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Comments: Here are my comments on the Thunder Basin National Grassland DEIS and associated documents. I had previously commented on the Scoping Document on May 18, 2019 (copy of those comments attached).

Black-footed Ferret

For many years, the USDA Forest Service's planning rule has required a land and resource management plan to include components that provide the ecological conditions necessary to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern. Moreover, the current Thunder Basin National Grassland (TBNG) plan direction responds correctly to the National Forest Management Act, the Endangered Species Act (ESA), and even the Bankhead-Jones Farm Tenant Act. A viable population of the endangered black- footed ferret needs what the current TBNG plan allows, that is, a large expanse of prairie dog colonies. The current plan devotes an area to black-footed ferret reintroduction and promises black-footed ferret reintroduction. The proposed plan amendment eliminates the black-footed ferret reintroduction area, provides an insufficient acreage for a viable population of black-footed ferrets, and makes no real commitment to black-footed ferret reintroduction.

The current black-footed ferret reintroduction area, Management Area 3.63, is a small segment of TBNG, a very tiny area in relation to the historic range of the black-footed ferret. Who can begrudge that? The preferred alternative in the Draft Environmental Impact Statement (DEIS) effectively prioritizes livestock grazing for Management Area 3.63 instead of black-footed ferret recovery. The two need not be mutually exclusive. Black-footed ferret recovery has been difficult, and progress is slow. Yes, prairie dogs and black-footed ferret conservation and management are socially challenging but that's no reason to give up.

Although the DEIS lists black-footed ferret recovery as an issue to address (page ii), Table 1 (Comparison of effects of alternatives related to the issues raised during the scoping period) (page iii) does not mention the black-footed ferret as an issue. Amazingly, human exposure to plague, a miniscule issue as indicated to me by the Wyoming Department of Health (Scoping Comments attached), is listed as an issue and the effects of each alternative stated regarding this issue, but black-footed ferret recovery (large areas of prairie dog colonies required), is absent. Viability of sensitive species and potential species of conservation concern is an issue in Table 1, but black-footed ferret recovery is not addressed in Table 1 even though the ferret is an actual listed species in serious trouble.

Regarding black-footed ferret recovery, the DEIS just states that all alternatives incorporate 1,500 acres. I recommend a more thorough effects analysis than what is presented in the DEIS. Afterall, the elimination of the black-footed ferret Management Area 3.63 (large acreage of prairie dog colonies) is a central reason for and outcome of the proposed plan amendment. I recommend that under "Issue" in Table 1 black-footed ferret recovery be listed and the effects of each alternative described in terms of required prairie dog colony parameters for a black-footed ferret reintroduction site, including but not limited to: inter-colony distances, colony acreages, and the site's ability to support 30 and 100 black-footed ferrets.

Comment on Nonessential Experimental Population of Black-footed Ferrets in Wyoming under section 10(j) of the ESA

The DEIS barely mentions the 10(j) rule which is designed to make black-footed ferret reintroductions and management easier. The 10(j) rule recognizes the need to control unwanted prairie dog colony expansion from

federal lands to non-federal lands. It gives great flexibility to management:

The Service and the WGFD recognize that local involvement is important to the success of recovery efforts and the long-term conservation of the black- footed ferret in Wyoming. Consequently, as required in the 2013 MOU, the Service and WGFD will coordinate to ensure local communities, including potentially affected landowners, stakeholder groups, local governments, and Tribes are fully engaged in any future black-footed ferret reintroduction efforts. Future management plans may contain provisions similar to the following, although the specific content and details will vary by reintroduction site. Public involvement may include but is not limited to the following: (1) Public meetings to outreach to all interested parties on determining potential reintroduction sites; (2) Coordination with all interested parties after a reintroduction site is determined; (3) Direct involvement of management plan development which could include state and federal agencies, County Commissioners, landowners, companies, academia, and other stakeholders, and tribes; (4) Allowing landowners and land managers the opportunity to cooperatively decide the number and distribution of prairie dogs (and correspondingly black-footed ferrets) that may occur on privately owned and leased lands; (5) Annually obtaining landowner approval of human activity necessary for actions specified in a plan; (6) Biannual review of the progress of ongoing activities by all concerned parties; (7) Direct involvement any interested parties in monitoring activities on reintroduction sites.

