

February 9, 2022

Tricia O'Connor, Forest Supervisor
Bridger-Teton National Forest
Box 1888
Jackson, WY 83001

**Re: Scoping comments on the Dell Creek and Forest Park Elk Feedgrounds: Long-term Special Use Permits
Project Environmental Impact Statement**

Electronic scoping comments submitted at:

<https://www.fs.usda.gov/project/?project=60949&exp=overview>

Hard Copy mailed to: PO Box 1888 Jackson, WY 83001 on February 9, 2022

"Like the resource it seeks to protect, wildlife conservation must be dynamic, changing as conditions change, seeking always to become more effective."

Rachel Carson, 1948, Guarding Our Wildlife Resources (in Smith 2012)

Dear Supervisor O'Connor:

Please accept my scoping comments regarding the proposal to reauthorize Wyoming Game and Fish Commission to operate and manage the Dell Creek and Forest Park elk feedgrounds via issuing long term special use permits. Given the inherent and unavoidable severe environmental impacts resulting from elk feedgrounds I oppose the long-term reauthorization of permits for these and any elk feedgrounds.

I am an elk and deer hunter, living in Teton County, Wyoming, for more than forty-six years now. Elk and deer in the herds that I hunt are nomadic and migratory and range throughout the Bridger-Teton National Forest, adjoining public and other lands, and the Greater Yellowstone Ecosystem wherein lie the elk feedgrounds at issue and other elk feedgrounds. Over time I have familiarized myself with literature describing historic and current conditions of the Greater Yellowstone Ecosystem, some wildlife diseases, and with recommendations from wildlife scientists about how to manage wildlife and habitat to better ensure a healthier ecosystem for future generations. I will be affected by any decision by the BTNF that perpetuates harmful elk feedgrounds because they pose a devastating and irreversible threat to wildlife, habitat, and my enjoyment of wildlife in this region.

1. Introduction

The Greater Yellowstone Ecosystem has vast expanses of national conservation lands consisting of National Forests, Bureau of Land Management lands, National Park units, and National Wildlife Refuges. In addition to these ecologically and culturally significant public lands, many private lands have conservation easements providing even more open spaces for wildlife. The ecosystem is approximately 22 million acres and

is world renowned for its native wildlife and habitats. Yet elk feedgrounds only exist in western Wyoming and many of them are on the BTNF. Such feedgrounds on the BTNF put at risk elk and other wildlife that range throughout the region. The BTNF needs to include in their consideration of elk feedgrounds on USFS land that elk feedgrounds are *not* a normal way of managing wild elk, or any other big game, in North America. Ninety-seven percent of wild elk in North America free range including all other elk throughout the GYE. (Smith 2001) Feedgrounds are superspreaders of diseases and are an aberration of wildlife management. Shockingly, contrary to the recommendations of virtually all wildlife scientists and abetted by the Bridger-Teton National Forest, the Wyoming Game and Fish Department has persisted for decades in this travesty by holding thousands of elk on small disease infested plots of land in three of Wyoming's twenty-three counties during winter months thus knowingly maintaining high levels of disease in those herds.

The perception in the early 1900s that wild Rocky Mountain elk in the only two herds that survived the mass slaughters of the late 19th and early 20th centuries by market hunters and white settlers could not survive without supplemental winter feeding was a well-intentioned but erroneous conclusion. Winters did not extirpate wild elk from North America, bullets did. While elk were extirpated from nearly all of their ancestral ranges by the overexploitation of white settlers and market hunters killing them for food, with the advent of conservation laws and limited harvests, elk and other big game have been restored to much of their ranges from New Mexico north into the western provinces of Canada without winter feeding in nearly all their range. Elk herds were also restored throughout much of Wyoming beyond Jackson Hole (home to one of those surviving elk herds); winter feeding has only persisted in 3 western counties in Wyoming and virtually nowhere else in the Rockies. As the abundant elk herds consisting of hundreds of thousands of elk in Idaho, Utah, Montana, Colorado and the rest of Wyoming prove, Rocky Mountain elk do not need winter feeding to survive Rocky Mountain winters. The mere presence of human communities and highways obviously are not cause for feeding big game in the winter because in far busier areas elk are not fed. Indeed, winter feeding for many decades in the three western Wyoming counties (Teton, Lincoln, and Sublette) has caused far more harm to the elk herds than it has provided benefit. Feedground elk harbor more diseases than wild elk and are at greater risk of fatal hoof rot, CWD, and bovine TB than wild unfed elk. The public's interest is far better served by conserving and managing for wild healthier unfed elk than by keeping elk on feedgrounds. The BTNF must consider the rates of morbidity and mortality of feedground elk due to diseases that do not inflict the same levels of harm to nonfed elk. As all wildlife scientists counsel, and as other jurisdictions do successfully, virtually all concerns and impacts from phasing out elk feedgrounds can be successfully mitigated, and elk can range free and be healthier and serve the public's long term interest far better.

