico, Texas, Oklahoma, Kansas, and Colorado
> Current Range: New Mexico, Texas, Oklahoma, Kansas, and Colorado[62]

The LPC 90-day finding that FWS published after completing the Petition Review Form then also identified the species as "Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*)" and it also identified the LPC's range as Colorado, Kansas, Oklahoma, New Mexico, Texas."[63] All of the Service's 90-day findings and determinations were with respect to the range-wide "species."[64] With the exception of single sentence noting that the Service was petitioned to designate and list three DPSs, there is no mention of a potential DPS designation in any of the Service's records for the 90-day finding.

Not only does the absence of any reference to DPSs in the 90-day finding highlight how FWS suddenly and without explanation now proposes to disavow its decades-long taxonomic classification, it has two very important practical implications as well. For one, the status review that FWS initiated based on the 90-day finding appears to have only examined the status of the range-wide "Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*)." Indeed, the Species Status Assessment Report ("2021 SSA Report") does not discuss or even reference the potential for designating DPSs.

Second, because the Service's 90-day finding was issued with respect to the range-wide "Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*)," FWS exclusively solicited "information relevant to whether the *species* falls within the definition of an endangered species . . ."[65] FWS did not request and largely did not receive any information or data relevant to the proposed DPS designation. The Associations and a handful of other commenters, however, responded to petitioner's DPS request by providing legal analyses and scientific data (including genetic

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[57] 81 Fed. Reg. 86,315, 86,317 (Nov. 30, 2016).
[58] LPC Listing Petition at 2. ((1) a Shinnery Oak Prairie DPS; (2) a Sand Sagebrush Prairie DPS; and, (3) a Mixed-Grass and Shortgrass Prairie/CRP DPS).
[59] 16 U.S.C. § 1533(b)(3)(A).
[60] *See* 50 C.F.R. § 424.14(c)(2).
[61] LPC Petition Review Form (FWS-R2-ES-2016-0133-0002).
[62] LPC Petition Review Form (2nd page).
[63] 81 Fed. Reg. at 86,317.
[64] 81 Fed. Reg. at 86,317.
[65] 81 Fed. Reg. at 86,317.

analysis) that militated against designating the range-wide LPC population into DPSs.[66] The Service's Proposed Listing does not acknowledge, much less respond to, any of this information.

The entire record for this DPS conclusion consists of a 1.5-page (roughly 1,500 word) narrative in the preamble to the Proposed Listing.[67] There are no technical support documents or other administrative records to explain the Service's proposed DPS determination, and again, no indication that the Service considered or even reviewed comments on potential DPSs.

Agencies are permitted to change policy positions and adopt new interpretations of technical data, but they cannot do so in the manner FWS is proposing.[68] New and changed policy positions are subject to the same APA standards [69] under which "a reviewing court shall . . . hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."[70]

This standard requires agencies to "examine the relevant data and articulate a satisfactory explanation for its action including a `rational connection between the facts found and the choice made.'"[71] Courts will invalidate agency decisions as "arbitrary and capricious" if:

> the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."[72]

Thus, while "agency action representing a policy change" need not be "justified by reasons more substantial than those required to adopt a policy in the first instance," "the requirement that an agency provide a reasoned explanation for its action would ordinarily demand that it display awareness that it *is* changing position."[73]

The Service's 1.5-page DPS conclusion fails to satisfy even the most basic of these standards. Nowhere does FWS acknowledge, much less discuss, that it is proposing to undue its longstanding position on the taxonomic classification of the LPC. The Service provides no mention of the taxonomic classification FWS utilized for over two decades in dozens of different contexts, and fails to acknowledge, much less explain why its 2014 LPC listing decision expressly declined to adopt recommendations to designate DPSs of the range-wide population.

Further, given that FWS failed to acknowledge that its proposed DPSs represent an important policy change, it is unsurprising that the Service also failed to provide a reasoned explanation for

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[66] *See* FWS-R2-ES-2016-0133-0029; *See also* FWS-R2-ES-2016-0133-0029.
[67] *See* 86 Fed. Reg. at 29,439-29,440.
[68] *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502 (2009).
[69] *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 ("The [APA] makes no distinction . . . between initial agency action and subsequent agency action undoing or revising that action.").
[70] 5 U.S.C. § 706(2)(A).
[71] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168, (1962)).
[72] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).
[73] *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (emphasis in original).

the change or identify the factual and/or scientific findings that might have caused the Service to undertake this unexplained policy u-turn. In fact, the Service's 1.5-page DPS analysis contains no new factual findings at all. The distance between the Shinnery Oak Ecoregion and the other LPC ecoregions was well known and extensively discussed in the Service's 2014 listing decision.[74] So too was the evidence of genetic structuring between ecoregions and the apparent absence of gene flow between the Shinnery Oak ecoregion and the other ecoregions.[75]

The Service's 1.5-page DPS analysis cites only one scientific paper to support its conclusion (Oyler-McCance (2016)).[76] While Oyler-McCance (2016) postdates the Service's 2014 listing decision, it did not provide the first evidence of genetic structuring between the Shinnery Oak Ecoregion and the other LPC ecoregions. In fact, the paper itself states that that this aspect of the analysis is "as reported in previous studies (e.g., Pruett et al. 2011)."[77]

FWS extensively discussed these "previous studies,"[78] including Pruett (2011), in its 2014 LPC listing decision, and it described the best available science on the genetic structuring between the Shinnery Oak Ecoregion and the other LPC ecoregions the same way the Service now describes that genetic structure in its 1.5-page DPS analysis. Thus, the Service's proposed DPS determination is not based on any new scientific evidence or a new FWS interpretation of that data; the Service's 2014 assessment of genetic structuring is no different that the Service's assessment today. The only thing that changed was FWS's policy position on designating the range-wide LPC population as DPSs.

There is no explanation in the Service's short DPS analysis for why FWS made that significant change in the absence of new data or analysis. If this change was due to FWS's intention to divide a relatively abundant species into two units that FWS believes are small enough to warrant listing, we believe that this is contrary to the purpose Congress intended when it authorized FWS to designate DPSs.

Therefore, in the subsections that follow, the Associations explain why the Service's longstanding recognition of the LPCs as a range-wide population is most consistent with scientific evidence, conservation practices, the Service's own policy guidelines, and more recent evidence of LPC habitat use and dispersal. It is our hope that FWS will meaningfully consider this information and withdraw its unsupported and impermissible proposed DPS determination.

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[74] *See* 69 Fed. Reg. at 20,005.

[75] *See* 69 Fed. Reg. at 20,004 – 20,006.

[76] Oyler-McCance, S.J., DeYoung, R.W., Fike, J.A. *et al*. Rangewide genetic analysis of Lesser Prairie-Chicken reveals population structure, range expansion, and possible introgression. Conserv Genet 17, 643–660 (2016).

[77] Oyler-McCance (2016) at 653 (referring to Pruett CL, Johnson JA, Larsson LC *et al.* (2011) Low effective population size and survivorship in a grassland grouse. Conserv Genet 12:1205–1214).

[78] *See* Corman KS (2011) Conservation and landscape genetics of Texas lesser prairie-chicken: population structure and differentiation, genetic variability, and effective size. Texas A&M University, Kingsville; *See also* Hagen CA, Pitman JC, Sandercock BK *et. al.* (2010) Regional variation in mtDNA of the lesser prairie-chicken. Condor 112:29–37; *See also* Van den Bussche RA, Hoofer SR, Weidenfeld DA *et. al*. (2003) Genetic variation within and among fragmented populations of lesser prairie-chickens (*Tympanuchus pallidicinctus*). Mol Ecol 12:675–683; *See also* Bouzat JL, Cheng HH, Lewin HA *et. al.* (1998) Genetic evaluation of a demographic bottleneck in the greater prairie chicken. Conserv Biol 12:836–843; *See also* Bouzat JL, Johnson K (2004) Genetic structure among closely spaced leks in a peripheral population of lesser prairie-chickens. Mol Ecol 13:499–505.

a. No LPC populations qualify as DPSs

The Service's authority to designate DPSs is limited to instances where populations of the species are conspicuously separated from each other and markedly distinct in some way that is important to the taxon as a whole.[79] None of these factors support separating the range-wide LPC population into the Northern and Southern DPSs. The LPCs in both of these populations are physiologically, morphologically, and behaviorally identical. The genetic distinctions described in the Service's DPS determination are consistent with the genetic variation one would expect to observe in any widespread species, and in no way indicative of genetic adaptations or other evolutionary distinctions.[80]

1. The Service's authority to designate DPSs must be used sparingly and only when distinctions are significant

The ESA applies to distinct taxonomic species, "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife that interbreeds when mature."[81] The aspects of this definition that relate to DPS were intensely scrutinized during congressional debate for fear that, through recognition of DPS, the ESA could be manipulated to disaggregate a species to such an extent that even healthy and abundant species could be found to be endangered.

Congress' 1978 addition of the phrase "DPS" was, in fact, designed to constrain language in the 1973 version of the ESA which extended the statute to "any other group of fish or wildlife of the same species or smaller taxa in common special arrangement that interbreed when mature."[82] Still, the U.S. General Accounting Office ("GAO") warned that use of a DPS could lead to unnecessary subdivision that did little more than lead to the listing of segments of healthy and abundant species.[83] In response to such concerns, Congress noted in the Conference Report on the 1978 ESA Reauthorization that it "is aware of the great potential for abuse of this authority," and therefore included an admonition that the listing services use their DPS authority "sparingly and only when then biological evidence indicates that such action is warranted."[84]

In the ensuing decades, FWS and the National Marine Fisheries Service (collectively "the Listing Services") have generally respected the high bar that Congress demanded be used to designate a DPS. In 1991, the Listing Services established a policy outlining criteria for designating Pacific salmon by DPS.[85] Under the policy, DPS status was restricted to "evolutionarily significant units"

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[79] 61 Fed. Reg. 4,722, 4,725 (Feb. 7, 1996).

[80] Oyler-McCance (2016); Ronald A. Van den Bussche *et al.*, Genetic Variation Within and Among Fragmented Populations of Lesser Prairie-Chickens (*Tympanuchus Pallidicinctus*), 12, at 675-683 (Molecular Ecology 2003); Christian A. Hagen *et al.*, Regional Variation in mtDNA of the Lesser Prairie-Chicken, 112, at 29-37 (Condor 2010); C. L. Pruett *et al.*, Low Effective Population Size and Survivorship in a Grassland Grouse, 12, at 1205-1214 (Springer 2011); R. W. DeYoung, and D. L. Williford, Ecology and Conservation of Lesser Prairie-Chickens: Genetic Variation and Population Structure in the Prairie Grouse- Implications for Conservation of the Lesser Prairie-Chicken at 77-97. (David A. Haukos & Clint W. Boal eds., 2016); John A. Crawford, Status, Problems, and Research Needs of the Lesser Prairie-Chicken, 1-7, (1980).

[81] 16 U.S.C. § 1532(16).

[82] *See* U.S. General Accounting Office, Endangered Species: A Controversial Issue Needing Resolution (1979).

[83] *See* U.S. General Accounting Office, Endangered Species: A Controversial Issue Needing Resolution (1979).

[84] S. Rep. No. 95-151, at 7 (1979), reprinted in ESA Legislative History at 1397.

[85] 56 Fed. Reg. 58,612 (Nov. 20, 1991).

("ESU") that are substantially reproductively isolated and which represent an important component of the evolutionary legacy of the species.[86] In 1996, the Listing Services established a new, more encompassing DPS policy that, like the ESU policy and consistent with congressional intent, maintained a high bar to designate a DPS ("DPS Policy").[87] For a population segment to be considered a DPS under the 1996 DPS Policy, the segment must meet two criteria: (1) it must be discrete; and (2) it must be significant.[88] Discreteness requires conspicuous separation from the remainder of the species, but separation alone is not enough for a population segment to qualify as a DPS.[89] Even if the population is markedly discrete, the Listing Services, at Congress's direction, instruct that the discrete segment be significant in some unique biological manner or that the segment serve some significant role in support of the species as a whole.[90]

The "significance" element of the DPS Policy is critical to the evaluation of population segments for DPS status. It "is intended to carry out the expressed congressional intent that this authority be exercised sparingly. . ."[91] Indeed, FWS has found several populations to be discrete, but declined to extend DPS status because the discrete segment was not significant.[92]

More broadly, the Listing Services' DPS designation authority is intended to:

> allow the Services to protect and conserve species and the ecosystems upon which they depend before largescale decline occurs that would necessitate listing a species or subspecies throughout its entire range. This may allow protection and recovery of declining organisms in a more timely and less costly manner, and on a smaller scale than the more costly and extensive efforts that might be needed to recover an entire species or subspecies. The Services' ability to address local issues (without the need to list, recover, and consult rangewide) will result in a more effective program.[93]

This intended purpose is not reflected in the DPS designation FWS is proposing here. FWS is proposing to list all LPCs throughout their range, albeit in two DPSs rather than as a range-wide species. The Service's proposal does not obviate the need to list any LPC populations, and there is no indication that listing LPCs as two DPSs rather than range-wide is more timely, less costly, or in any way beneficial to the conservation of LPCs.

FWS is not proposing the LPC DPSs to "address local issues (without the need to list, recover, and consult rangewide)," because, (again) FWS is proposing to list *all* LPCs as either endangered or threatened, but also because there is no indication that designating two DPSs can help "address local issues." To the contrary, the Service's proposed Section 4(d) regulations reflect that FWS

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[86] 56 Fed. Reg. at 58,518.
[87] 61 Fed. Reg. 4,722 (Feb. 7, 1996).
[88] 61 Fed. Reg. at 4,725. If the species is both discrete and significant, it is considered a DPS, but that DPS is not then protected under the ESA unless and until the listing agency determines that the DPS is either threatened or endangered under the ESA.
[89] 61 Fed. Reg. at 4,725
[90] 61 Fed. Reg. at 4,725
[91] 61 Fed. Reg. at 4,724.
[92] *See, e.g.*, 67 Fed. Reg. 44133 (Jul. 1, 2002); 68 Fed. Reg. 11,574 (Mar. 11, 2003); 68 Fed. Reg. 34,628 (Jun 10, 2003); 77 Fed. Reg. 25,792 (May 1, 2012).
[93] 61 Fed. Reg. at 4,725.

intends to apply essentially the same protections and prohibitions range-wide regardless whether the Proposed DPSs are listed as endangered or threatened.[94]

FWS is not proposing the Northern and Southern DPSs "to concentrate conservation efforts undertaken under the Act on avoiding important losses of genetic diversity."[95] Rather, FWS is proposing to designate these DPSs simply because it has identified genetic diversity throughout the range-wide LPC population. This distinction is easy to miss but highly important. The DPS Policy allows FWS to designate DPSs to concentrate conservation efforts on maintaining genetic diversity. The Service cannot designate a population segment simply because it currently contributes to, or may one day contribute to, the larger taxon's overall genetic diversity.

The Service may well have credible concerns about the apparent lack of connectivity between the proposed DPSs, but it is unclear why FWS believes that taxonomic deconstruction of the species can help increase connectivity between its northern and southern populations. Extensive federal, state, local, public and private conservation efforts are working to improve range-wide protection of LPCs by focusing on connectivity between these populations. FWS has been deeply involved in these efforts for years. The Service's short DPS analysis does not explain why the long-recognized lack of connectivity[96] now justifies designating two DPSs or the conservation purpose served by dividing up the range-wide taxonomic classification.