Evidently, the DEIS disagrees and concludes that neither the 10(j) rule, or the 2001 plan, or the 2009 and 2015 plan amendments make it possible to have a black-footed ferret reintroduction site (large complexes of prairie dog colonies). However, the DEIS is not explicit in quantitative or qualitative terms why the above documents are a failure regarding black-footed ferret reintroduction.

I recommend that any plan amendment make full use of the 10(j) rule so that a black-footed ferret reintroduction site can be established at TBNG. The 10(j) rule states that Recovery of the species is a dynamic process that requires adaptive management. There are currently only a few hundred acres of prairie dog colonies on TBNG. New techniques against plague are being developed. Allow the colonies to expand, control the boundaries, adjust grazing and much more. Listen to the words of the 10(j) rule:

One of the benefits of an NEP designation is that it provides flexibility in the regulatory requirements in the area where the reintroduction occurs. This regulatory relief is important because, prior to reintroduction, these sites had no regulation related to the subject species because the species was not present. Thus, State, tribal, and private landowners typically resist endangered species reintroductions that bring with them new Federal regulation. This resistance can be nearly insurmountable. Fewer black-footed ferret reintroductions would have been initiated during the past 20 years without the added flexibility of nonessential experimental designations. Fewer black-footed ferret reintroductions would have been initiated during the past 20 years without the added flexibility of nonessential experimental designations. To date, 11 black-footed ferret reintroductions have occurred through use of section 10(j) designated NEP areas in the United States[hellip]

Comment on Section 7(a)(1) Responsibilities for the Black-footed Ferret

As indicated above, my major concern about the DEIS is the effective elimination of TBNG as a site to aid the recovery of the black-footed ferret. There is presently a definitive site to aid black- footed ferret recovery, Management Area 3.63, under the existing TBNG land and resource management plan. That dedicated site is replaced with a weak future "maybe" for ferrets as stated in Table 6 (Comparison of alternatives and the effects to potential reintroduction of the black-footed ferret) of the Biological Evaluation of Animal Species and Potential Animal Species of Conservation Concern Report and elsewhere: Meets the minimum requirement (1,500 active acres of black-tailed prairie dogs) for a site to be considered for reintroduction of ferrets. This is hardly the kind of species conservation commitment required of all federal agencies by the ESA.

The purposes of the ESA are to provide a means for conserving the ecosystems upon which endangered and

threatened species depend and a program for the conservation of such species. All federal agencies have a proactive responsibility for the conservation of endangered and threatened species listed under the ESA. Section 2(c)(1) states:

[i]t is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act. Conserve is defined by the ESA: "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 the Act are no longer necessary.

Section 7(a)(1) of the ESA mirrors and expands upon this statutory requirement:

The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act.

Essentially, Section 7(a)(1) expresses a strong assertion that all federal agencies do their best for the conservation of species listed under the ESA. The ESA directs all federal agencies to participate in conserving these species. Again, section 7 (a)(1) of the ESA charges federal agencies to aid in the conservation of listed species, and section 7 (a)(2) requires the agencies, through consultation with the U.S. Fish and Wildlife Service, to ensure their activities are not likely to jeopardize the continued existence of listed species, or destroy or adversely modify their critical habitat. Section 7(a)(1) conservation is not a novel approach, and its potential and under- utilization to create effective species recovery programs has been recognized by a variety of legal scholars (Eider-Orley 1978; Ruhl 1995; O'Neill 1999-2000; Wood 2004; Gersen 2009) and by the U.S. Fish and Wildlife Service. Agencies are supposed to be proactive for species conservation and not just review their proposed actions under Section 7(a)(2) consultation (see https://www.fws.gov/midwest/endangered/section7/s7process/7a2process.html).