Wyoming is the least populated state in the Union and its three feedground counties are no exception. Colorado is about the same size as Wyoming, has more than *ten times the number of people*, nearly 3 times the number of wild elk, and twice the number of cattle. Yet Colorado doesn't feed their elk during winter. Neither does Montana. Idaho and Utah have one small elk feedground each. The Service must consider and acknowledge the reality that elk feedgrounds are not necessary for successful conservation of elk in the 21st Century in the Rocky Mountain region. The Service must take advantage of the natural capital of millions of acres of undeveloped National Forest, National Parks, and other national conservation lands surrounding the elk feedgrounds and restore health to the ecosystem by phasing out elk feedgrounds.

2. A Reasonable Range of Alternatives

In September 2018, in *Western Watersheds Project v. Christiansen*, the U.S. District Court for Wyoming vacated and remanded back to the US Forest Service the Service's decision to continue feeding elk at Alkali Creek, Wyoming. One of the deficiencies the Court found was a failure by the Service to examine a reasonable range of alternatives when it considered the proposal to continue winter feeding of elk at Alkali Creek.

Conservation groups, scientists, hunters, and individual wildlife enthusiasts have for decades clearly requested that the Service consider phasing out elk feedgrounds for many reasons, not least of which are the unavoidable and rampant diseases amplified by feedground conditions. In addition to other deficiencies, the Court also found that the Service failed to take a hard look at the environmental consequences of artificial feeding and failed to meaningfully analyze the cumulative impacts of all the region's feedgrounds, including the National Elk Refuge and the 2007 Bison and Elk Management Plan, on wildlife and habitat. In this current analysis ostensibly for only Dell Creek and Forest Park, the Service must heed the Court's direction and consider that two elk feedgrounds are merely small pieces of the whole interconnected elk feedground program consisting of twenty-two state-run elk feedgrounds and the National Elk Refuge and, therefore, must conduct an appropriately scaled and considered analysis. That Court recognized, as must the Service, that whether the Game and Fish intends to continue feeding elk elsewhere, the Service must consider phase out alternatives for Forest Service jurisdictions. Any decision arising from this EIS must be mindful of the Court's ruling in *WWP v. Christiansen*, 2018.

The Service is not bound by, and must not merely support the Game and Fish Department's and Commission's goals and elk population objectives without ensuring such goals and objectives comply with federal laws and regulations and with modern wildlife science and wildlife management practices that serve the public's long term interests. The WGFD sets their own big game population objectives incorporating little if any ecologically-based criteria such as carrying capacity of healthy natural winter range, standards of health for elk herds other than exorbitant numbers to appease special interests. The WGFD ignores the ecological value and consideration of large predators to attend the big game herds and cull sick individuals, the natural winter loss of less fit animals, and other widely accepted natural processes and values. Feedgrounds artificially confine elk onto disease infested small tracts of land for months each winter, feed them bales of livestock hay, where elk contract hoof rot, a bacterial disease which does not appear in wild elk in Wyoming, condemning many of them to die from necroses, systemic infection, and organ failure by the dozens instead of a more rational and common tactic of fencing in vulnerable haystacks and livestock with elk proof fences. A review of the Brucellosis Management Action Plans (WGFD 2022 online BMAP archive) plainly shows that the WGFD consistently defaults to special interests in crafting their BMAPs which govern the operations of elk feedgrounds since 2006 in five-year increments. The considerations of the BTNF must not be defined or constrained by what the WGFD wants or claims it will do elsewhere nor by the preferences of special interests. While the WGFD may establish their own wildlife population objectives it does not relieve the BTNF from its duties and responsibilities to manage the resources on USFS lands fairly for all people and in a manner which protects the environment and wildlife and mitigates or eliminates impacts harmful to the environment and wildlife. The US Forest Service must not agree with the WGFD herd objectives *prima facie*. The service must first conduct its own analysis of elk populations that consider the ecology of elk, including migrations and natural winter loss, as one of many interdependent natural species and habitats within an ecosystem, and the Service must then manage in accordance with their legal directives and for the long term *health* of the system and for the long term benefit of all people and communities. There is nothing healthy about elk feedgrounds.