Indeed, there is no scientific or conservation basis for designating Northern and Southern DPSs. Connectivity between populations will not be improved by separating them taxonomically. The Service's proposed DPS determination represents a taxonomic fiction that would erect a new barrier to range-wide LPC conservation and the need to maintain connectivity throughout the LPC's range. We therefore urge FWS to refrain from finalizing its proposed DPS designation.

2. <u>The Service's proposal presents insufficient evidence of distinction and no evidence of significance</u>

As explained above, for a population segment to be considered a DPS, the segment must: (1) be discrete; and (2) be significant.[97] The Service's Proposed Listing and DPS designation fail to present data sufficient to support either factor.

i. Discreteness

FWS suggests that the northern and southern portions of the range-wide LPC population are markedly separate are conspicuously discrete based on the geographic separation of the populations and evidence of genetic structuring.[98] The scientific evidence provided, however, is not sufficient to demonstrate that the populations are markedly separate or that they are conspicuously discrete. In fact, a careful reading of the available data, including the studies on

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[94] *See* 86 Fed. Reg. at 26,446 – 29,447 (allowing incidental take of LPCs in the Proposed Northern DPS only for certain continuing routine agricultural practices on existing cultivated lands and for prescribed fire activities necessary to improve/manage habitat).
[95] 61 Fed. Reg. at 4,724.
[96] *See e.g.,* 79 Fed. Reg. at 20,005.
[97] 61 Fed. Reg. at 4,725. If the population is both discrete and significant, it can be considered a DPS, but that DPS is not then protected under the ESA unless and until the Listing Service determines that the DPS is either threatened or endangered under the ESA.
[98] 86 Fed. Reg. at 29,439.

which FWS bases its proposed DPS determination, reveals that these populations are not markedly separate and that the conservation strategies that are currently being implemented will likely increase connectivity between populations.[99]

Importantly, the Service's proposed DPS determination is not based on any physical, physiological, behavioral, or morphological distinctions between the northern and southern populations. Nor could it be – an LPC in one ecoregion is physically and behaviorally indistinguishable from an LPC in another ecoregion. While FWS is correct in concluding that the Proposed DPSs are separated by areas of unoccupied habitat, the Service has not provided evidence that these unoccupied areas are barriers to migration. Indeed, the four LPC ecoregions were delineated in large part in order to serve conservation and habitat management purposes – not to suggest the presence of evolutionarily distinct population units.

Recent studies of LPC's long-range dispersals also undermines the Service's assertions about marked separation.[100] While biologists have long understood that LPCs were capable of long-range movements, until recently, very little was known about whether LPCs undertake such movements. Earl (2016) used satellite GPS transmitters on LPCs across the entire distribution of the species and documented dispersal movements "up to 71 km net displacement."[101] As noted by the authors "[t]hese distances suggest that there may be greater potential connectivity among populations than previously thought."[102] Although the unoccupied habitat between the Proposed Northern and Southern DPSs exceeds the observed net displacement of LPCs, increased connectivity is not expected to be accomplished by the singular long-distance dispersals of female LPCs.[103] Instead, conservation efforts are focused on increasing LPC abundance so that birds can incrementally disperse to and reoccupy areas between the northern and southern populations. Extensive efforts to protect and preserve connectivity zones have been initiated for precisely this purpose.[104] The more recent evidence of longer-range dispersal is welcome news because it may mean that LPC expansion into unoccupied areas may be accomplished in fewer increments than anticipated and that genetic exchange between the northern and southern populations may occur before the habitats physically converge.[105]

The genetic data also support this conclusion. While FWS cites Oyler-McCance (2016) as evidence of marked separation, the study utilized an approach that allowed for an examination of genetic structure over time but is not particularly relevant to assessing discreteness for the purpose of applying the DPS Policy or designating DPSs under the ESA. Oyler-McCance (2016) relied on variation at microsatellite loci, which are selected because they contain genetic variation.

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[99] Wolfe, R. L., S. C. Kyle, J. C. Pitman, D. M. VonDeBur, M. E. Houts, 2018. The 2018 Lesser Prairie-Chicken Range-wide Conservation Plan Annual Progress Report. Western Association of Fish and Wildlife Agencies. Boise, Idaho, pp.123.

[100] Julia E. Earl *et al*., Characteristics of Lesser Prairie-Chicken (*Tympanuchus Pallidicintus*) Long-Distance Movements Across Their Distribution, 7(8). (Ecosphere 2016). Hereafter "Earl (2016)."

[101] Earl (2016).

[102] Earl (2016).

[103] Earl (2016).

[104] *See* Hagen, Christian A.; Jamison, Brent E.; Giesen, Kenneth M.; and Riley, Terry Z., "Guidelines for Managing Lesser Prairie-Chicken Populations and Their Habitats" (2004). USGS Northern Prairie Wildlife Research Center. 36. https://digitalcommons.unl.edu/usgsnpwrc/36.

[105] *See* Peterson, J. M., J. E. Earl, S. D. Fuhlendorf, R. D. Elmore, D. A. Haukos, A. M. Tanner, and S. A. Carleton. 2020. Estimating response distances of lesser prairie-chickens to anthropogenic features during long-distance movements. Ecosphere 11(9):e03202. 10.1002/ecs2.3202.

Microsatellite loci have a low likelihood of uncovering recent geographic structure because of their high effective population size,[106] although they typically recover statistically significant differences in gene frequencies if there is enough spatial distance between sampling localities.

More precisely, Oyler-McCance (2016) reported on the results of a microsatellite survey of 13 loci selected, not randomly, but rather because of the high variability associated with those loci. Based on an examination of the extent of variability exhibited by these loci in 640 individual LPCs from across the species' current range, the study authors found that "[t]he Shinnery Oak Prairie and Sand Sagebrush Prairie represented genetically distinct populations (FST > 0.034 and FST > 0.023 respectively)."

The distinction referenced in the study, however, is in regard to the statistical difference in gene frequencies found in various LPC populations. Oyler-McCance (2016) supports the notion that differences in genetic frequencies increase with distance, but the reference to "genetically distinct populations" in Oyler-McCance (2016) does not amount to a conclusion that LPCs in the Shinnery Oak Ecoregion are "markedly separated" from other populations . . . as a consequence of physical or, physiological, ecological, or behavioral differences."[107] Under the DPS Policy's analytical approach, "discreteness" means that a genetic variation can be identifiable to a specific geographic area. This is clearly not the case because, as noted above, less than 3.4% of the total genetic variance is explained by geographic area.

In basing its proposed "discreteness" conclusion on populations that differ only statistically in minute differences in gene frequencies, the Service's proposal fails to adhere to Congress' admonition that the Listing Services use their DPS designation authority "sparingly and only when then biological evidence indicates that such action is warranted."[108] Under the standard that FWS proposes to employ here, nearly every species would consist of DPSs as long as the genetic units that were sampled were similarly far apart. For example, Munshi-South and Kharchenko (2010) found that the methods used in Oyler-McCance (2016) will show distinct genetic structure in common deer mouse (*Peromyscus leucopis*) depending on where found within New York City's Central Park,[109] but this is not what Congress had in mind when it gave the Listing Service's limited authority to designate DPSs "when warranted."

Nor does the genetic structuring identified in Oyler-McCance (2016) evince the requisite "discreteness" described in the DPS Policy. For one, the examination of neutral genetic markers in Oyler-McCance (2016) can help describe historical population isolation and gene flow between populations, but it does not represent the effects of any adaptive processes. Indeed, there are no physical, behavioral, morphological, reproductive, breeding differences or any other adaptive differences between the Proposed Northern and Southern DPSs, and therefore there is no evidence to suggest that LPCs from the Proposed Northern or Southern DPSs developed adaptations specific to their ecoregions or are in any way evolutionarily distinct from LPCs in other ecoregions. FWS

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[106] *See* Zink, R.M. (2014) Comparison of patterns of genetic variation and demographic history of the greater sage-grouse (*Centrocercus urophasianus*): relevance for conservation. The Open Ornithology Journal. 7:19-29.

[107] 61 Fed. Reg. at 4,725.

[108] S. Rep. No. 95-151, at 7 (1979), reprinted in ESA Legislative History, note 144, at 1397.

[109] Munshi-South J, Kharchenko K (2010) Rapid, pervasive genetic differentiation of urban white-footed mouse (*Peromyscus leucopus*) populations in New York City. Molecular Ecology, 19, 4242–4254.

has identified no unique trait or attribute in LPCs from any of the ecoregions that suggests those birds are less likely to survive in any other ecoregion.

Rather, the genetic evidence cited by FWS suggests that LPCs in all ecoregions continue to have genetic diversity sufficient to avoid the deleterious effects of inbreeding.[110] While Oyler-McCance (2016) recommended continued genetic monitoring to insure future population declines do not adversely impact LPC's genetic diversity, overall the study's analysis merely confirmed that the LPC populations situated in the various ecoregions exist as metapopulations, within which population-specific genetic markers develop based on the tendency for a small number of (non-migratory) male LPCs to dominate the breeding pool.[111] Connectivity between these populations is largely maintained by longer-dispersing females.[112] And, while different metapopulations of LPCs exhibit some genetic distinctiveness, that distinctiveness is inherent in all metapopulations and necessary for overall genetic diversity. Moreover, this localized genetic variation is present between ecoregions, but also within ecoregions.[113] It is not evidence of marked distinction or conspicuous separation – it merely reflects metapopulation dynamics not altogether different than what would be observed in any other widespread species.

Further, the genetic studies described in Oyler-McCance (2016) were chiefly designed to inform ongoing efforts to increase connectivity between LPC ecoregions. As previously mentioned, increasing habitat connectivity is one of the foremost goals of the LPC conservation strategy that is being implemented throughout the full range of the LPC.[114] As such, even if the generic structuring indicates some genetic distinctions between LPC populations, that distinctiveness does not reflect that these populations are "marked separated." Nor does it account for the fact that geographic separation between the northern and southern populations is likely eroding as LPC populations stabilize and increase, and as connectivity strategies continue to be implemented on an unprecedented scale.

ii. Significance

Even if the Service's proposed DPS determination credibly showed that LPCs in the Shinnery Oak Ecoregion are markedly distinct and conspicuously separated from LPCs in the other ecoregions, the DPS Policy still requires a demonstration that the distinctiveness of the population segment is important to the taxon as a whole.[115] Once more, the Service's three-paragraph "significance" analysis falls short of the high standards for designating DPS imposed by the ESA and the DPS Policy.

As best we can discern, the Service's analysis of the "significance" of the Proposed DPSs to the taxon as a whole is that: (1) the DPSs are "markedly separate based on neutral genetic markers;"[116]

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[110] Oyler-McCance (2016) at 656.
[111] Oyler-McCance (2016).
[112] Earl (2016).
[113] Oyler-McCance (2016).
[114] Sean C. Kyle *et al.,* The 2015 Lesser Prairie-Chicken Range-Wide Conservation Plan Annual Progress Report. (Western Association of Fish and Wildlife Agencies 2016). Hereafter "Kyle (2016)".
[115] 61 Fed. Reg. 4,725.
[116] 86 Fed. Reg. at 29,540 (It is not clear whether this conclusion, which is found only within the subsection entitled "Distinct Population Segment Conclusion," but not in the subsection on "Significance," is reiterating the conclusion FWS appeared to reach in the "Discreteness" subsection or whether FWS also separately reached this conclusion with respect to "Significance."

and (2) that hypothetical loss of either Proposed DPS would result in a significant gap in the range of the species.[117] Neither of these conclusions are adequately explained. Nor are they consistent with the Listing Services' DPS Policy or reflective of Congress' admonition that DPS designation authority be exercised "sparingly."

Indeed, it is not even clear whether FWS did, in fact, conclude that the Proposed Southern DPS "differs markedly . . . in its genetic characteristics" from the Proposed Northern DPS in a manner that is "importan[t] to the taxon . . ." [118] The Service's discussion of genetic differences in its subsection on "Significance" merely restates longstanding evidence of genetic differences between and among LPCs in different ecoregions.[119] The Service's proposal never discusses why FWS now views these distinctions as "markedly" different and never explains whether genetic differences between populations have resulted in "genetic characteristics" within the proposed DPSs "that might bear on bear on the biological and ecological importance of" the proposed DPSs to the taxon as a whole.[120] FWS simply concluded, without explanation, that the "two segments of the range are genetically distinct from each other."[121]

Such a conclusion is arguably insufficient to support a finding of "Discreteness," and it is unquestionably insufficient to support a finding of "Significance." In essence, after concluding that the northern and southern populations of LPCs were discrete, FWS concluded those populations were significant merely because they were discrete. FWS's analysis thus impermissibly ignored the Services' own policy requirement to examine significance separately, and in addition to, "discreteness." Perhaps this oversight is because there is no evidence to suggest that LPCs from the Proposed Northern or Southern DPSs developed adaptations specific to their ecoregions or are in any way evolutionarily distinct from LPCs in other ecoregions. We do not know because FWS provided no explanation in its proposal.

The Service's sole remaining basis for demonstrating the "biological and ecological significance" of the Proposed Northern and Southern DPSs is therefore that the hypothetical loss of either population would result in a significant gap in the range of the species.[122] This conclusion also represents an unacknowledged and unexplained departure from the Service's prior views on the proper taxonomic classification of LPCs. And like the proposal's discussion of "marked separation," the Service's "significant gap" analysis is plainly inadequate.

The Service's entire analysis of the "significant gap" element is that, because the Proposed Northern DPS contains approximately 75 percent of LPC range and the Proposed Southern DPS contains 25 percent of the LPC range, "loss of either part of the range would result in a significant gap in the range of the lesser prairie-chicken."[123] Although it is certainly true that the hypothetical (and very unlikely) extirpation of LPCs from either of the Proposed DPSs would represent a significant restriction in LPC range, this would be the case with any species. Under the analytical framework employed here, FWS can conclude that any proposed DPS is significant to the taxon

[117] 86 Fed. Reg. at 29,539-29,540.
[118] 61 Fed. Reg. at 4,725.
[119] 86 Fed. Reg. at 29,539.
[120] 61 Fed. Reg. at 4,725.
[121] 86 Fed. Reg. at 29,539.
[122] 86 Fed. Reg. at 29,539-29,540.
[123] 86 Fed. Reg. at 29,540.

as a whole as long as the Service delineates the proposed DPS such that it contains more than a *de minimis* portion of the overall range of the species.