Section 7(a)(1) provides a path to identify and focus listed species conservation efforts across each federal agency's entire authority and/or program footprint, which together will cumulatively promote proactive recovery of listed species. The conservation mandate of section 7(a)(1) has most recently been confirmed by the 2008 11th Circuit Court finding that "[hellip]while agencies might have discretion in selecting a particular program to conserve[hellip]they must in fact carry out a program to conserve, and not an 'insignificant' measure that does not, or is not reasonably likely to, conserve endangered or threatened species" (emphasis added; Florida Key Deer v. Paulison, 522 F. 3d 1133 (11th Cir. 2008)). Therefore, while implementation of specific conservation actions under section 7(a)(1) may be discretionary, the duty of all federal agencies to develop programs and implement significant actions for the conservation of listed species is not discretionary. In my opinion, the DEIS's elimination of the black-footed ferret reintroduction Management Area 3.63, paltry 1,500 acres of prairie dog colonies in the proposed Management Area 3.67 for a viable black-footed ferret population, and non-committal language for black- footed ferret reintroduction fail to live up to Section 7(a)(1). The above is an insignificant measure that does not conserve an endangered species.

All the courts that have examined section 7(a)(1) have concluded that federal agencies have an affirmative duty to develop and implement programs for the conservation of listed species. In 1998, the U.S. Court of Appeals for the 5th Circuit found that "section 7(a)(1) contains a clear statutory directive requiring the federal agencies to consult and develop programs for the conservation of each of the endangered and threatened species listed pursuant to the statute." Sierra Club v. Glickman, 156 F.3d 606, 617 (5th Cir. 1998). The court clarified that "under section 7(a)(1), each federal agency must consult with U.S. Fish and Wildlife Service and develop programs for the conservation of each endangered species that it can affect within its authorities." Sierra Club at 606, 618 FN 7.

Other courts have come to the same conclusion. See, e.g., Defenders of Wildlife v. Gutierrez, 532 F.3d 913 (D.C. Cir. 2008) (section 7(a)(1) gives the Coast Guard duties regarding the right whale); as mentioned above, Florida Key Deer v. Paulison, (11th Cir. 2008) (Section 7(a)(1) imposes a judicially reviewable obligation to carry out programs for the conservation of listed species); Wyoming Farm Bureau Federation, 199 F.3d 1224 (10th Cir. 2000) (Section 7(a)(1) authorizes the trapping and transplanting of rare species in order to conserve them); Pyramid Lake Paiute Tribe v. Navy, 898 F.2d 1410 (9th Cir. 1990). More recently, the District Court for the District of Nevada stated "[t]hus, the ESA required (and requires) that the USDA take some action in an effort to actually conserve the flycatcher" and "[i]n short, the USDA has not adequately demonstrated how its termination policy satisfies its affirmative duty to adopt a 'conservation' policy as required under Section 7(a)(1). Center for Biological Diversity, et al., v. Vilsack, et al., (D. Nev. 2017) (--F. Supp.3d --; No. 2:13-cv-01785-RFB-GWH).

USDA Forest Service was following the law (Section 7(a)(1) in 2001 with the establishment of a black-footed ferret reintroduction area (Management Area 3.63) on TBNG. However, USDA Forest Service in 2020 is now abrogating its responsibilities for the black-footed ferret under Section 7(a)(1) by dissolving MA 3.63. From a large area consecrated to black-footed ferrets to 1,500 acres of habitat and a non-committal "to be considered for reintroduction of ferrets", the USDA Forest Service is no longer following the law and fulfilling its responsibilities under the ESA.

I urge the Forest Service in the EIS or SDEIS to consider its obligations under Section 7(a)(1). Any plan amendment should include a robust contribution to black-footed ferret recovery.

Comment on No Effect Determinations for the Black-footed Ferret

The DEIS delivers "no effect" determinations for the black-footed ferret for the purposes of Section 7(a)(2) consultation. In my judgement, there is an effect because a recovery site, Management Area 3.63, is effectively being eliminated. 10(j) sites count towards recovery. Removal of Management Area 3.63 area hampers recovery. The 10(j) rule contains an entire section called Relationship of the Experimental Population to Recovery Efforts.

The 10(j) rule states:

We have determined that the issuance of this rule will advance the recovery of the endangered black-footed ferret. Specifically, this rulemaking will facilitate the establishment of free-ranging populations of ferrets within the species' historical range in Wyoming, thereby contributing to the numerical and distributional population targets laid out in the recovery plan's delisting and downlisting (reclassifying from endangered to threatened) criteria (U.S. Fish and Wildlife Service 2013a, p. 6).

We believe that recovery can be achieved through a combination of expansion of ferret populations at existing reintroduction sites and reintroduction of ferrets at new sites, both of which are possible if conservation of prairie dog occupied habitat and disease management are aggressively pursued.