3. Vision and Mission of the Bridger-Teton National Forest

The BTNF should remember and incorporate into its analyses and decisions the excellent Vision Statement of the Bridger-Teton National Forest as once prominently displayed in the Supervisor's Office in Jackson, Wyoming:

*“The Bridger-Teton National Forest is home to world-class headwaters, wildlife, wilderness and wildlands. Conserving these values, in concert with providing for sustainable uses, is our legacy. We are leaders committed to **service, action and excellence.**”*

It is clear from a review of the disease and wildlife management science and professional wildlife managers’ and scientists’ associations’ policies that the perpetuation of elk feedgrounds on USFS lands in no way rises to the level of “excellence” in BTNF’s Vision Statement. Elk feedgrounds are substandard- even horrific- treatments of habitat and wildlife which are done almost nowhere else in North America other than in western Wyoming, several on the BTNF. The BTNF is not living up to its Vision Statement by permitting elk feedgrounds which, by their influence on other habitats and wildlife populations, are harmful to a broad swath of the BTNF and adjacent lands and wildlife. Definitely not the treatment of “world-class wildlife” in the Vision Statement the public expects and deserves.

The Mission Statement for the Bridger-Teton National Forest reads thus:

“The employees of the Bridger-Teton National Forest are dedicated to sound natural resource management. We care for the land by improving and maintaining healthy Forests and rangelands, clean air and water, and diverse habitat for fish and wildlife populations. We serve the people by encouraging responsible use of the resources our Forest provides.

We aim to be progressive leaders in natural resource management. We work effectively as a team, committed to timely completion of projects to meet resource and public needs. We value public comment, we foster partnerships and we are active in our communities.

Above all else, Bridger-Teton National Forest employees respect each other and the public we serve.”

While this is an excellent Mission Statement, the existence and perpetuation of any elk feedgrounds on USFS land does not exemplify the Mission Statement. The science, law, and all readily available information regarding elk feedgrounds are in no way “sound natural resource management.” Feedgrounds are a mistaken and archaic practice that do not even come close to modern wildlife management standards. Perpetuating unhealthy disease ridden feedgrounds that cause elk to be sick are the opposite of “maintaining *healthy* Forests.” How else can any agency or the public reasonably interpret the reality of sick elk confined en masse on small tracts of land, eating baled hay atop layers of feces built up over decades amidst overbrowsed, stunted woody shrubs and dead aspen? Virtually all other wildlife managers throughout North America- with the apparent exception of the leadership of the WGFD- acknowledge the inherent and unavoidable unhealthy character of elk feedgrounds and, thus, wisely counsel to abolish artificial feeding of big game.

Rather than cavalierly issuing the WGFD authorization to continue what is arguably one of the worst wildlife management programs known, the BTNF should instead- as their mission statement pledges- act as a leader and help expeditiously transition to a healthier elk management paradigm on the BTNF and throughout western Wyoming. The BTNF should live up to its Mission Statement.

The public scoping notice sent by the Bridger-Teton National Forest (BTNF) on January 14, 2022 and the same date posting in the Federal Register Vol. 87, No. 10/Friday, January 14, 2022, pages 2404-2405 explains in part that in response to a request from the Wyoming Game and Fish Department to conduct long term elk feedgrounds on BTNF lands an analysis of the actions resulting from the proposal will be documented in an environmental impact statement (EIS). Unfortunately, this EIS risks focusing on only two of twenty or more highly controversial elk feedgrounds in western Wyoming. A look at a regional map of elk feedgrounds