Indeed, the analytical frame employed by FWS provides no limitation to the Service's discretion to designate DPSs, and therefore impermissibly ignores that the sole intent of the DPS Policy's requirement to examine a proposed DPS's "biological and ecological significance" was to limit the Listing Services' DPS designation authority in furtherance of Congress' instruction that this authority be used "sparingly." [124]

After the Listing Services proposed their DPS Policy, they received a comment on the "significant gap" element which noted that "if distinct populations are entirely separate, the loss of one has little significance to the others."[125] And in response, the Listing Services stated:

> If the standard for discreteness were very rigid or absolute, this could very well be true. However, the standard adopted allows for some limited interchange among population segments considered to be discrete, so that loss of an interstitial population could well have consequences for gene flow and demographic stability of a species as a whole.[126]

This exchange, memorialized within the DPS Policy itself, illuminates the reasonable limiting principle intended by the "significant gap" inquiry. The hypothetical extirpation of a population will result in a significant gap only if the population is connected to the taxon as a whole. And conversely, the hypothetical extirpation of a population will not result in a significant gap if, as FWS concludes in the "Discreteness" subsection of the Proposed Listing, "there is no connection between the two parts of the range" and "no gene flow between them."[127] According to the DPS Policy, the Service's Proposed Northern and Southern DPSs cannot be both entirely distinct and yet highly significant to the range-wide population.

The Listing Services intended the "significant gap" element to allow for consideration of those interstitial populations that are necessary to maintain connectivity and genetic flow between and among the range-wide taxon. As FWS acknowledges, there presently is no interstitial population between the Proposed Northern and Southern DPSs. As described throughout these comments, significant efforts are in place to address the present lack of connectivity through connectivity zones and habitat improvements that can help increase LPC abundance and range such that the geographic distances between ecoregions shrinks and ceases to be a barrier to connectivity. This need to increase connectivity has been the cornerstone of the Service's range-wide LPC conservation approach for decades, and FWS offers no explanation why now, for the first time, connectivity concerns warrant the taxonomic deconstruction of the range-wide LPC population into the Proposed DPSs.

As such, absent any meaningful demonstration of either discreteness or significance, much less both, FWS cannot finalize its proposed designation of a threatened Northern DPS or an endangered Southern DPS. FWS has provided no reasoned explanation for, or even acknowledged, this stark and seemingly arbitrary policy shift. It is not supported by data; it is inconsistent with the ESA

[124] 61 Fed. Reg. at 4,725.
[125] 61 Fed. Reg. at 4,724.
[126] 61 Fed. Reg. at 4,724.
[127] 86 Fed. Reg. at 29,439.

and the DPS Policy, and it serves no conservation purpose. The Associations therefore respectfully request that FWS withdraw its proposed DPS determination.

V. NEITHER THE RANGE-WIDE LPC POPULATION NOR THE PROPOSED SOUTHERN DPS OR NORTHERN DPS MEET THE ESA'S DEFINITIONS OF ENDANGERED OR THREATENED SPECIES

There is no basis for FWS to conclude that the range-wide LPC population or the Service's proposed DPSs meet the ESA's definitions for either threatened or endangered species. The ESA commands a high standard for listing species, and owing to unprecedented conservation efforts, an ongoing monitoring program, and the LPC's known resiliency to seasonal drought, LPCs face no present or reasonably foreseeable risk of extinction.

The best available evidence demonstrates that LPCs are well protected through myriad conservation efforts, that their abundance is increasing, and that their range is expanding. The Service acknowledges much of this. Thus the Service's proposal to list a Northern DPS as threatened and a Southern DPS as endangered is based entirely on the Service's presumption that potential habitat loss over the next 25 years[128] will be so extensive that it will not only end the LPC's recent observed increases in abundance, but reverse those trends to such a degree that LPC abundance will plummet to levels never before observed, placing LPCs on the brink of extinction.

This is not a rational or factually supported conclusion. The geospatial model the SSA team developed to estimate future available habitat is not capable of modeling potential habitat change on a scale relevant to the Service's listing analysis, and was further undermined by analytical framing decisions, model inputs, and data gaps that render its projections largely speculative. The model may be a helpful tool to analyze hypothetical development trajectories, but it is not the best scientific information available, and it should not be relied upon in determining whether LPCs (range-wide or as the Proposed DPSs) meet the ESA's definitions of endangered or threatened species.

The best scientific information available continues to demonstrate that LPC abundance is increasing and range is expanding. Unprecedented habitat conservation and monitoring efforts are in place to ensure that future habitat modification does not reverse those trends. While the SSA team's geospatial model is likely sufficient to show that habitat modification is a serious conservation concern and a factor that may potentially limit future LPC population growth, it provides no basis to conclude that LPCs (range-wide or as the DPSs proposed by FWS) are presently on the brink of extinction or likely to become so within 25 years.

Range-wide or as the DPSs proposed by FWS, LPCs do not meet the ESA's definition of endangered or threatened species. A conclusion otherwise would be arbitrary, capricious, a violation of the ESA, and an abuse of the Service's discretion.

[128] The Service's proposal is based on a "foreseeable future" of 25 years. This was the time horizon through which FWS believed it could project future habitat changes with reasonable confidence. *See* 86 Fed. Reg. at 29,461.

a. The ESA requires a high standard for listing species, subspecies, and DPSs[129]

The ESA sets a high standard for listing a species, subspecies, or DPS as threatened or endangered. An "endangered" species is statutorily defined as one that is presently in danger of extinction throughout all or a significant portion of its range.[130] A "threatened" species is one that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.[131] When evaluating the status of a species, FWS must consider the following five factors:

(1) the present or threatened destruction, modification, or curtailment of its habitat or range;

(2) overutilization for commercial, recreational, scientific, or educational purposes;

(3) disease or predation;

(4) the inadequacy of existing regulatory mechanisms; and

(5) other natural or manmade factors that affect the species' continued existence.[132]

In making these assessments, FWS must use "the best scientific and commercial data available" after conducting a review of the status of the species and taking into account the efforts being made by any nation or political subdivision of a nation to protect the species, including through predator control, protection of habitat and food supply, or other conservation practices.[133]

Courts have interpreted these listing standards to reflect Congress' intent that the decision to list a species as threatened or endangered not be based on speculation or a misplaced intent to err on the side of species conservation:

> Under Section 4, the default position for all species is that they are not protected under the ESA. A species receives the protections of the ESA only when it is added to the list of threatened species after an affirmative determination that it is 'likely to become endangered within the foreseeable future.' Although an agency must still use the best available science to make that determination, *Conner* [*v. Burford,* 848 F.2d 1441 (9th Cir. 1988)] cannot be read to require an agency to 'give the benefit of the doubt to the species' under Section 4 if the data is uncertain or inconclusive. Such a reading would require listing a species as threatened if there is any possibility of it becoming endangered in the foreseeable future. This would result in all or nearly all species being listed as threatened.[134]

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[129] The ESA does not vary these standards based on whether the entity is a species, subspecies, or DPS. For simplicity, we refer only to "species" in this section.
[130] 16 U.S.C. § 1532(6).
[131] 16 U.S.C. § 1532(20).
[132] 16 U.S.C. § 1533(a)(1).
[133] 16 U.S.C. § 1533(b)(1)(A).
[134] *Trout Unlimited v. Lohn*, 645 F. Supp. 2d 929, 947 (D. Or. 2007); *see also Center for Biological Diversity v. Lubchenco*, 758 F. Supp. 2d 945, 955 (N.D. Cal. 2010) (finding that the "benefit of the doubt" concept does not apply in the Section 4 listing context); *Oregon Natural Resources Council v. Daley,* 6 F. Supp. 2d 1139, 1152 (D. Or. 1998) (ESA requires a determination as to the likelihood—rather than the mere prospect—that a species will or will not

Whether a species should be listed under the ESA (or not) is not a question of whether the species is important, iconic, or deserving of conservation. Nor can species be listed based on a finding that they are being harmed, may be harmed in the future, that their abundance and range had declined, or that there are limits to the species future population growth. Listing status is measured by the prospect that the species will cease to exist. Assessing the prospect of extinction is necessarily imprecise, and the Service's judgments are entitled to deference if based on best available evidence and the five listing criteria, but the question the ESA requires FWS to answer does not change: Is this species at risk of extinction today, or is a risk of extinction likely to arise in the foreseeable future?

FWS determined that it could not reliably predict threats to LPCs, or LPCs' responses to those potential threats, beyond 25 years.[135] Although the Associations question the Service's ability to reliably predict impacts relevant to assessing the listing status of LPCs (either range-wide or as the proposed DPSs) on a 25-year horizon, we agree that FWS has no basis to predict impacts beyond this horizon. As such, the Associations' response and analyses utilize the Service's 25-year "foreseeable future" determination. As discussed in the subsections that follow, the best available evidence demonstrates that LPCs (either range-wide or as the proposed DPSs) are not presently as risk of extinction and they are highly unlikely to become so in the next 25 years.

b. <u>Listing decisions must meaningfully consider conservation efforts</u>

As discussed above, the ESA requires FWS to consider five factors, including "the present or threatened destruction, modification, or curtailment of a species' habitat range."[136] FWS has interpreted this provision to require the Service "to consider the conservation efforts of not only State and foreign governments but also of Federal agencies, Tribal governments, businesses, organizations, or individuals that positively affect the species' status."[137]

The ESA also requires that listing decisions be made "solely on the basis of the best scientific and commercial data . . . *and after taking into account those efforts, if any, being made by any state or foreign nation or political subdivision of a state or foreign nation to protect such species* . . . ."[138] The plain language of the ESA thus requires the FWS to consider conservation measures undertaken by other entities in determining whether listing of a species is warranted. The implementing regulations for the ESA similarly provide that the Secretary "*shall* take into account . . . those efforts, if any, being made by any State or foreign nation or any political subdivision of a State or foreign nation to protect such species . . . ."[139]

In order to help guide their consideration of conservation efforts in making listing decisions, in 2003 the Listing Services published the Joint Policy for the Evaluation of Conservation Efforts When Making Listing Decisions ("PECE Policy").[140] The PECE Policy "identifies criteria [the Services] will use in determining whether formalized conservation efforts that have yet to be

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become endangered in the foreseeable future); *Federation of Fly Fishers v. Daley*, 131 F. Supp. 2d 1158, 1165 (N.D. Cal. 2000) ("The ESA cannot be administered on the basis of speculation or surmise.").

[135] *See* 86 Fed. Reg. at 29,461.

[136] 16 U.S.C. § 1533(a)(1)(A).

[137] 68 Fed. Reg. 15,101, 15,113 (Mar. 28, 2003).

[138] 16 U.S.C. § 1533(b)(1)(A) (emphasis added).

[139] 50 C.F.R. § 424.11(f) (emphasis added).

[140] 68 Fed. Reg. 15,100.

implemented or to show effectiveness contribute to making listing a species as threatened or endangered unnecessary."[141] It sets forth two fundamental criteria that guide the Listing Services' evaluation of whether new conservation measures may be considered in a listing decision: (1) the certainty that the conservation measure will be implemented; and (2) the certainty that the conservation measure will be effective.[142] Under the PECE Policy, the Service considers several criteria under each prong—implementation and effectiveness—in order to determine whether a specific conservation effort can be considered in the context of a listing decision.

To determine the "certainty that the conservation effort will be implemented," the PECE Policy requires FWS to evaluate the nine criteria related to the availability of resources and funding, legal authority, procedural requirements, necessary authorizations and approvals, the type and level of voluntary participation, and the sufficiency of the implementation schedule. [143]

The PECE Policy also requires consideration of certain specified criteria for assessing the "certainty that the conservation effort will be effective." These criteria examine the nature and extent of threats to be addressed, as well as the clarity with which conservation objectives are stated, quantified, measured, monitored, and if necessary, adaptable to address changed circumstances. [144]

While the PECE Policy limits the Service's consideration of conservation efforts to those that are reasonably certain to be implemented and beneficial to the species, *nothing* in the policy suggests that the Service may limit its consideration to only those conservation efforts that are certain to eliminate *all* threats.[145] To the contrary, for purposes of evaluating the potential efficacy of conservation efforts, the PECE Policy requires only that the Service identify threats and conservation objectives, and evaluate whether the efforts "identify the appropriate steps to *reduce* threats to the species . . ."[146] Indeed, in making a listing decision, FWS must consider any conservation effort that the Service concludes "improves the status of the species . . ."[147]

c. <u>The 2021 SSA Report's analysis of current and future LPC conservation status</u>

Unlike the Service's proposed DPS designation, which was developed without any input from the SSA review team, FWS's proposed listing of the two DPSs relies extensively on the March 2021 SSA Report. As such, even though the 2021 SSA Report did not include conclusions about the listing status of LPCs (range-wide or as the proposed DPSs), FWS adopted the 2021 SSA Report's assessment of current LPC conditions and future trends as the basis for proposing to find that the proposed Northern DPS is threatened and the proposed Southern DPS is endangered.

The 2021 SSA Report is therefore key to understanding the Service's "more detailed justification"[148] for contradicting its 2014 determination that the range-wide population of LPCs

[141] 68 Fed. Reg. 15,100.
[142] 68 Fed. Reg. 15,100.
[143] 68 Fed. Reg. at 15,114.
[144] 68 Fed. Reg. at 15,115
[145] *See* 68 Fed. Reg. 15,100.
[146] 68 Fed. Reg. at 15,101.
[147] 68 Fed. Reg. at 15,101.
[148] *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515

is not endangered.[149] The "reasoned explanation" for this change is likely found in prior versions of the 2021 SSA Report, but FWS has not provided those prior versions or other relevant information in the docket for this rulemaking.

Indeed, the 2021 SSA Report is characterized as "Version 2.2," reflecting that one or more SSA review teams produced three prior versions of the SSA Report (Version 1.0, Version 2.0, and Version 2.1).[150] FWS began work on Version 1.0 of the SSA Report in 2015,[151] which means that the Service began work its status review prior to publishing its final rule implementing the Western District of Texas's vacatur of FWS's 2014 Listing Decision,[152] and prior to the Service's November 30, 2016 receipt of the petition that precipitated this Proposed Listing.[153]

Version 1.0 of the SSA Report "had undergone peer and partner review in 2017" and was completed in draft form in 2018.[154] The 2021 SSA Report identified the peer and partner reviewers, but FWS has never released or provided a characterization of their comments. Nor has the Service publicly released the 2017 draft SSA Report it circulated for peer and partner review, or the 2018 draft final report that presumably incorporated or responded to the feedback from the peer and partner reviewers.

Version 2.0 of the SSA Report was produced in August 2020, "to facilitate additional peer and partner (State and Federal agency) review."[155] The 2021 SSA Report stated that "[m]uch of the report and analytical framework in this version remained the same as Version 1.0, but we have updated the data and information, including the spatial analysis."[156] As with Version 1.0, FWS has not publicly released Version 2.0 or any of the peer or partner review comments the Service received on Version 2.0. Likewise, FWS has not provided Version 2.1, which "was completed in October 2020 following review and comments from peer and partner review of Version 2.0."[157] Version 2.2, which reflects "very minor revisions from Version 2.1," was published in January 2021 and was "intended to support the Service's 12- month petition finding to publish in May or June 2021."[158]

The Associations believe that FWS must provide these prior versions of the SSA reports as well as all previous peer and partner review comments on those previous versions. In fact, the APA requires FWS to provide stakeholders information necessary to inform their comments on an Agency proposal. And importantly, the absence of this information is not a harmless oversight.[159]

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[149] *See* 69 Fed. Reg. 19,974 (Apr. 10, 2014).
[150] 2021 SSA Report at ii.
[151] 2021 SSA Report at ii.
[152] 81 Fed. Reg. 47,047 (July 20, 2016)
[153] *See* 90-Day Finding at 81 Fed. Reg. 86,315.
[154] 2021 SSA Report at ii.
[155] 2021 SSA Report at ii.
[156] 2021 SSA Report at ii.
[157] 2021 SSA Report at ii.
[158] 2021 SSA Report at ii.
[159] *See Chocolate Mfrs Ass'n v. Bloc*k, 755 F2d 1098, 1103 (4th Cir. 1985); *See also United Steelworkers v. Marshall*, 647 F2d. 1189, 1221 (D.C. Cir. 1980); *See also Am. Med. Ass'n v. United States*, 887 F2d 760, 767 (7th Cir. 1989).