Under the revised Black-footed Ferret Recovery Plan, the species may be downlisted from endangered to threatened when at least 10 ferret populations, each with at least 30 breeding adults, are established. Thus, downlisting is based on biological parameters (e.g., number of breeding adults, number of successful sites). The recovery plan makes no distinction as to how these populations are designated once biological criteria are satisfied; each population will contribute toward recovery of the species whether it is designated as endangered, essential experimental, or nonessential experimental. The importance of future reintroduction sites to recovery, however, does not mean these populations are "essential" under section 10(j) of the Act. All reintroduction efforts are undertaken with the primary goal to move a species toward recovery.

Comment on Black-footed Ferret Reintroduction Sites and TBNG

The U.S. Fish and Wildlife Service has always ranked TBNG as a priority BFF recovery site.

1) In the 1990s, the BFF Interstate Coordinating Committee (precursor to the BFFRIT) identified TBNG as one of the highest priority recovery sites in the nation.

2) In an August 2, 2000 letter from the USFWS BFF Recovery Coordinator, J. Michael Lockhart, to Forest Supervisor, Jerry Schmidt, USFWS stated: The Cheyenne River area of TBNG is one of the top two, if not the best potential ferret reintroduction site in North America today.

3) In 2002, the USFWS ranked TBNG 7th overall in a list that included active BFF recovery sites.

4) In a March 16, 2007 letter from USFWS to USDA Forest Service, the need for National Grasslands to contribute to BFF recovery was reinforced.

5) In 2008, the USFWS ranked TBNG as 6th in North America for potential reintroduction sites, despite a recent plague epizootic that drastically reduced habitat.

6) A BFF Species Status Assessment for Wyoming (Esch et al. 2005) suggested the black- tailed prairie dog complex at TBNG represented a significant site for potential BFF recovery.

7) Luce, a former BFF biologist for WGFD, identified TBNG as an immediate potential BFF reintroduction site and WGFD had assessed BFF habitat at TBNG in 2003.

8) The Multi-State Conservation Plan for the Black-Tailed Prairie Dog specified a target objective of a prairie dog complex >5,000 acres for conservation of prairie dogs.

9) Others have identified TBNG as a priority site for prairie dog ecosystem conservation (Wuerthner 1997, Buseck et al. 2005, Johnsgard 2005, Proctor et al. 2006, Sidle et al. 2006).

10) In Wyoming, BFFs are considered a species of Greatest Conservation Need by WGFD State Wildlife Action Plan (2017) and the Wyoming BFF Management Plan (2018) calls for at least one BFF recovery site in the black-tailed prairie dog range. The most obvious black-tailed prairie dog site in Wyoming for a viable reintroduced BFF population is on TBNG. BFFs are native to Wyoming and occupied TBNG likely into the 1970s, with a BFF skull found in 1979 suggesting the recent occupation (Anderson et al. 1986).

The DEIS does not explain why TBNG has gone from a definite reintroduction site to a "perhaps" site. What is the justification? The EIS or SDEIS should make such an assessment. Otherwise, the proposed plan amendment appears arbitrary and capricious.

Finding suitable black-footed ferret recovery sites, that is, extensive areas of prairie dog colonies is difficult. Given the limits of social acceptance of prairie dog colonies on private land, many have viewed federal lands in the western Great Plains as ideal locations for prairie dog conservation and the conservation of associated species such as the black-footed ferret (Proctor et al. 2006, Sidle et al. 2006, Wuerthner,1997). That said, even federal lands can be very fragmented, a land ownership pattern that creates major challenges for the conservation of controversial species such as prairie dogs.

The thrust of the DEIS strongly suggests that extensive areas of prairie dog colonies, black- footed ferret habitat, can no longer be countenanced on federal lands. The DEIS aims for the bare minimum of 1,500 prairie dog colony acres for black-footed ferrets and states:

According to the 10(j) rule, a minimum of 1,500 acres of black-tailed prairie dog colonies is required for a reintroduction site (80 FR 66824); the recovery plan also states approximately 4,500 acres of colonies are expected to be necessary to support at least 30 breeding adult ferrets and more than 15,000 acres are likely needed to support at least 100 ferrets (USFWS 2013).