in Wyoming (WEST:8) shows how close many of the elk feedgrounds are to one another. Elk, deer, and moose- all members of the cervid family that are susceptible to the deadly chronic wasting disease (CWD)- roam and migrate individually and in small groups that collectively total many thousands throughout this region, comingling and using the same habitats thus tying together all areas that host elk feedgrounds and beyond. One feedground, or any few elk feedgrounds, do not exist separate from all the others. See a representative map from the Wyoming Migration Initiative (migrationinitiative.org) and also maps in WGFD Job Completion Reports (JCRs, archived at wgfd.wyo.gov) spatially and colorfully displaying GPS locations and routes of elk, deer, and moose. An integrated, interagency and multidisciplinary EIS should be done that includes all elk feedgrounds. The BTNF should lead this effort and emphasize the broad ecological interconnectedness of all the elk feedgrounds and associated landscapes rather than conduct piecemeal analyses that have historically resulted in a hodgepodge of short sighted, narrow decisions.

4. Purpose and Need

While the WGFD may claim they need “winter elk feeding operations”, aka, elk feedgrounds, “in order to maintain population objectives and control elk distribution in an effort to minimize conflicts with human land uses”, their claims that such artificial feedgrounds are needed are unsound at best and without foundation in the realm of elk management throughout the Rocky Mountain states. Virtually all of the hundreds of thousands of elk in all the Rocky Mountain states (New Mexico, Utah, Colorado, Idaho, Montana) and 20 of 23 counties in Wyoming do not rely on such aberrant and manipulative interventions to thrive, and livestock and big game hunting also thrive in those very same areas in proximity to all those elk without elk feedgrounds. The artificial objectives and goals fabricated by the WGFD should not be accepted, believed, or held by the US Forest Service, and the health of elk and the ecosystem should not be sacrificed on such myopic and parochial claims. There is no need for elk feedgrounds to manage elk in the Rocky Mountains including the three counties in western Wyoming. The elk would do fine without.

The Purpose mentions that the analysis is simply to “assure (that the) Wyoming Game and Fish Commission is managing elk in a manner that allows the health of the land to be sustained and to meet the goals and objectives of the 1990 Bridger-Teton Land and Resource Management Plan with Amendments ().” The opinions of virtually all wildlife scientists including epidemiologists, and all wildlife professional organizations counsel that elk feedgrounds are the opposite of healthy lands and wildlife. After considering the record, the Wyoming Court concluded, “There is no question that Alkali Creek Feedground could become a reservoir for CWD infection if it becomes established in elk populations in Northwest Wyoming. That potential is increased with the concentration of elk at feedgrounds. If infected animals congregate the environment will eventually be contaminated.” (*WWP v. Christiansen* 2018:24). If elk are “managed” on winter feedgrounds “the health of the land” cannot be sustained.

5. Migrations:

The posting in the Federal Register for this action mentions the need for a Forest Service decision to “compl(y) with the BTNF Land and Resource Management Plan (Forest Plan), Forest Service regulations and policies, and other applicable direction.” One of a few Objectives it quotes from the Forest Plan is the need to “[h]elp re-establish historic elk migration routes to provide increased viewing and hunting opportunities for outfitters and clients”. The Court, too, found merit in calling attention to this part of the Forest Plan about re-establishing migrations and opined, “[b]ased on the record, feedgrounds seem to undermine this goal.” (*WWP v. Christiansen*:25) The Service must consider how elk feedgrounds impact elk migrations across multiple jurisdictions and how phasing out elk feedgrounds would benefit existing and re-established migrations. It is irrefutable that, “feedgrounds help truncate the natural migratory routes of elk(.).” (Maloney, et al. 2020). Dell

Creek elk feedground is situated, “in (an) area() considered elk summer range *to stop elk migration* short of lower-elevation private property.” (WEST 2004:48 emphasis added) Given that the Court has already noted the contradiction of elk feedgrounds and the BTNF Forest Plan, and in addition to all the other unavoidable harmful impacts of elk feedgrounds, Dell Creek elk feedground must be phased out expeditiously in order not to short stop elk in their natural migrations.