The 2021 SSA Report's identification of these prior versions reflects that the analysis which FWS now uses to support its proposal to list two DPSs comes from Version 1.0, which was started the year after the Service determined that the range-wide LPC population was threatened; not endangered. Stakeholders should be allowed to see what conclusions FWS was prepared to reach in each of these prior versions of the SSA Report, and whether or to what extent those conclusions changed as year after year of survey data provided evidence of stabilizing or increasing populations, or new academic research showed increased likelihood of persistence.[160]

It is particularly important that stakeholders understand the evolution of the Service's geospatial analysis between 2015 and 2021. The Service relies heavily on the geospatial analysis in the 2021 SSA Report to conclude that lack of available habitat will constrain LPC population growth and reverse recent increases in abundance and range.[161] In fact, this is the only analysis FWS identifies to rebut the best available evidence that LPCs (range-wide or as the proposed DPSs) are not a risk of extinction or likely to become so in the next 25 years,[162] and it represents a significant departure from the way FWS considered LPC habitat requirements in the 2014 Listing Decision and the analyses of LPC conservation needs that FWS provided state and private conservation partners.[163]

These prior versions are also necessary to evaluate how the SSA team selected the inputs for its geospatial model. Small changes in the geospatial model inputs can have outsized impacts on the 2021 SSA Report's estimates of future available habitat, and are therefore critical to understanding whether the Proposed Listing is rationally supported. For instance, the 2021 SSA Report identified usable habit as areas with at least 60 percent potential usable un-impacted land cover within a mile.[164] A 2017 U.S. Geological Service ("USGS") report developed in cooperation with the Service states that FWS developed "unpublished habitat projections" in support of an SSA that determined that a habitat was suitable if "40% or more of the area within 1 mile of the center of the patch was also suitable land cover."[165] As discussed further in Section V.d.3.ii. below, the change from 40 percent usable area to 60 percent usable area is substantial and highly consequential because the Service's geospatial modeling of available habitat is perhaps more sensitive to this single "new neighbor" input than any other input or assumption.

As we have noted throughout these comments, the APA requires agencies to "examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'"[166] And while "agency action representing a policy change" need not be "justified by reasons more substantial than those required to adopt a policy in the first

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[160] Hagen, C.A., E.O. Garton, G. Beauprez, B.S. Cooper, K.A. Fricke and B. Simpson. 2017. Lesser Prairie-Chicken population forecasts and extinction risks: an evaluation 5 years post–catastrophic drought. Wild. Soc. Bull. 41(4):624–638.

[161] 86 Fed. Reg. at 29,471.

[162] *See* Hagen (2017); *See also* Garton (2016).

[163] *See e.g.,* Grass & Shrubland Fragmentation Assessment, which the Lesser Prairie-Chicken Estimated Occupied Range of the Southern Great Plains; FWS Branch of Technical Support, Albuquerque, NM (Jan. 2014).

[164] 2021 SSA at 23-23; discussed in more detail in Section V.d.3.ii. below.

[165] Cummings, J.W., S.J. Converse, C.T. Moore, D.R. Smith, C.T. Nichols, N.L. Allan, and C.M. O'Meilia. 2017. A projection of lesser prairie chicken (*Tympanuchus pallidicinctus*) populations range-wide: U.S. Geological Survey Open-File Report 2017-1071, p 2, 14.

[166] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168, (1962)).

instance," when a "new policy rests upon factual findings that contradict those which underlay its prior policy," the agency must "provide a more detailed justification than what would suffice for a new policy created on a blank slate" as it "would be arbitrary or capricious to ignore such matters."[167] The Associations therefore respectfully urge FWS to place into the docket for this rulemaking all prior versions of the 2021 SSA Report and all peer/partner review charge questions and comments.

1. Current Condition

The assessment of current LPC abundance and near-term population trends that FWS used in both its 2021 SSA Report and the Proposed Listing was based on two estimates: (1) the WAFWA range-wide LPC surveys and; (2) a population reconstruction analysis that uses historical lek surveys to estimate male abundance since 2016.[168] Both of these studies represent the best scientific information available on LPC abundance, and both of these studies depict a population trend that is stable, if not increasing.

i. WAFWA range-wide LPC surveys

The annual WAFWA range-wide LPC surveys, which began in 2012, provide the first ever statistically valid range-wide survey for the species.[169] The surveys are conducted by flying aerial line-transact surveys throughout LPC range, and then extrapolating densities from the surveyed area to the rest of the range.[170] The survey provides a robust methodology for selecting and varying grid cells for the transact surveys, estimating the probability of detection, and verifying aerial results with ground surveys.[171] The survey's parameters were also conservative: a minimum of five LPCs per lek must have been observed for the lek to be considered an "active lek" and reported in the survey results, the model used the fewest number of variables, and reported results have a 90% confidence interval.[172]

The WAFWA range-wide survey results for 2012 to 2020 are as follows:

Year[173]	**Proposed Southern DPS**[174]	**Proposed Northern DPS**[175]	**Range-wide**
2012	3,106	25,260	28,366

[167] *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515.
[168] 86 Fed. Reg. at 29,435.
[169] Nasman, K., T. Rintz, D. Pham, and L. McDonald. 2020. Range-wide population size of the lesser prairie-chicken: 2012 to 2020. Prepared for: Western Association of Fish and Wildlife Agencies by Western EcoSystems Technology, Inc., Fort Collins, CO. October 12, 2020. 23 pp ("Nasman (2020)").
[170] Nasman (2020).
[171] Nasman (2020) at 3-4.
[172] Other studies consider leks to be "active" with much fewer birds displaying. For example, in Verquer and Smith, 2011, p. 1-2, leks were considered active if three males are displaying on the lek. *See* 77 Fed. Reg. 73,828, 73847-48 (Dec. 11, 2012).
[173] No surveys were conducted in 2019.
[174] Designated as "Shinnery Oak Prairie Region" in Nasman (2020) at 15.
[175] Estimate from Nasman (2020) converted to Proposed Northern DPS by adding estimates for Sand Sagebrush, Mixed-Grass Prairie, and Short Grass Prairie CRP Ecoregions.

2013	1,773	13,624	15,397
2014	1,211	16,931	18,142
2015	808	22,091	22,899
2016	2,578	17,335	19,913
2017	2,057	24,549	26,606
2018	4,802	28,292	33,094
2020	5,138	29,270	34,408

As these survey results indicate, LPC populations in the different ecoregions in the species' range remain quite stable and, in fact, are growing. As such, Nasman (2020) concluded that the survey data show a "statistically significant annual rate of increase in the total lesser prairie-chicken population size from 2013 to 2020 (p-value = 0.01)."[176] Further, with respect to the Proposed Southern DPS, Nasman (2020) "observed a stable to increasing population of lesser prairie-chickens from 2015-2020."[177]

Nasman (2020) examined the survey data on a range-wide and ecoregion basis only, and therefore did not offer conclusions with respect to population trends in the Proposed Northern DPS. Nonetheless, aggregating the ecoregion data, we can readily observe the similarly significant increases in LPC abundance, and further indication that LPC populations have rebounded from the effects of the 2012 drought (reflected as a lag effect in the 2013-2015 surveys).

Thus, FWS has now for the first time proposed to list a Proposed Southern DPS as endangered and a Proposed Northern DPS as threatened at a time when the best available scientific evidence demonstrates that *both* of those populations are experiencing the highest abundance ever observed. Although FWS has not proposed to once again list the range-wide population of LPCs, it is noteworthy that range-wide abundance has nearly doubled since the Service's 2014 determination that the LPC was a "threatened" species.

ii. Population reconstruction analysis

The second estimate of LPC population trends that FWS considered the best scientific information available is from Hagen (2017).[178] Hagen (2017) actually reflects an effort to validate a previous population analysis (Garton (2016)),[179] using the first four years of WAFWA range-wide survey data (2013-2016).[180]

[176] Nasman (2020) at ii.
[177] Nasman (2020) at ii.
[178] Hagen, C.A., E.O. Garton, G. Beauprez, B.S. Cooper, K.A. Fricke and B. Simpson. 2017. Lesser Prairie-Chicken population forecasts and extinction risks: an evaluation 5 years post–catastrophic drought. Wild. Soc. Bull. 41(4):624–638.
[179] Garton, E.O., C.A. Hagen, G.M. Beauprez, S.C. Kyle, J.C. Pitman, D.D. Schoeling and W.E. Van Pelt. 2016. Population Dynamics of the Lesser Prairie-Chicken. Pp 49–76 in D.A. Haukos and C.W. Boal (editors), Ecology and conservation of lesser prairie-chickens. Studies in Avian Biology (no. 48), CRC Press, Boca Raton, FL. ("Garton (2016)").
[180] Hagen (2017) at 625.

Garton (2016) "provided a unified long-term (1965 – 2012) assessment of lesser prairie-chicken population dynamics and projections of persistence in the Southern Great Plains."[181] According to Garton (2016):

> *Reconstructed* populations show an increase in Lesser Prairie-Chicken populations in the last half of the 1960s, followed by long-term declines through the 1980s until the mid-1990s when population numbers apparently stabilized. Stabilization was coincident with improvements in multiple habitat factors, including cessation of conversion of grasslands to center-pivot irrigation in Kansas, maturation of CRP grasslands, and increased conservation efforts as the species was petitioned for listing under Endangered Species Act in 1995.[182]

In the Shinnery Oak Ecoregion, which FWS now proposes to designate as the endangered Southern DPS, Garton (2016) found that LPC abundance has since 1969 fluctuated around 4,500 birds, and with the exception of population spikes from 1983 to 1988 and in 2006, the abundance observed in the most recent WAFWA range-wide LPC surveys are likely among the highest estimated for the Shinnery Oak Ecoregion/Proposed Southern DPS.[183]

As relevant here, the population reconstructions in Garton (2016) and Hagen (2017) not only help place the WAFWA range-wide LPC survey estimates in the context of decades of fluctuating abundance, the populations trends since the 1960s provide Garton (2016) and Hagen (2017) the basis to project likely future probabilities of LPC persistence range-wide and in each of the ecoregions. To calculate the likelihood of future LPC persistence the studies assessed the likelihood that populations of LPCs would fall below effective population sizes of 50 and 500 on 30- and 100-year time horizons.

An "effective population size" is an estimate of the number of sexually mature individuals that are capable of reproducing.[184] Effective population size estimates can be important for conservation and recovery planning because they provide a metric for estimating the prospect of genetic depression and loss of biological fitness as a result of genetic depression.[185] As effective population size decreases, inbreeding likely increases and therefore the likelihood of genetic depression increases as well.

Franklin (1980) introduced a generic "rule of thumb" that indicated that populations below 50 individuals are likely to experience inbreeding depression in the short-term, and populations below 500 will experience inbreeding depression in the long-term. Importantly, simply noting that a species is at risk of genetic depression does not mean that the species is necessarily at risk of extinction. Inbreeding depression is present in all small populations and, some deleterious recessive alleles will be present in all populations. For inbreeding and genetic depression to negatively affect a species, it must also affect traits that influence population viability. Indeed, the

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[181] Hagen (2017) at 624.
[182] Garton (2016) at 72 (emphasis added).
[183] Garton (2016) at 65, 71.
[184] I.R. Franklin and R. Frankham, How Large Must Populations be to Retain Evolutionary Potential, 1.1, 69-73 (Animal Conservation 1998). Hereafter "Franklin and Frankham (1998)."
[185] Franklin and Frankham (1998).

"50/500 standard" was characterized by the study authors as a genetic "warning light" and a target for conservation planning.[186] As such, even if the LPC's effective population size were to fall below 50 or 500, this fact alone would provide an insufficient basis on which to list the species. As it were, LPC effective population sizes are well above 500 range-wide and in each ecoregion individually. Moreover, the best available scientific data shows that it is extremely unlikely that LPCs will fall below an effective population size of 50 or 500 within the 25-year "foreseeable future" that FWS utilized for this Proposed Listing.[187] To the contrary, the data indicate that populations of LPC are more than sufficient to perpetuate the species through reproduction, avoid genetic inbreeding depression, and provide resiliency from stochastic events.

In the table below, we have reproduced from Hagen (2017) and Garton (2016) the probabilities that relevant populations[188] of LPCs will reach "quasi-extinction" levels of 50 or 500 breeding pairs within 30 years.[189]

Population	**Hagen (2017)**		**Garton (2016)**	
	Probability of <50 breeding pairs within 30 years	**Probability of <500 breeding pairs within 30 years**	**Probability of <50 breeding pairs within 30 years**	**Probability of <500 breeding pairs within 30 years**
Assuming gene flow between populations[190]				
Proposed Southern DPS	5.0%	11.5%	2.3%	19.2%
Range-Wide LPCs	1.1%	1.8%	4.8%	15.2%
Assuming no gene flow between populations[191]				
Proposed Southern DPS	0.2%	15.8%	0.0%	13.1%
Range-wide LPCs	0.0%	0.9%	0.0%	0.9%

[186] Franklin and Frankham (1998).
[187] Hagen (2017); Garton (2016).
[188] Hagen (2017) and Garton (2016) estimate these "quasi-extinction" for LPCs in each of the four ecoregions and range-wide. We included the results for the Shinnery Oak Ecoregion because this is the ecoregion that FWS proposes to designate as the endangered Southern DPS. We were not able to precisely derive a risk of quasi-extinction for the Proposed Northern DPS from Hagen (2017) and Garton (2016), but because the three ecoregions in the Proposed Northern DPS encompasses >85% of LPCs and approximately 75% of LPC range, we believe the range-wide estimates provide a reasonable proxy for the "quasi-extinction" risk for the Proposed Northern DPS.
[189] The Associations use the 30-year time horizon from Hagen (2017) and Garton (2016) based on the Service's conclusion that threats to LPCs cannot be reliably predicted beyond a "foreseeable future" of 25 years. *See* 86 Fed. Reg. at 29,461.
[190] Hagen (2017) at Table 3.
[191] Hagen (2017) at Table 10.

These results provide the best available scientific evidence of the likelihood that LPCs will persist into the foreseeable future range-wide and within the Proposed Southern and Northern DPSs. Far from indicating that the Proposed Southern DPS is on the brink of extinction or that the Proposed Northern DPS is likely to be pushed to the brink of extinction within the foreseeable future, Hagen (2017) and Garton (2016) demonstrate that those risks are highly unlikely, and in most scenarios, incredibly remote.

The estimates for the Shinnery Oak Ecoregion are particularly relevant, not only because the studies' delineation of ecoregions aligns with the bounds of the Proposed Southern DPS, but because Hagen (2017) and Garton (2016) specifically examined the potential for increased risk of extirpation based on genetic isolation. Hagen (2017) and Garton (2016) show that, even under a scenario where connectivity with the Proposed Northern DPS is not increased, the Proposed Southern DPS is highly unlikely to be reduced to "quasi-extinction" levels (15.8% for Hagen (2017) and 13.1% for Garton (2016)).