The U.S. Fish and Wildlife Service developed the minimum 1,500 acres to accommodate a black-footed ferret nursery. The 1,500 acres does not convey: That's all you need for a reintroduction site! TBNG was a suitable site because it had a history of large prairie dog colony complexes. The 1,500-acre minimum is to get ferrets started and expanding acres would eventually allow a viable population of black-footed ferrets. I recommend that any chosen plan amendment clearly state that there will be a black-footed ferret reintroduction site and that TBNG will proceed to 1,500 acres of prairie dog colonies and then 4,500 acres and then 15,000 acres.

Recently, scientists at the USDA's Agricultural Research Service (ARS) examined the challenges and opportunities for biodiversity conservation across the Great Plains that center on the capacity for ?re and fauna to move across broad, spatially diverse landscapes and for prairie dogs to play their keystone role (Augustine et al. In Press; copy attached to these comments).

They examined the fragmentation of rangeland and the fragmentation of land ownership throughout the Great Plains. Northeast Wyoming, including TBNG, contains one of the least areas of fragmented grassland (see Figure 4 in Augustine et al. In Press). That's one reason why TBNG has been an attractive option for prairie dogs and black-footed ferrets. I recall the 107- page 2000 12-month administrative finding on the black-tailed prairie dog by the U.S. Fish and Wildlife and summarized in the Federal Register. Most of the large prairie dog complexes identified in the finding are gone. Losing TBNG as a black-footed ferret reintroduction site is yet another blow to black-footed ferret recovery. There is no indication in the DEIS that the USDA Forest Service has assessed how the agency's elimination of MA 3.63 affects overall recovery potential throughout the black-footed ferret's historic range and among other federal land management agencies and other organizations.

USDA ARS research (Augustine et al. In Press; copy attached to these comments) states:

The need to coordinate management objectives and practices across property boundaries and jurisdictions to conserve Great Plains fauna has been recognized by many authors, organizations, managers, and agencies (e.g., Samson and Knopf 2004; Fuhlendorf et al. 2012; NRCS 2016). Yet cross-jurisdictional management remains a major challenge within a region that is predominantly private land intermingled with public lands managed by 11 states, 3 provinces, > 1 000 counties and administrative divisions, and at least 4 different federal agencies in the United States alone. Samson and Knopf (2004) proposed that establishment of more meaningful state and federal agency designs is necessary to advance Great Plains grassland conservation. In particular, they suggested that consolidation or realignment of federal agencies and improved state-federal collaboration would reduce con?icting approaches to species conservation and enhance conservation cost-effectiveness. Progress in this regard has been limited over the past 15 yr, but the history of efforts to conserve the Lesser Prairie-Chicken in the southern Great Plains suggests some opportunities to advance cross-boundary management efforts. In some cases, even small nature reserves or other public lands, when managed in a manner that includes effective outreach and interactions with surrounding private landowners, can serve as catalysts for landscape-scale conservation and directly enhance wildlife conservation (Miller et al. 2012). Success in such efforts relies on application of novel advances in the science and practice of engaging landowners[hellip]

Boundary management for BTPDs can be an especially signi?cant source of con?ict, as their colonies can frequently expand across distances of 800 m in 1-2 yr (Augustine et al. 2008), and management options to prevent such movement can be expensive and contentious (Luce et al. 2006; Miller et al. 2007). It is notable that the Buffalo Gap National Grassland currently has the greatest proportion of its land base occurring in contiguous blocks of grassland distant from property boundaries (see Table 3). This resulted from a program to conduct land

exchanges (i.e., exchanges of National Forest System and private land of equal value) to reduce boundary complexity over the past 2 decades. This effort, combined with portions of Buffalo Gap National Gap occurring adjacent to the Badlands National Park and the Pine Ridge Indian Reservation, has facilitated the recovery of BTPD in this landscape and supports the most successful BFF reintroduction site in the Great Plains (US Fish and Wildlife Service 2013).