Given that Hagen (2017) and Garton (2016) estimated risks to LPCs in the Shinnery Oak Ecoregion before and after the historic 2012 drought, it is also relevant to the Service's assessment of the potential vulnerability of the Proposed Southern DPS to droughts and climatological risks. The Service's Proposed Listing identifies drought vulnerability as one of the primary justifications for proposing to list the Southern DPS as endangered,[192] and yet Hagen (2017) concluded that this "population continues to demonstrate its adaptability to extreme drought."[193]

Furthermore, the Associations believe these estimates should be viewed as conservative because they are extrapolations of reconstructed population trends during a time period (1964 – 2016) associated with significant development and habitat fragmentation, only the last few years of which included meaningful efforts to protect and conserve habitat. In other words, Hagen (2017) and Garton (2016) are based on development rates that are unlikely to ever be realized and are extrapolated from a baseline during which none of the many current state and voluntary conservation programs were in place to help maintain population growth and connectivity.[194] Indeed, near-term trends reflect the expansion of LPC range and occupied habitat,[195] and the data show those encouraging trends to be positively correlated with range-wide LPC conservation efforts.

These estimates in Hagen (2017) and Garton (2016) should also be viewed as conservative because they were based on WAFWA survey data from 2012 to 2016. LPC abundance in the Proposed Southern DPS has nearly doubled since 2016 and populations in the Proposed Northern DPS have increased by nearly 70 percent during the same time. And importantly, the Service's own estimates of usable habitat show that LPCs in the Proposed DPSs have sufficient habitat to sustain further population increases as well.

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[192] 86 Fed. Reg. at 29,471.
[193] Hagen (2017) at 634.
[194] Garton (2016).
[195] *See Ross*, B. E., D. Haukos, C. Hagen, and J. Pitman. 2016a. The relative contribution of climate to changes in lesser prairie-chicken abundance. Ecosphere 7(6):e01323. 10.1002/ecs2.1323. *See also* Oyler-McCance (2016).

As noted in Section V.d. below, while we believe the Service's geospatial analysis profoundly underestimates the amount of usable habitat available to LPCs, even using FWS's highly pessimistic assessment of potential usable habitat,[196] the 5,138 LPCs WAFWA estimated to be in the Proposed Southern DPS represents a density of 0.0019 birds per "usable" acre.[197] The Proposed Northern DPS has a similarly low density of 0.0026 LPCs per "usable" acre.[198]

In sum, in the months following the range-wide survey showing the highest LPC abundance ever surveyed by WAFWA, FWS proposes to conclude that the Proposed Southern DPS is presently at risk of extinction and the Proposed Northern DPS is likely to be driven to the brink of extinction within 25 years. The Service is proposing to finalize this conclusion despite the best available evidence showing that Proposed Southern DPS and range-wide population are highly unlikely to be extirpated under the most conservative of scenarios, and in fact, that the risk to LPCs (range-wide and as the Proposed DPSs) will even each "quasi-extinction" levels is effectively *de minimis*. The fact that FWS identified the WAFWA range-wide survey and Hagen (2017) as the best available evidence on LPC abundance and population trends, and yet still proposes to conclude that the Proposed Southern DPS is endangered and the Proposed Northern DPS is threatened suggests that the Service has not "articulate[d] a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'"[199]

FWS must apply the listing standards that Congress required in the ESA. A species or DPS is not presently at risk of extinction if the best available evidence shows that populations are stable or growing, and that near-term population threats are effectively nil. And, a species or DPS is *not likely* to become at risk of extinction within the foreseeable future if the best available evidence expressly concludes that population risks are *highly unlikely* to impact the species over the same time period.

The best available evidence shows that LPC abundance is increasing, that conservation efforts are working, and that it is highly unlikely that the LPCs will be placed at risk of extinction at any point in the foreseeable future. The Associations therefore reiterate their request that FWS withdraw this Proposed Listing.

d. Best available evidence show that LPC populations will not be driven to the brink of extinction within the foreseeable future

Even though the best available evidence that FWS itself identified reflects that LPC abundance in both of the Proposed DPSs is increasing and highly likely to remain above any levels of concern for the foreseeable future, FWS is proposing to list the Proposed Southern DPS as endangered and the Proposed Northern DPS as threatened. The Service proposes to do so largely based on the 2021 SSA Report and the geospatial analysis it employed to model potential future changes to LPC habitat.[200] According to FWS, the geospatial analysis is sufficient to show that,

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[196] *See* 86 Fed. Reg. at 29,457 (Table 1).
[197] 2,626,306 "usable" acres per FWS estimate/5,138 birds from 2020 WAFWA survey.
[198] 11,112,204 "usable" acres per FWS estimate/29,270 birds from 2020 WAFWA survey.
[199] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168, (1962)).
[200] 86 Fed. Reg. at 29,442.

notwithstanding Nasman (2020)'s observed increases in LPC abundance and Hagen (2017)'s projections of healthy populations of LPCs for the foreseeable future, current and anticipated future habitat modification places the Proposed Southern DPS at risk of extinction and makes the Proposed Northern DPS likely to be at risk of extinction within 25 years.[201]

The Associations view the geospatial modeling in the 2021 SSA Report as a helpful tool for synthesizing data and qualitatively assessing the potential impacts on LPCs of various hypothetical future development scenarios, but this modeling approach does not have the capability to forecast potential habitat change on a scale relevant to the Service's listing analysis. As the 2021 SSA Report disclaims:

> This data/model was not designed for, and should never be used for, identifying predicted areas of change or predicting how and where features and effects may change on the ground. This model was designed to project multiple feasible scenarios of how changes to the landscape, defined by the (hypothetical) future scenarios, may affect the spatial relationship of usable LEPC area, by increasing decreasing block sizes and configurations.[202]

As noted in the quote above and described in more detail below, the future available habitat projections generated by the Service's geospatial model are the product of the analytical framing decisions and model inputs that FWS used to run the model. Many of these framing judgements and model inputs are plainly inconsistent with the best available evidence and others are, at best, highly questionable.

The output of the geospatial model cannot be considered the best available evidence if the inputs to the model are not based on the best available evidence. Stated differently, inferior data does not become the best available evidence simply because it is run through a model.

The best scientific information available continues to demonstrate that LPC abundance is increasing and range is expanding. Unprecedented habitat conservation and monitoring efforts are in place to ensure that future habitat modification does not reverse those trends. While the SSA team's geospatial model is likely sufficient to show that habitat modification is a serious conservation concern and a factor that may potentially limit future LPC population growth, it provides no basis to conclude that LPCs (range-wide or as the DPSs proposed by FWS) are presently on the brink of extinction or likely to become so within 25 years. Once again, the 2021 SSA Report itself describes the limits of the geospatial model that caution against overreliance on its projections:

> The future scenario modeling of spatial data is only a generalized representative view and/or outlook of landscape conditions based on generalized criteria and treatments applied to the input features. The model cannot definitively identify where specific areas of LEPC habitat currently occur or will occur in the future but

[201] 86 Fed. Reg. at 29,470 – 29,473.
[202] 2021 SSA Report at B-16.

do show the variability of how different landscape configurations may affect LEPC usable area.[203]

Indeed, the geospatial model's inherent limitations, combined with questionable framing decisions, inaccurate data inputs, and significant data gaps render the future habitat projections largely speculative. But, "[t]he ESA cannot be administered on the basis of speculation or surmise."[204] FWS should therefore refrain from relying on the geospatial model in determining whether LPCs (range-wide or as the Proposed DPSs) meet the ESA's definitions of endangered or threatened species.

1. Geospatial Modeling Framework

The Service's geospatial model is intended to identify areas that LPCs can currently use as habitat and which LPCs can potentially use as habitat in the future. It has multiple steps.

First, FWS delineated the area within which it would conduct a geographic information system ("GIS") survey ("Analysis Area"). The Service selected the estimated occupied range described in Van Pelt (2013)[205] as the "Analysis Area."

Then FWS created a "current condition layer" in order to broadly identify the areas within the Analysis Area that contained features that were consistent with LPC habitat. To create the "current condition layer" used GIS landscape datasets to identify "land cover classes (grass and grass/shrub cover types) that may support LEPC use/activities at some point in their life cycle."[206] Then FWS used multiple other GIS datasets to exclude "from any acreage calculations or future scenario modeling," "[f]eatures which are not, nor will not likely be, usable LEPC areas during the analysis time period (25 years).[207]

This "Exclusion Layer" was comprised on the following features, each of which was assigned an exclusion radii or "buffer:" (1) Roads/Railroads; (2) Urban footprints/Airports; (3) Building Footprints; (4) Tall structures (not including wind turbines); (5) Power transmission line corridors; (6) Wetlands; and (7) High slope terrain (25% or greater).[208]

After application of the "Exclusion Layer," the Service then also excluded "Impact Features" "that result in habitat loss and/or fragment habitat or impede LEPC activities."[209] The Service "accounted for the indirect effects of these features by treating the surrounding areas as impacted."[210] The following "Impact Features" and their radii were included in this layer:

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[203] 2021 SSA Report at B-2.
[204] *Federation of Fly Fishers v. Daley*, 131 F. Supp. 2d 1158, 1165 (N.D. Cal. 2000).
[205] Van Pelt, W.E., S. Kyle, J. Pitman, D. Klute, G. Beauprez, D. Schoeling, A. Janus, J. Haufler, 2013. The Lesser Prairie-Chicken Range-wide Conservation Plan. Western Association of Fish and Wildlife Agencies. Cheyenne, Wyoming, pp. 367.
[206] 2021 SSA Report at B-4.
[207] 2021 SSA Report at B-7.
[208] 2021 SSA Report at B-6.
[209] 2021 SSA Report at B-4.
[210] 2021 SSA Report at 22.

- Oil and natural gas wells (impact radii of 300 meters);
- Wind turbines (impact radii of 1800 meters); and
- Trees (impact radii of 224 meters for Shinnery Oak Ecoregion and 329 meters for all other ecoregions).[211]

The exclusion of these "Impact Features" is the last step in the "Current Condition Layer." Next, FWS derived "Usable Area Blocks from the un-impacted Potential Usable Area features identified in the Current Condition layer."[212] This step involved grouping "the areas of potential usable, unimpacted land cover based on the proximity of other areas with potential usable, unimpacted LEPC land cover."[213]

To do this, FWS used a "nearest-neighbor" geospatial process to determine how much potential usable land cover is within one mile of any area of potential usable land cover. This analysis gives an estimate of how closely potential usable, un-impacted land cover is clustered together, versus spread apart, from other potential usable, un-impacted land cover. Areas with at least 60 percent potential usable, un-impacted land cover within one mile were grouped.[214]

This "nearest neighbor" analysis represented the last step in the Service's assessment of current usable habitat. The results of this analysis and the preceding estimates potential usable area were used by the FWS in its Listing Proposal.

TABLE 1—RESULTS OF LESSER PRAIRIE-CHICKEN GEOSPATIAL ANALYSIS BY ECOREGION AND RANGEWIDE, ESTIMATING TOTAL AREA IN ACRES, POTENTIAL USABLE AREA, AND AREA CALCULATED BY OUR NEAREST NEIGHBOR ANALYSIS

[All numbers are in acres. Numbers may not sum due to rounding.]

Ecoregion	Ecoregion total area	Potential usable area	Nearest neighbor analysis	Percent of total area
Short-Grass/CRP	6,298,014	2,961,318	1,023,894	16.3
Mixed-Grass	8,527,718	6,335,451	994,483	11.7
Sand Sagebrush	3,153,420	1,815,435	1,028,523	32.6
Northern DPS total	17,979,152	11,112,204	3,046,900	16.9
Shinnery Oak (Southern DPS total)	3,850,209	2,626,305	1,023,572	26.6
Rangewide Totals	21,829,361	13,738,509	4,070,472	18.6

FWS then used the "Usable Area Blocks" that were derived using the "nearest neighbor" analysis as the baseline for assessing potential future habitat conditions.[215] From this baseline, FWS attempted to "project how varying rates of LEPC conservation efforts . . . and impacts . . . to LEPC potential usable area may affect land cover types, amounts and configurations 25 years into

[211] 2021 SSA Report at B-6 FWS also applied a minimum canopy requirement for the exclusion (5% cover for the Shinnery Oak Ecoregion and 1% for all other ecoregions.).
[212] 2021 SSA Report at B-6.
[213] 2021 SSA Report at 22.
[214] 2021 SSA Report at 22.
[215] 2021 SSA Report at 80.

the future under five scenarios."[216] FWS deemed the "five scenario" necessary given the uncertainty inherent in predicting future landscape impacts.[217]

The potential future habitat impacts that FWS considered within its impact scenarios were: (1) oil and natural gas development; (2) wind farm development; (3) cropland conversion/tillage risk; and, (4) tree encroachment.[218] These impact layers were developed using a wide variety of GIS databases and assumptions. FWS then estimated development/disturbance scenarios according to three tiers (low, medium, and high).

The only type of future conservation effort included in this layer were "restoration efforts," which FWS defined as "those actions which convert otherwise non-usable area for the LEPC to usable space (examples: conversion of cropland to grassland, removal of energy infrastructure, and removal of woody vegetation)."[219] FWS did not consider future "enhancement efforts . . . intended to maintain or enhance the quality of existing LEPC habitat (example: grazing management, prescribed fire, and inter-seeding)."[220] The conservation efforts that included within this layer were taken from the USGS Protected Areas Database 2.0 ("PAD-US 2.0") with the additional inclusion of areas permanently protected under the WAFWA RWP that were observed to be excluded from the PAD-US 2.0 database.[221] The level of potential future restoration efforts was then estimated according to three tiers (low, continuation, enhanced).

The model allowed projected future conservation efforts to eliminate potential future impacts in two ways: (1) if the area was identified as presently protected from an impact (*e.g.*, no oil and natural gas development), the model identified no impact even if its impact layer had predicted a likelihood of that impact in the area; and, (2) if future restoration activates were predicted in an area that was identified as a "potentially usable area" in the Current Conditions Layer, the model converted the area's status from "potentially usable" to "usable."

The final processing step in the Future Scenario projections uses the same neighborhood analysis threshold as the Current Condition to identify usable area patches that relate, together, as Potential Usable Area Blocks.

The resulting five future condition scenarios that FWS generated from this process are displayed in the table below.

[216] 2021 SSA Report at B-10.
[217] 2021 SSA Report at 23 (The five scenario were derived from three impact scenarios (low, medium, high) and three conservation scenarios (low, medium, high).
[218] 2021 SSA Report at B-11-12.
[219] 2021 SSA Report at 90-91.
[220] 2021 SSA Report at 90-91.
[221] 2021 SSA Report at B-38.

TABLE 14.—PROJECTED FUTURE MEDIAN ACREAGE OF LESSER PRAIRIE-CHICKEN AREAS AVAILABLE FOR USE AS A RESULT OF OUR NEIGHBORHOOD ANALYSIS IN ACRES, AND SHOWING PERCENT CHANGE IN ACREAGE FROM ESTIMATED CURRENT AREAS AVAILABLE FOR USE AS A RESULT OF OUR NEIGHBORHOOD ANALYSIS, IN 25 YEARS.

			Scenario 1 Low Impacts High Restoration		Scenario 2 Low Impacts Continuation Restoration		Scenario 3 Moderate Impacts Continuation Restoration		Scenario 4 High Impacts Continuation Restoration		Scenario 5 High Impacts Low Restoration	
Ecoregion	Total Area	Current Condition	Median	% Change	Median	% Change	Median	% Change	Median	% Change	Median	% Change
Short-Grass/CRP	6,298,014	1,023,894	975,047	-4.8%	956,190	-6.6%	877,663	-14.3%	808,152	-21.1%	776,111	-24.2%
Mixed-Grass	8,527,718	994,483	974,200	-2.0%	864,780	-13.0%	742,855	-25.3%	649,227	-34.7%	630,633	-36.6%
Sand Sagebrush	3,153,420	1,028,523	992,632	-3.5%	980,302	-4.7%	932,477	-9.3%	887,224	-13.7%	884,851	-14.0%
Shinnery Oak	3,850,209	1,023,572	1,149,759	12.3%	988,072	-3.5%	868,761	-15.1%	771,923	-24.6%	711,933	-30.4%
Rangewide Totals	21,829,361	4,070,473	4,091,638	0.5%	3,789,343	-6.9%	3,421,756	-15.9%	3,116,525	-23.4%	3,003,529	-26.2%

This is the information FWS used in in its proposed conclusion that LPCs in the Proposed Southern DPS were endangered and LPCs in the Proposed Northern DPS were threatened.

2. Analysis Area

The Service's use of Van Pelt (2013)'s estimated occupied range ("EOR") as the "Analysis Area" for its geospatial area represents a fundamental error that biases each subsequent step in the Service's geospatial modeling framework and undermines the credibility of all of the resulting estimates of current and potential future usable habitat. Limiting the model's Analysis Area is also incompatible with the stated purpose of the geospatial modeling effort.

As the name indicates, Van Pelt (2013)'s EOR depicts those areas that are currently occupied by LPCs. It does not describe the LPCs' historic range or all those areas with features and conditions consistent with LPC habitat. In fact, Van Pelt (2013) does not even encompass all of the areas currently occupied by LPCs.[222] Indeed, even the 2021 SSA Report acknowledges that LPC leks can be found outside of the EOR described in Van Pelt (2013).[223]

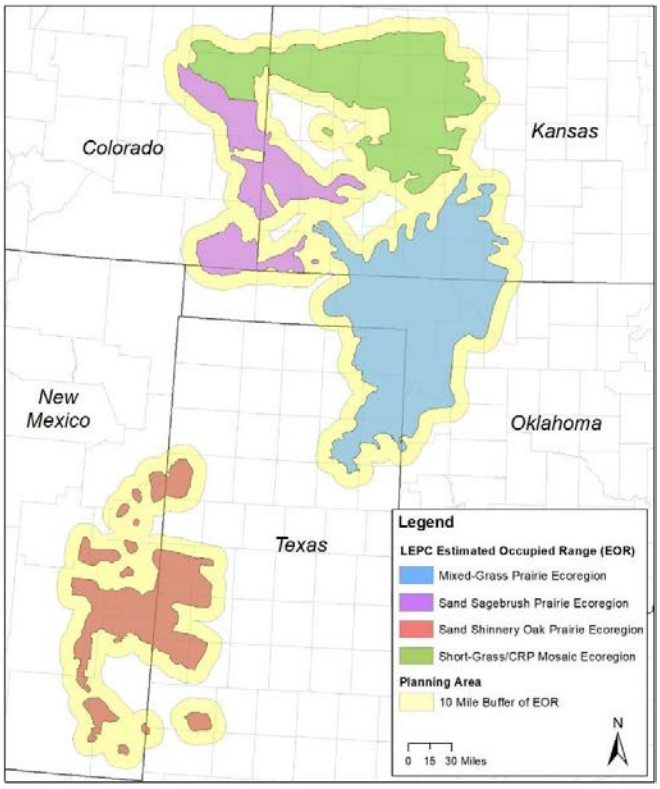
In recognition of the inherent imprecision of Van Pelt (2013)'s EOR, for regulatory permitting and conservation planning, FWS has always delineated LPC range as the EOR described in Van Pelt (2013) with a 10 mile buffer ("EOR+10").[224] Indeed, the EOR+10 habitat delineation is the foundation for the Range-Wide CCAA, the WAFWA RWP, the LPCI, and likely every other federal, state, local, or private LPC conservation effort that has been undertaken in the last decade. The Service's largely unexplained use of EOR for its geospatial model is therefore a glaring departure from the Service's longstanding practice.

Indeed, it is unclear why FWS would decline to utilize EOR+10 for the first time in this modeling effort. The goal of this modeling effort is not to identify where LPCs can presently be found. The goal is to identify what areas they are capable of using now or in the future. By limiting the geospatial model's Analysis Area to EOR, and for the first time refusing to use the EOR+10

[222] Oyler-McCance (2016); *See also* Spencer *et al.*, Global Ecology and Conservation: Conservation Reserve Program Mitigates Grassland Loss in the Lesser Prairie-Chicken Range of Kansas, 9, at 21-38 (2017). ("Spencer (2017)"); *See also* Earl (2016).
[223] 2021 SSA Report at 23.
[224] 2021 SSA Report at 23.

specification, FWS framed the output of the model such that it cannot identify usable areas through habitat expansion or population shifts. In other words, if the Analysis Area is limited to the range currently occupied by LPCs, the model cannot identify "usable areas," it can only identify "used areas."

The consequence of this constrained Analysis Area is difficult to overstate. Using EOR instead of EOR+10 reduces the amount of potential usable area by half.[225] Van Pelt (2013)'s EOR encompasses approximately 20 million acres while EOR+10 area encompasses approximately 40 million acres.[226] Thus, before the GIS analysis overlays any land cover classes, exclusion layers, or impact features, the Service's use of the EOR as the Analysis Area has eliminated roughly 20 million acres from the model analysis. But that is far from the only impact of this framing decision.



As applied to the "Current Condition Layer," use of the EOR parameter not only limits the overall area that can be screened for habitat suitability, it prevents many potentially usable un-impacted areas from qualifying as "usable area blocks" under the "nearest-neighbor" analysis. Under the Service's "nearest-neighbor" analysis, areas with at least 60 percent potentially usable, un-impacted land cover within one mile were grouped into the "Usable Area Blocks" that the model then uses as the baseline for projecting future habitat changes.[227]

Potentially usable, un-impacted areas near the edge of the Analysis Area are far less likely to be in close proximity to other potentially usable, un-impacted areas because FWS's use of the EOR

[225] 2021 SSA Report at 23.
[226] 2021 SSA Report at 23.
[227] 2021 SSA Report at 22.

parameter foreclosed any determination that areas outside the EOR were usable (regardless of condition or suitability as habitat). As a consequence, the Service's use of the EOR parameter reduced the overall area that the model could identify as usable, and then reduced it again by prohibiting the grouping of otherwise suitable habitat outside of the EOR, but well within the EOR+10.

It is therefore readily apparent that the Service's use of the EOR parameter caused it to significantly underestimate the amount of usable habitat area under the "Current Conditions Layer." But in the context of the model's projections of future habitat conditions, the use of the EOR as the Analysis Area completely undermines the intended purpose of the geospatial modeling exercise and renders the product of this modeling effort plainly inaccurate.

FWS uses the "Usable Area Blocks" identified in the Current Conditions Layer as the baseline to project potential future habitat conditions. From these baseline conditions, FWS models the extent to which certain conservation actions could increase usable habitat above baseline conditions and the extent to which various impacts and features could reduce usable habitat to below baseline conditions. This is presumably intended to be opened-ended inquiry that allows FWS to project the possibility of either habitat expansion and contraction, but the Service's use of the EOR as the Analysis Area does not allow the model to operate in this manner.

By delineating the Analysis Areas to overlay the LPC's occupied range, and restricting the model from identifying as usable habitat any area outside the EOR, the Service prohibited the model from projecting any increase in usable habitat. Habitat expansion and population shifts that could be projected if FWS selected the EOR+10 parameter, but the Service's selection of the EOR parameter completely precludes the model from projecting these reasonably anticipated outcomes – outcomes which FWS and many others have been planning for and working to achieve for decades.

The inclusion of conservation scenarios into the Future Conditions model layer therefore does not allow for any meaningful incorporation of present or future conservation actions. By confining the Analysis Area to the EOR, FWS precluded the model from projecting any habitat improvement or conservation benefits in buffer area of EOR+10. And as FWS is aware, a great deal of the conservation measures and habitat improvements under the CCAA, WAFWA RWP, and programs have made significant improvements in precisely these areas. Limiting the consideration of conservation actions to those within the EOR means that the best conservation outcome that the model can predict is a reduction in the level of habitat destruction that the model (unrealistically) predicts using the Service's impact scenarios.[228]

Indeed, FWS's decision to restrict the model's Analysis Area to the EOR parameter means that any impact within that Analysis Area will almost result in a net loss of usable area. The EOR parameter makes it impossible for the model to generate an estimate that shows an increase in usable areas.

[228] Curiously, the Service's assessment of potential future adverse impacts from oil and natural gas development is based on development rates in EOR+10. As far as the Associations can tell, this is the only instance where the 2021 SSA Report utilizes EOR+10.

In sum, the Service's decision to use the EOR as the Analysis Area reduced potential usable areas by half before any GIS analysis was conducted. Then, when the model was used in the "Current Condition Layer" the EOR parameter caused the model to calculate fewer "Usable Area Blocks." This artificially reduced quantity of "Usable Area Blocks" then provided the baseline for projecting future habitat conditions. But because the Service used the EOR as the Analysis Area, the model could only project reductions in usable habitat – not increases.

The Service's capricious and unexplained decision to cease analyzing LPC habitat using EOR+10 and begin using the EOR was therefore plainly erroneous. This one model framing decision renders the entire geospatial analysis unreliable and unsuited for use in determining the status of LPCs.

3. Current Conditions

In addition to the aforementioned errors attributable to the Service's problematic delineation of the Analysis Area, the Associations wish to identify two additional concerns with the manner in which FWS used the model to identify potentially usable areas and "Usable Area Blocks" in the Current Conditions Layer: (1) the assumption that LPCs cannot use areas within 300 meter of an oil and natural gas well is incorrect; and (2) the "near-neighbor" analysis misconstrues LPC habitat preferences and optimal habitat conservation goals to exclude from their usable area classification large areas of habitat in which LPCs are found.[229]

i. Oil and Natural Gas Wells

FWS identified oil and natural gas wells as one of the Impact Features "that result in habitat loss and/or fragment habitat or impede LEPC activities."[230] As a result, FWS programmed the geospatial model to exclude from its calculation of potentially usable habitat all areas within 300 meters of wells identified active in the IHS GIS database.[231]

While the Associations recognize that oil and natural gas development activities can potentially have impacts on LPCs, we disagree with the Service's determination that LPCs cannot use areas within 300 meters of a well. The 300-meter metric may be a useful tool for siting and conservation planning but it does not accurately reflect the area that LPCs can or cannot use as part of their habitat and home ranges. In fact, Plumb (2019) found that oil wells had no effect on placement of home ranges or nests.[232] And while LPCs have certainly been shown to avoid wells (as they do with all anthropogenic structures), recent studies have shown that LPCs avoid wells at lower levels and by smaller distances that most other anthropogenic structures, with the exception of lightly trafficked country roads.[233]

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[229] The Associations characterize these as our "primary" concerns with the Current Conditions Layer, but they are by no means our only concerns.
[230] 2021 SSA Report at B-4.
[231] 2021 SSA Report at B-7.
[232] Plumb, R. T. *et al.* Lesser Prairie-Chicken space use in relation to anthropogenic structures. J. Wildl. Manag. 83, 216–230 (2019).
[233] *See* Patten, M.A., Barnard, A.A., Curry, C.M. *et al.* Forging a Bayesian link between habitat selection and avoidance behavior in a grassland grouse. Sci. Rep. 11, 2791 (2021). https://doi.org/10.1038/s41598-021-82500-0;

Unlike other types of development, the majority of oil and gas development impacts are temporary. The overall lifecycle of a well on the landscape is a mostly hands-off process. The majority of well activity occurs during the initial development phase that lasts only a few short weeks – after which, when the well is put into production, the activity level becomes very minimal. [234] Vertical structures are largely removed after production, and recent evidence indicates that LPCs tolerate the low density of oil and gas structures that may remain present on the landscape during the production stage.[235] These structures may define LPC habitat suitability to some extent, but far less than natural features such as elevation and tree cover.[236]

Fences and other structures are similarly reduced after initial development of the well. And, at any rate, recent studies reveal that fences are not a significant source of LPC mortality.[237] Noise and vehicle traffic, which are negatively associated with LPC presence, are nearly nonexistent for the majority of the lifetime of a well. Indeed, while there may be evidence of LPC avoidance behavior during brief periods of development, there is evidence that LPCs quickly adapt to, and even utilize, roads and well pads once wells go into production.[238]

As such, the best available data indicates that, although oil and gas activities can adversely impact LPC presence, those impacts are more modest than previously understood, temporally limited, and mitigated by technologic advances. It is inconsistent with the best available information to characterize an area extending 300 meters from an oil and natural gas structure as entirely unusable by LPCs.

ii. Near-neighbor analysis

Under the "near-neighbor" analysis, areas with at least 60 percent potential usable, un-impacted land cover within one mile were grouped and classified as "Usable Area Blocks."[239] None of the other potentially usable, un-impacted areas that were identified in the first three steps of the Current Conditions Layer qualified as usable LPC habitat.

Designation of Usable Area Blocks is important because FWS appears to consider these areas to be the only suitable LPC habitat areas. The Service believes all other areas are too small or fragmented to be used by LPCs as habitat. Identification of Usable Area Block is also important

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See also Peterson, J. M. *et al.* Estimating response distances of Lesser Prairie-Chickens to anthropogenic features during long-distance movements. Ecosphere 11, e03202 (2020).

[234] As the petition notes, some studies have found only a limited relationship between oil and gas operations and LPC populations, finding that major roads are often more influential of behavior than the temporary impacts of oil and gas operations. Listing Petition at 59, citing J. M. Timmer, Relationship of Lesser Prairie-Chicken Density to Landscape Characteristics in Texas. MS Thesis, Texas Tech. University, 131 pp. (2012).

[235] T. J. Hovick *et al*., Predicting Greater Prairie-Chicken Lek Site Suitability to Inform Conservation Actions. 10.8 (PlosOne 2015). (Hereafter "Hovick (2015)."

[236] Hovick (2015).

[237] S. G. Robinson *et al*., Lesser Prairie-Chicken Fence Collision Risk across its Northern Distribution, 80, 906-915 (Journal of Wildlife Management 2016).

[238] K. M. Giesen, The Birds of North America, No. 364: Lesser Prairie-Chicken (*Tympanuchus Pallidicinctus*), (The Birds of North America Inc. 1998); J.M. Timmer *et al*., Abundance and density of lesser prairie-chickens and leks in Texas, 37, 741-749 (Wildlife Society Bulletin 2013); Taylor, M.A., and Guthery, F.S., 1980a, Fall-winter movements, ranges, and habitat use of Lesser Prairie Chickens: The Journal of Wildlife Management, v. 44, no. 2, p. 521–524.