Those engaged in prairie dog/black-footed ferret management and conservation recognize the challenges indicated by the USDA ARS. The DEIS does not indicate what actions have been taken in the past on TBNG to overcome conflicts. Before and during prairie dog colony increases, what actions were taken to curtail plague, control boundaries, and otherwise act in a preemptive or strategic manner? The DEIS does not quantify complaints registered, actions taken, etc. I recommend that any plan amendment take an adaptive management approach that does not necessarily lock the USDA Forest Service into a hard number of prairie dog colony acres.

Comment on Black-footed Ferret Recovery Plan's Relation to TBNG

The DEIS states:

In regard to species recovery, recovery plans are not regulatory documents, but are instead intended to provide guidance to the U.S. Fish and Wildlife Service, other federal agencies, States, tribes and other partners on methods of minimizing threats to listed species and on criteria that may be used to determine when recovery is achieved. The recovery of a species may be achieved without all criteria being fully met. The proposed Thunder Basin National Grassland 2020 Plan Amendment was developed intentionally to provide design features or plan components that could create ecological conditions necessary for the reintroduction of black- footed ferrets.

Regulatory or not, Section 4 of the ESA clearly authorizes recovery plans for listed species. No, they are not subject to a formal rulemaking process, but recovery plans are a substantive document with full ESA statutory backing. The above quote from the DEIS appears to minimize the importance of the recovery plan and its content. The DEIS rather highlights the Wyoming black-footed ferret management plan instead. The Wyoming plan incorporates many aspects of the federal recovery plan, but is the Wyoming plan regulatory?

Yes, the black-footed ferret recovery plan contains the standard recovery plan disclaimer:

Recovery plans delineate reasonable actions for the conservation and survival of listed species, based upon the best scientific and commercial data available. Plans are published by the U.S. Fish and Wildlife Service (Service or USFWS), and often prepared with the assistance of recovery teams, contractors, State agencies, Tribes and others. Recovery plans are guidance and planning documents and do not necessarily represent the views, official positions, or approval of any individuals or agencies involved in the plan formulation, other than the Service. Although this black-footed ferret recovery plan represents the official position of the Service, identification of an action to be implemented by any public or private party does not create a legal obligation beyond existing legal requirements.

The recovery plan also states:

This revised recovery plan was prepared through collaborative efforts among the U.S. Fish and Wildlife Service (Service) National Black-footed Ferret Conservation Center, the Service's South Dakota Ecological Services Office, the Service's Mountain-Prairie Regional Office, and many other Service offices. We especially thank the members of the Black-footed Ferret Recovery Implementation Team for their review of the plan and their on-the-ground ferret recovery efforts over the past 16 years, as well as their predecessors who initiated conservation actions in 1981 to save this species from extinction.

The recovery plan benefits from four decades of knowledge and experience in black-footed ferret conservation

and should have been highlighted and referred to frequently in the DEIS. The EIS or SEIS should assess how any plan amendment contributes to the strategy, goal, objectives and criteria in the 2013 recovery plan for the black-footed ferret. Let's give due credit to both the federal and state black-footed ferret plans.

Other Comments

Public Health and Safety

You have seen my Scoping Document comments. I was critical that the Scoping Document began with:

The Forest Service proposes to amend prairie dog management direction in the Thunder Basin National Grassland land and resource management plan to place greater emphasis on control and active management of prairie dog colonies to address significant concerns related to health, safety, and economic impacts on neighboring landowners.

Comment: The Scoping Document provided no data on public health, public safety and economic impacts on neighboring landowners. Although the DEIS does not begin with a strident concern about public health, public safety and economic impacts to landowners, the DEIS equivocates on these matters with words such as could and can no matter how remote the possibility of a concern. I notice that the phrase "economic impacts to landowners" does not appear in the DEIS.

Prairie dog burrowing and clipping habits and the variable nature of their colony extent can have negative effects on forage availability for domestic livestock; infrastructure such as dams, cemeteries, corrals, and buildings; and the monetary value of pasture, residential, and other lands. Prairie dog burrows can also create a tripping hazard horses, cattle, or humans and prairie dogs can pose a risk for transmission of plague-causing bacterial to humans and domestic animals.

Burrows in prairie dog colonies could create safety hazards for permittees, workers, visitors, and livestock on NFS land and where encroachment has occurred on state and private lands.

Comment: During the life of the current plan and even before, how many structures (dams, cemeteries, corrals, and buildings) on and off TBNG were compromised by prairie dogs? How many reports of people and animals tripping in burrows? To what extent did land values change during the same period? To what extent have adjacent landowners been harmed during 2001- 2019. Let's put some numbers to these matters.