[239] 2021 SSA Report at 22.

because these are the only habitat areas from the Current Conditions Layer that FWS uses in its Future Conditions Layer. FWS uses Usable Area Blocks as the baseline from which the model projects whether habitat will increase or decline in the future.

As support for its modeling decision to consider as usable habitat *only* those areas with at least 60 percent potential usable, un-impacted land cover within one mile, FWS cites to studies that found that "maintaining grassland in large blocks is vital to conservation of the species."[240] While it is well established that LPC abundance is positively correlated with larger and less fragmented grassland areas,[241] none of these studies support the Service's conclusion that an LPC cannot carry out its life cycle in areas with less than 60 percent un-impacted grass cover. Ross (2016a) examined LPC abundance relative to levels of disturbance.[242] Spencer (2017) found that LPC abundance generally increases with the size of the grassland patch.[243] Hagen and Elmore (2016) concluded that LPC abundance was positively correlated with patch size but that there was little data on minimum grassland patch sizes.[244] And Sullens (2018) used habitat patch size as a predictor of LPC abundance.[245]

None of these studies state that LPCs cannot use areas unless they contain with at least 60 percent potential usable, un-impacted land cover within one mile. And in fact, *all* of these demonstrated that significant populations of LPCs are commonly found in and use areas with less than 60 percent un-impacted land cover.

The Service's use of the "60-percent parameter" in the geospatial model is wholly unsupported. Perhaps the 60-percent un-impacted land metric is appropriate as a conservation goal or for using in identifying populations strongholds, but that is not how FWS used it in the geospatial model. FWS used the 60-percent parameter to define habitat. The Service ran the model using a conclusion that LPCs could not use any area with less than 60 percent un-impacted cover.

The 2021 SSA Report contains an analysis that FWS suggests supports its decision to use the 60-percent parameter.[246] We do not agree that the analysis provides this support.

To conduct the analysis, FWS overlaid active lek locations from the Southern Great Plains, Crucial Habitat Assessment Tool ("SPG-CHAT") on the geospatial model's Usable Area Blocks. The SPG-CHAT data that FWS downloaded contained 1,252 leks identified as 1.25-mile buffered

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[240] 2021 SSA Report at 22.

[241] Spencer, D., Haukos, D., Hagen, C., Daniels, M. and Goodin, D. 2017. Conservation Reserve Program mitigates grassland loss in the lesser prairie-chicken range of Kansas. Global Ecology and Conservation 9:21–38.

[242] Ross, B.E., Haukos, D.A., Hagen, C.A., and Pitman, J.C., 2016a, Landscape composition creates a threshold influencing Lesser Prairie-Chicken population resilience to extreme drought: Global Ecology and Conservation, v. 6, p. 179–188.

[243] Spencer, D., Haukos, D., Hagen, C., Daniels, M. and Goodin, D. 2017. Conservation Reserve Program mitigates grassland loss in the lesser prairie-chicken range of Kansas. Global Ecology and Conservation 9:21–38.

[244] Hagen, C.A., and Elmore, R.D., 2016, Synthesis, conclusions, and a path forward, in Haukos, D.A., and Boal, C.W., eds., Ecology and conservation of Lesser Prairie-Chickens: Boca Raton, Fla., CRC Press, Studies in Avian Biology, v. 48, p. 345–351.

[245] Sullins, D.S., Haukos, D.A., Lautenbach, J.M., Lautenbach, J.D., Robinson, S.G., Rice, M.B., Sandercock, B.K., Kraft, J.D., Plumb, R.T., Reitz, J.H., Hutchinson, J.M.S., and Hagen, C.A., 2019, Strategic conservation for Lesser Prairie-Chickens among landscapes of varying anthropogenic influence: Biological Conservation, v. 238.

[246] 2021 SSA Report at B-49 – B-50.

points. Of the 1,252 buffered leks, 21 were outside of the Analysis Area, which again reflects that the Service's use of the EOR was improper. Of the 1,231 buffered leks that were within the Analysis Area, FWS found that 1106 intersected with the Usable Area Blocks. This means that nearly 10% (125) of leks were located outside of the Usable Area Blocks. FWS viewed this analysis as confirming its decision to use the Usable Area Blocks to describe LPC habitat but that conclusion is erroneous.

For one, as applied to the 4,070472 acres of Usable Area Blocks identified in its geospatial analysis, the 10% deviation represents over 400,000 acres of missed habitat. Further, leks are the equivalent of LPC habitat. LPCs have home ranges that can extend several miles from leks. As such, the Usable Area Blocks likely missed many thousands more acres of occupied habitat. Moreover, FWS developed the Usable Area Blocks, not to identify occupied LPC habitat, but to identify areas that LPC could use as habitat. As such, the hundreds of thousands of acres of *occupied* LPC habitat that FWS failed to capture within its Usable Area Blocks is likely a fraction of *usable* habitat that FWS's Listing Proposal deemed unavailable to support LPCs.

The Service's "60-percent un-impacted land cover" metric was a categorically incorrect parameter for defining usable habitat, and because none of FWS's cited studies support use of this metric to define usable habitat, the Service's selection of this parameter appears arbitrary.

As previously mentioned, we do, however, know that as recently as 2017, the Service's status assessment team was using a metric of 40-percent un-impacted land cover.[247] The Associations can find no other information to identify the reason or basis for this change.

4. Future Conditions

As detailed above, various framing decisions and model inputs employed in the earlier steps of the geospatial analysis rendered the model incapable of projecting any non-speculative future habitat conditions. FWS's use of the EOR as the Analysis Area eliminated approximately 20 million acres from the model analysis and made it impossible for the model to predict any expansion or changes in range.

In the Current Conditions Layer, the Service again eliminated hundreds of thousands, if not millions of acres of occupied LPC habitat by employing two unsupported assertions: (1) that LPCs cannot use land within 300 meters of an oil or natural gas well; and, (2) that LPCs cannot use any area with less than 60 percent un-impacted land. The Current Conditions Layer also omitted any consideration of conservation measures.

FWS considered conservation for the first time in the Future Conditions Layer. However, because the Service used the EOR as the Analysis Area, the model excluded any of the significant conservation efforts throughout the EOR+10.

The Future Conditions Layer also bypassed consideration of any future conservation "enhancement efforts . . . intended to maintain or enhance the quality of existing LEPC habitat

[247] Cummings, J.W., S.J. Converse, C.T. Moore, D.R. Smith, C.T. Nichols, N.L. Allan, and C.M. O'Meilia. 2017. A projection of lesser prairie chicken (*Tympanuchus pallidicinctus*) populations range-wide: U.S. Geological Survey Open-File Report 2017-1071, p 2, 14.

(example: grazing management, prescribed fire, and inter-seeding management, prescribed fire, and inter-seeding)."[248] Thus, the Future Conditions Layer only considered the potential future of conservation actions in two narrow applications: (1) if the area was identified as presently protected from an impact (*e.g.*, no oil and natural gas development), the model identified no impact even if its impact layer had predicted a likelihood of that impact in the area; and, (2) if future restoration activates were predicted in an area that was identified as a "potentially usable area" in the Current Conditions Layer, the model converted the area's status from "potentially usable" to "usable."[249]

The Future Conditions Layer, and in fact, the Service's entire geospatial modeling effort, fail to capture even a fraction of the unprecedented conservation efforts that have been devoted to LPCs, and have been ongoing for many years.

FWS extensively (and favorably) discusses the various LPC conservation measures in both the Proposed Listing and the 2021 SSA Report.[250] Nevertheless, citing back to the geospatial modeling effort that largely excluded consideration of conservation efforts, the Service concludes:

> This analysis indicated additional future habitat loss and fragmentation across the range of the lesser prairie-chicken is likely to occur, and conservation actions will not be enough to offset those habitat losses. Our analysis finds that the expected conservation efforts are inadequate to prevent continued declines in total habitat availability, much less restore some of what has been lost, and species viability for this species will continue to decline.[251]

As explained above, the plain language of the ESA requires the FWS to consider conservation measures undertaken by other entities in determining whether listing of a species is warranted. The PECE Policy sets forth the criteria that guide the Service's evaluation of whether new conservation measures may be considered in a listing decision: (1) the certainty that the conservation measure will be implemented; and (2) the certainty that the conservation measure will be effective.

This Proposed Listing contains no PECE analysis. This oversight is astounding given that the Service's 2014 decision to list range-wide LPCs at threatened was vacated by the Western District of Texas for failing to conduct a proper PECE analysis. To be clear, in 2014, FWS did conduct a PECE analysis, but only on the WAFWA RWP, not for any of the dozens of other conservation efforts, individually or cumulatively.

In assessing the RWP in 2014, FWS concluded that "there was a high degree of certainty that the plan will achieve its stated purposes of creating a net conservation benefit to the species and moving the species towards its population goals. . ."[252] Elsewhere and without explanation, FWS concluded that, even though the Service was "highly certain" that the RWP would be effective in protecting LPC habitat, it could not conclude that listing was not warranted because the RWP's

[248] 2021 SSA Report at 90-91.
[249] 2021 SSA Report at B-10.
[250] 86 Fed Reg. at 29,454-56; 2021 SSA Report at 49-61.
[251] 86 Fed. Reg. at 29,467.
[252] 79 Fed. Reg. at 19,980.

habitat improvements would not be fully implemented at the time of the listing decision.[253] The Western District of Texas rejected this analysis as inconsistent with the PECE Policy and as inappropriate given that the listing decision concluded that the LPC's risk of extinction would only arise (if at all) in the future.[254]

The sole remaining reason why FWS concluded that the RWP would not be enough to avoid listing was the Service's uncertainty over future enrollment, and the availability of funds generated through future enrollment.[255] Notwithstanding that on the eve of the final listing over 3.6 million acres were enrolled and nearly $21 million in fees were raised for LPC habitat conservation under the RWP,[256] FWS deemed the likelihood of future or continued enrollment to be too speculative because landowners may withdraw from the RWP once the prospect of an impending listing was removed.[257] Not only was this conclusion based on a fundamental misunderstanding of how the RWP operates, it has been proven to be incorrect.

Indeed, the level of voluntary LPC conservation described in the administrative record before the Western District of Texas when it vacated the 2014 Listing Rule for failure to adequately consider conservation measures pales in comparison to the extent of voluntary conservation underway today. The $21 million in fees that were raised through the WAFWA RWP prior to the Service's 2014 listing decision has more than tripled to more than $65 million today.[258] Likewise, the number of acres enrolled under the WAFWA RWP's CCAA and the WAFWA Conservation Agreement ("WCA") have nearly doubled to over 6,228,000 acres.[259]

Moreover, these components of the WAFWA RWP are far from the only measures that continue to protect and improve LPC's and their habitat. The Lesser Prairie-Chicken Conservation Initiative ("LPCI"), Conservation Reserve Program ("CRP"), and Partners for Fish and Wildlife ("PFW") programs continue to protect, enhance, and conserve millions of additional acres of present and potential future LPC habitat.[260] Significant additional efforts to protect LPCs and their habitat also continue to be implemented on federal lands, by each state within the LPC's range, and voluntarily by individual landowners, industries, and organizations throughout the five-state range of the LPC.

FWS itself describes many of these widespread conservation efforts in its Proposed Listing,[261] but the requirements of the PECE Policy are not satisfied by simply itemizing these efforts. The PECE Policy requires a more searching examination of the likelihood that these programs will continue

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[253] 79 Fed. Reg. at 19,980.
[254] *See PBPA v. DOI*.
[255] 79 Fed. Reg. at 19,980.
[256] *See* http://www.eenews.net/stories/1059996772 (accessed Jan. 25, 2017).
[257] 79 Fed. Reg. at 19,980.
[258] ICF. 2020. Range-Wide Oil and Gas Candidate Conservation Agreement with Assurances Realignment Phase 1 Findings and Recommendations. December. Final. (ICF 00659.19.) at 1-9. Golden, Colorado. Prepared for Western Association of Fish and Wildlife Agencies, Boise, Idaho.
[259] Moore, C. 2020. WAFWA Annual Report for the Range-wide Oil and Gas Candidate Conservation Agreement with Assurances for the Lesser Prairie-Chicken. 84 pp.
[260] Wolfe, R. L., S. C. Kyle, J. C. Pitman, D. M. VonDeBur, M. E. Houts, 2018. The 2018 Lesser Prairie-Chicken Range-wide Conservation Plan Annual Progress Report. Western Association of Fish and Wildlife Agencies. Boise, Idaho, at Table 18.
[261] *See* 86 Fed. Reg. at 29,454 – 29,256.

to be implemented and effective. Neither the preamble to the Proposed Listing nor the 2021 SSA Report provide this analysis. Flawed as the Service's 2014 PECE analysis may have been, it at least provided some explanation of the Service's reasoning. Here, FWS simply points to a deeply flawed geospatial model and holds it out a demonstrating an outcome it has no capability of projecting. This is plainly insufficient. And on this matter alone, FWS should withdraw its Proposed Listing.

VI. FWS HAS NOT PROVIDED EVIDENCE TO SHOW THAT ITS PROPOSED 4(D) REGULATIONS ARE NECESSARY AND ADVISABLE[262]

FWS has not provided a reasoned explanation for the restrictions the Service proposes to impose if it finalizes a threatened listing for the Proposed Northern DPS. Instead, without any meaningful explanation, FWS is proposing to exercise its Section 4(d) authority to "extend the standard section 9 prohibitions for endangered species to the Northern DPS of the lesser prairie-chicken in order to conserve the species."[263]

a. The proposed 4(d) rule is arbitrary, inconsistent, and unexplained

In lieu of an explanation of the Service's rationale for applying Section 9 prohibitions to specific activities, FWS disclaimed that it "considered exceptions to the standard section 9 prohibitions for endangered species that would facilitate essential conservation actions needed for the Northern DPS."[264] The "essential conservation efforts" that FWS viewed as "the primary essential conservation actions needed to conserve the lesser prairie chicken" included: (1) restoration actions; (2) utilization of prescribed fire; and, (3) compatible grazing management.[265]

Of these three "essential conservation efforts," FWS has proposed to exclude from the ESA's Section 9 take prohibitions only prescribed fire activities.[266] The FWS determined that "compatible grazing" practices were too site-specific to be defined in a Section 4(d) rule, which we take no position on. The Service's determination with respect to "restoration actions," however, is completely arbitrary and inconsistent with the 2021 SSA Report as well as other provisions of the Proposed Listing.

FWS defined "restoration actions" to be "actions that convert areas that are otherwise not habitat for lesser prairie-chickens to areas which are lesser prairie-chicken habitat." Those "restoration actions" deemed "essential for the species as . . . the only way to offset habitat loss and fragmentation" included: (1) "woody vegetation removal in and adjacent to grasslands;" (2) "removal of existing anthropogenic features (such as existing energy infrastructure, roads, fences, windmills, and other anthropogenic features);" and, (3) "converting cropland to grassland."[267]

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[262] While these comments are necessarily only directly applicable to the proposed Northern DPS, these comments should be more broadly construed more broadly should it be necessary for the Service to adopt a Section 4(d) rule in this or any future rulemaking (*e.g.*, if the Service were to propose to list LPCs as threatened range-wide or within the Proposed Southern DPS).
[263] 86 Fed. Reg. at 29,475.
[264] 86 Fed. Reg. at 29,475.
[265] 86 Fed. Reg. at 29,475.
[266] 86 Fed. Reg. at 29,475.
[267] 86 Fed. Reg. at 29,475.