Safety of humans and livestock is another concern related to prairie dog management. Commenters raised the issue that burrows in prairie dog colonies create safety hazards for permittees, workers, visitors, and livestock. Very few safety issues have been reported to the Thunder Basin National Grassland personnel. Of greatest concern is the risk of horses stepping in burrow holes, especially when moving quickly and when carrying a rider. This risk can increase in abandoned prairie dog colonies or following a plague event when taller vegetation may conceal inactive burrows.

Comment: "very few have been reported" says the above, but the Forest Service then equivocates with words such as could and can. This is not an issue and the DEIS provides no quantification of public health and safety issues occurring since 2001 or even before.

Rangeland vegetation and livestock management would be affected by the extent of prairie dog colonies in all four alternatives. The no-action and prairie dog emphasis alternatives would result in the greatest potential occupancy by prairie dogs and the largest negative effects on forage availability and authorized use due to the higher target acreages for prairie dog occupancy.

Comment: Since 2001, when the plan came into effect, what has been the effect of expanding prairie dog colonies on permitted livestock AUMs and actual AUM use? Please present data on authorized AUMs and actual AUMs on the TBNG.

At target acreages, and depending on colony distribution, availability of forage on Federal allotments could cause grazing association members to change grazing management, perhaps by grazing for longer periods on their private properties, finding and securing other private pasture and rangeland leases during summer months, or purchasing more hay and grains to replace forage in winter, early spring, or late fall. While individual replacement costs would depend on ranch-level decisions to mitigate forage availability, additional range or supplemental feed would likely be purchased at prices higher than the cost of grazing on Federal allotments.

Comment: Please give examples of those higher costs. Please present quantitative data on the impacts to AUMs on TBNG during 2001-2019 and even before. If neighboring landowners have been adversely affected during 2001-2019, one would think that they would come forward with information or that the DEIS would display Forest Service AUM information on TBNG. Rangeland management is about manipulating livestock herds and grazing management for many reasons. The TBNG cannot provide a guaranteed steady-state AUM amount.

Livestock production from the national grasslands is very important to local agricultural families with national grassland grazing permits. Many grazing permittees have an interdependent relationship with the national grasslands. Therefore, any increase or decrease in forage for permitted livestock on the national grasslands may cause adjustments in herd size or other ranch operations.

Comment: "any increase or decrease" in the last sentence. This is simply not true. The use of the word, any, is troubling. If the amount of forage in a permittee's allotment decreased or increased by one pound that would not trigger any adjustment in herd size or other ranch operation. These types of exaggeration or bias or poor writing occur in the DEIS.

Competition between livestock and prairie dogs has long been a concern of livestock operators. Direct forage competition has been estimated by numerous studies, and several studies have attempted to estimate how many prairie dogs or what extent of prairie dogs are equivalent to one cow or one animal unit month. Varying densities of prairie dogs, ecological site characteristics, and levels of predation and disease make these estimates difficult.

The DEIS should attempt to define the ecological term, competition. Competition in nature can be very complex involving numerous parameters. In one's vegetable garden different vegetable species co-exist because there are enough soil nutrients and water to go around. In a given area on TBNG where prairie dogs and livestock occur, prairie dogs eat grasses and forbs and livestock eat grasses and forbs. However, eating the same thing does not mean that competition is occurring. Competition occurs, in general, when one species is adversely affected by another species. Livestock may be affected in terms of weight gain as the DEIS indicates. TBNG staff are probably familiar with the research conducted by USDA ARS in Fort Collins, Colorado.

Fence management should be explored. A 50-acre prairie dog colony on a 100-acre pasture may affect livestock weight gain but if removal of a fence creates a 200-acre pasture, the effect of the colony on livestock weight gain is likely negligible.

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ATTACHMENT: Scoping Letter from Same Commenter

ATTACHMENT: Interagency Statement, US Forest Service, US Fish and Wildlife Service, and Wyoming Game and Fish Department, December 4, 2017

ATTACHMENT: Augustine et al In Press. Thinking like a grassland: challenges and opportunities for biodiversity conservation and the Great Plains of North America.