Notwithstanding the recognized essentiality of these actions, FWS:

> determined that an exception under this 4(d) rule is not needed for these restoration actions as they occur on lands already impacted or altered in ways that they no longer represent lesser prairie-chicken habitat and thus there is no potential for a section 9 violation.[268]

This conclusion makes little sense. The suggestion that "there is no potential for a section 9 violation" ignores that LPCs are likely to be present in many areas that may not be sufficient to support all the life stages of LPCs. The Service's conclusion therefore misconstrues LPCs' habitat preferences and avoidance behaviors as absolute preclusions from certain landscapes. FWS also ignores ample data, much of which the Service cites for other purposes in the Proposed Listing, that occupied LPC habitat does contain, or the LPCs have been observed in close proximity to, energy infrastructure, roads, fences, other anthropogenic features, woody vegetation, and cropland.[269] As such, FWS must acknowledge that restoration actions in these areas could very well present a risk of causing Section 9 violations.

FWS recognizes this distinction with respect to LPC's use of cultivated lands, and even though FWS did not consider them to be restoration actions or in any way in furtherance of conservation, the Service's Section 4(d) rule proposes to exempt from the Section 9 "take" prohibitions, continued routine agricultural practices on existing cultivated lands.[270] The Service provides no explanation why it proposes exempt to continued use of what FWS believes to be the primary cause of historic habitat loss,[271] while subjecting to Section 9 take liability *restoration activities* in other types of impacted landscapes.

Further, FWS elsewhere recognizes that "restoration activities" are not limited to areas wholly unusable by LPCs, but instead encompass a wide variety of actions that improve habitat for LPCs.[272] While it is true that the 2021 SSA Report somewhat distinctly defines "enhancement efforts" as "primarily targeted at maintaining or improving the quality of the existing [LPC] habitat,"[273] it recognizes the conservation value of these efforts even if they cannot be said to create new habitat from presently uninhabitable areas.[274]

In contrast, the Service's proposed 4(d) rule ignores that valuable conservation measures and enhancement efforts are frequently conducted in and around occupied LPC habitat. In fact, the

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[268] 86 Fed. Reg. at 29,475.
[269] *See* Plumb, R. T. *et al.* Lesser Prairie-Chicken space use in relation to anthropogenic structures. J. Wildl. Manag. 83, 216–230 (2019).
[270] 86 Fed. Reg. at 29,476.
[271] *See* 86 Fed. Reg. at 29,444.
[272] *See* SSA Report at 60 (recognizing restoration to address habitat degradation); *See also* Public Scoping Analysis Report for the LPC Stakeholder Conservation Strategy (July 2014); *See also* Nov. 22, 2013 FWS Conference Opinion for the Natural Resources Conservation Service's (NRCS) Lesser Prairie-Chicken Initiative (LPCI); *See also* FWS Dec. 2014 Guidelines for the Establishment, Management, and Operation of Permanent Lesser Prairie-Chicken Mitigation Lands at 4; *See also* 2014 final "threatened" listing (69 Fed. Reg. at 19,995) (recognizing restoration of degraded habitat); *See also* the final 2014 4(d) Rule (69 Fed. Reg. at 20,078) (recognizing restoration of rare and declining habitats).
[273] *See* SSA Report at vii.
[274] *See* SSA Report at Section 3.4.

Service's proposed 4(d) rule, which purports to "promote conservation of the Northern DPS of the lesser prairie-chicken by encouraging management of the landscape in ways that meet the conservation needs of the lesser prairie-chicken,"[275] does not mention, much less discuss, any conservation measures, agreements, or practices (other than prescribed fire).

Remarkably, the proposed 4(d) rule does not discuss or even mention the WAFWA RWP, the Natural Resources Conservation Service's LPC Initiatives, or any conservation program or effort that was excluded from Section 9 take liability in the Service's 2014 Section 4(d) Rule.[276] As such, the Service's proposed 4(d) rule contains no justification or reasonable basis for this profoundly important policy change. In fact, the Service's proposed Section 4(d) rule does not indicate that FWS even recognizes that it is changing this longstanding approach to incentivizing conservation planning and collaboration.

b. The proposed 4(d) rule is not "necessary and advisable to provide for the conservation of" LPCs

As described above, the Service's proposed 4(d) rule proposes to summarily apply all Section 9 take prohibitions with two narrow exceptions (*i.e.*, prescribed fire and continued routine agricultural practices on existing cultivated lands).[277] This approach is inconsistent with the Service's 2019 rule requiring FWS to promulgate 4(d) rules that tailor prohibitions to the conservation needs of the species.[278] The proposed 4(d) rule applies these Section 9 prohibitions in omnibus fashion and less discriminatingly than even FWS's 2014 4(d) Rule, which obviously predated FWS's 2019 revision to its regulations implementing ESA Section 4(d).

The Service's proposed 4(d) rule also ignores that, with respect to threatened species, Congress directed FWS to only impose protections "necessary and advisable" in order to conserve threatened species.[279] Indeed, U.S. Supreme Court case law has admonished that "[f]ederal administrative agencies are required to engage in 'reasoned decisionmaking.'"[280] "Not only must an agency's decreed result be within the scope of its lawful authority, but the process by which it reaches that result must be logical and rational."[281] "It follows that agency action is lawful only if it rests 'on a consideration of the relevant factors.'"[282]

While there can be reasonable dispute about precise "relevant factors" requiring FWS's consideration in this context, there should be little dispute that it is unreasonable to altogether avoid consideration of relevant factors. But that is precisely what FWS did when it proposed to impose blanket prohibitions applicable to the putative Northern DPS without any examination of the propriety or necessity of those prohibitions to LPC conservation.

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[275] 86 Fed. Reg. at 29,475.
[276] *See* 69 Fed. Reg. at 20,074.
[277] 86 Fed. Reg. at 29,475.
[278] *See* 84 Fed. Reg. 44,753, 44, 755 (Aug. 27, 2019).
[279] 16 U.S.C. § 1533(d).
[280] *Michigan v. EPA*, 135 S. Ct. 2699, quoting *Allentown Mack Sales & Service, Inc. v. NLRB*, 522 U. S. 359, 374 (1998) (internal quotation marks omitted).
[281] *Id.*
[282] *Michigan v. EPA*, 135 S. Ct. 2699, quoting *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Automobile Ins. Co.*, 463 U. S. 29, 43 (1983).

The "reasoned decisionmaking" that the Associations believe must be utilized here comes from the Supreme Court's decision in *Michigan v. EPA*, which evaluated whether the U.S. Environmental Protection Agency ("EPA" or "the Agency") had properly promulgated an air regulation. In particular, the Court considered whether the Clean Air Act's ("CAA's") requirement that the Agency promulgate rules that were "appropriate and necessary" to control power plant emissions mandated consideration of cost. A majority of the Supreme Court concluded that the phrase "appropriate and necessary" did amount to a congressional mandate to consider cost. More importantly, however, the Court found that this congressional mandate was not exclusively embodied in the phrase "appropriate and necessary:"

> Agencies have long treated cost as a centrally relevant factor when deciding whether to regulate. Consideration of cost reflects the understanding that reasonable regulation ordinarily requires paying attention to the advantages and the disadvantages of agency decisions. It also reflects the reality that 'too much wasteful expenditure devoted to one problem may well mean considerably fewer resources available to deal effectively with other (perhaps more serious) problems.'[283]

The Supreme Court in *Michigan v. EPA* further held that:

> One would not say that it is even rational, never mind 'appropriate,' to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits. In addition, 'cost' includes more than the expense of complying with regulations; any disadvantage could be termed a cost. EPA's interpretation precludes the Agency from considering any type of cost— including, for instance, harms that regulation might do to human health or the environment. The Government concedes that if the Agency were to find that emissions from power plants do damage to human health, but that the technologies needed to eliminate these emissions do even more damage to human health, it would still deem regulation appropriate. . . . No regulation is 'appropriate' if it does significantly more harm than good.[284]

Moreover, while the dissent in *Michigan v. EPA* disagreed with the majority on the precise point in the rulemaking process that EPA was required to evaluate costs under the CAA, the dissenting justices agreed with the majority that agencies must consider costs in all instances unless expressly prohibited:

> Cost is almost always a relevant—and usually, a highly important—factor in regulation. Unless Congress provides otherwise, an agency acts unreasonably in establishing a standard-setting process that ignores economic considerations. At a minimum, that is because such a process would threaten to impose massive costs far in excess of any benefit. And accounting for costs is particularly important in

[283] *Michigan v. EPA*, quoting *Entergy Corp. v. Riverkeeper, Inc.*, 556 U. S. 208, 233 (2009) (Breyer, J., concurring in part and dissenting in part).
[284] *Michigan v. EPA* at 7.

an age of limited resources available to deal with grave environmental problems . . .[285]

While the phrase "appropriate and necessary" was at issue in *Michigan v. EPA*, both the majority and the minority clearly indicated that EPA's obligation to consider costs in rulemaking was inherent in the Agency's obligation to engage in "reasoned decision-making," and not a function of that precise phrase. Indeed, the ESA's phrase "necessary and advisable" is closely akin to the phrase "appropriate and necessary" as they both reflect "the classic broad and all-encompassing term that naturally and traditionally includes consideration of all the relevant factors."[286] As then-Circuit Court Judge Kavanaugh noted in dissent in the United States Court of Appeals decision on the rule that was appealed to the Supreme Court in *Michigan v. EPA*, where the "only statutory discretion is to decide whether it is 'appropriate' to go forward with the regulation . . . common sense and sound government practice" warrant consideration of both costs and benefits.[287]

The Service's proposed 4(d) rule contains no such consideration of costs and benefits, and is therefore not grounded in "common sense and sound government practice." As such, the Associations believe that the Service's proposed 4(d) rule is arbitrary, capricious, and an abuse of agency discretion.

c. More precisely tailored prohibitions more effectively promote LPC conservation

Regardless of whether *Michigan v. EPA* can be interpreted to require FWS to consider actual monetary costs against benefits under the "necessary and advisable" standard, as opposed to broadly considering the pros and cons of imposing Section 9 prohibitions to threatened species, it is difficult to suggest that the ESA's "necessary and advisable" standard and case law interpreting similar standards would allow the Service to largely avoid consideration of tailored protections. Indeed, while the Section 9 prohibition on "take" is one of the conservation mechanisms with which the ESA is most frequently identified, it is neither the ESA's sole conservation tool, nor its most effective tool.

The ESA was created to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate" to achieve those goals.[288] Congress defined the terms "conserve," "conserving," and "conservation" to mean "to use and the use of *all methods and procedures* which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary."[289] FWS's authority to impose Section 9 prohibitions therefore represents a tool in furtherance of this mandate—not the mandate itself.

In drafting the ESA, Congress understood that the Listing Services would need to meet their conservation mandate through actions outside of its Section 9 authority, like:

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[285] *Michigan v. EPA* at 6-7.
[286] *Michigan v. EPA* at 6, citing 748 F. 3d, at 1266 (opinion of Kavanaugh, J.).
[287] *White Stallion Energy Ctr, LLC v. Envtl. Prot. Agency*, No. 12-1100 (D.C. Cir. 2014) (Kavanaugh, J. dissenting).
[288] 16 U.S.C. § 1531(b).
[289] 16 U.S.C. § 1533(3) (emphasis added).

> [E]ncouraging the States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish, wildlife, and plants.[290]

A tailored and species-specific approach to Section 9 prohibitions helps encourage states and other stakeholders to participate in conservation. Tailored prohibitions, and the increased likelihood of more tailored prohibitions, allow states the opportunity to undertake conservation measures with less risk that FWS will impose redundant or contradictory prohibitions. And as particularly relevant here given the large percentage of LPC habitat that occurs on private land, tailored prohibitions also provide other landowners and land use industries the incentive to undertake conservation measures in exchange for FWS's imposition of a narrower suite of Section 9 prohibitions for threatened species. FWS recognized this conservation role in its 2014 4(d) rule, and ignores it its present 4(d) proposal.

Meeting the ESA's conservation mandate therefore requires FWS to succeed in protecting species and habitat on private land. Take prohibitions on private land, however, are difficult to enforce and only successful if landowners perceive a credible threat of enforcement.[291] "Whatever successes the ESA has had in other contexts . . . the regulatory model has failed on private land. As *Science* reported in 2005, 'it's become clear over three decades that its regulatory hammer isn't enough.'"[292]

Voluntary conservation succeeds where Section 9 prohibitions fail because it can leverage the funding and resources that FWS cannot provide and because it incentivizes landowners to protect and improve habitat on private land. There are few better examples of this than the WAFWA RWP, which has contributed over $65 million and protected millions of acres.

The Service's proposed 4(d) rule ignores this aspect of conservation, and FWS's failure to even mention voluntary conservation efforts imperils the future success of programs like the WAFWA RWP. The Service's arbitrary and unexplained 4(d) policy position is shortsighted and impermissible. We therefore urge FWS to withdraw this proposed 4(d) rule. If FWS persists in finalizing this Proposed Listing or proposes a new LPC listing in the future, at a minimum, the Service must propose and take comment on a new proposed 4(d) rule that is in accord with the ESA, the Service's own regulations, and the well-recognized need for FWS to more fully support and incentivize state and private conservation.[293]

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[290] 16 U.S.C. § 1531(a)(5).

[291] *See* Ferraro, *supra* note 33, at 256.

[292] *See* Adler, *supra* note 28 (citing Erik Stokstad, *What's Wrong with the Endangered Species Act*, 30 SCIENCE 2150, 2152 (2005)).

[293] Although the Associations believe that FWS cannot lawfully finalize the current proposed DPS designation and listing determination, if FWS proceeds to finalize this proposal with changes to either the taxonomic classification or the listing status, those changes will also require a reassessment under Section 4(d) of the protections necessary and advisable for the conservation of LPCs. For instance, if FWS determines that the range-wide LPC population or Proposed Southern DPS should be listed as threatened, the Service must reassess and take comment on the Section 9 prohibitions necessary and advisable for those populations.

VII. CONCLUSION

The Associations appreciate the opportunity to provide these comments. As explained in great detail throughout these comments, designating the range-wide LPC population into DPSs is inconsistent with the ESA, the Service's own guidelines, and the best scientific information available. The best scientific information available also demonstrates that there are no threats or other factors likely to drive LPCs (range-wide, in the Proposed Northern DPS, or in the Proposed Southern DPS) to the brink of extinction within the foreseeable future. To the contrary, the best available scientific information reflects that LPCs range-wide are growing in abundance, increasing in range, and protected by a historic level of conservation actions.

Based on the foregoing, the Associations strongly urge FWS to withdraw the Proposed Listing and finalize a determination that listing LPCs (range-wide or as DPSs) is not warranted. If you have any questions or would like to discuss these comments, please feel free to contact any of the signatories below.

Thank you again for your consideration of our comments.

Sincerely,

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