Migrations of elk, deer, moose and other big game within, across and beyond the Bridger-Teton National Forest and the Greater Yellowstone Ecosystem can and should be heralded as indications of healthy ecosystem function. Historic migrations should be restored. The BTNF must not fall into the trap of considering elk ecology and life cycles as requiring elk to remain in a small localized place on the BTNF or adjacent lands. “It was in the Rocky Mountain region that elk developed well-defined migrations.” (Murie 1979). Elk should be managed to allow migrations of varying distances to reach their important habitats including winter ranges. Elk are known to travel scores of miles between their summer and winter ranges. (WMI 1982:509 Table 90) Mule deer, pronghorn, bighorn sheep, and moose are not constrained by artificial feedgrounds to remain for months on small areas on the BTNF or adjacent lands, nor should elk. If the seasonal ranges of big game are mostly intact and connected as they are in the GYE, and absent anthropogenic barriers or impediments such as interstate highways, dams, or feedgrounds, wildlife will be healthier if allowed to move across the natural landscapes, the fittest surviving harsh weather, predation, and meager winter forage as they evolved to do over millennia, resulting in healthier herds over time.

As described above, the Wyoming Game and Fish Department, the Wildlife Migration Initiative at the University of Wyoming, and other agencies and partners team up to document many of the big game migrations throughout the GYE. Maps with colored lines or dots indicate contemporary movements of individual animals in various game herds in Yellowstone and Grand Teton National Parks, the National Elk Refuge, and throughout the Bridger-Teton and other National Forests, and across BLM and other jurisdictions; such maps are now commonly used by professional wildlife managers and scientists and are familiar to public wildlife enthusiasts. The Wyoming Migration Initiative website shows maps of mule deer and elk migrations in western and northwestern Wyoming (<https://migrationinitiative.org/>). So, do maps included in several WGFD Job Completion Reports. (WGFD JCRs archived on their website) Some of these deer and elk migrations from the Wind River Basin and the Green River Basin into the Snake River Basin, and back, connect CWD endemic areas to the areas containing elk feedgrounds- including the National Elk Refuge- and visually indicate the risk of CWD affecting elk that attend feedgrounds and the Refuge. It is also known from field research by agency biologists and academics that elk from any given feedground can roam across a large geographic area and mingle with elk in other herds throughout their yearly life cycles. In 2002 and 2003 wildlife biologist Dr. Bruce Smith radio collared 25 elk in the Gros Ventre River Valley and tracked the radio transmitters for the next two years. “Fully one-third of those twenty-five elk summered elsewhere- in the Green River drainage to the south, or east of the Continental Divide in the Wind River country. . . . Assuming this sample of radioed animals is representative of the three thousand elk that occupy the Gros Ventre drainage, some one thousand head may mingle with other herds to the east and south.” (Smith 2012:155-56)

The Wyoming Game and Fish Department’s Job Completion Reports over the years consistently identify the Hoback Elk Herd Unit (where Dell Creek is) as consisting of elk that roam widely: “The Hoback Herd Unit is “leaky” in regards to elk moving in and out of the herd on a seasonal basis.” (2012 Pinedale Big Game JCRs p.20). In fact, the most recent 2020 Pinedale Big Game JCRs says, “this is an *extremely* “leaky” herd unit,” (p.6 emphasis added). Additionally, data from years of ear tagging, and radio or GPS collaring elk in western Wyoming by the WGFD corroborates that elk from the Hoback Herd Unit do indeed range widely and comingle with elk in other herd units such as the Jackson Elk Herd, the Pinedale Elk Herd, and others. Such indicators plainly show that elk and other big game cross watersheds and mountain ranges (see Smith 2012

above and Rudd 1982 below) or mingle with others that undertake such movements during their seasonal and life cycles.

These movements- while significantly truncated for feedground elk- include those elk that attend elk feedgrounds which testify to the fact that one elk feedground is connected to all other elk feedgrounds through comingling of elk on seasonal habitats and some elk wintering on one feedground one winter, and a different one the next. The Service must collect, include, and consider such movements and opportunities for comingling among elk and other cervids and consider how amplifying infectious diseases in elk such as brucellosis and, someday, CWD among elk that attend feedgrounds would harm wildlife geographically beyond the feedground locations. Rather than piecemeal an analysis of only one or a few elk feedgrounds, the BTNF should examine the entire elk feedground program as a whole, and examine its impacts on the BTNF and surrounding lands and wildlife, and should eliminate the adverse impacts by helping eliminate feedgrounds.

6. Winter Ranges

Rather than cavalierly issuing the WGFD authorization to continue what is arguably one of the worst wildlife management programs known, the BTNF should lead efforts to expeditiously transition to a healthier elk management paradigm on the BTNF and throughout western Wyoming. The BTNF must consider and help develop practical alternatives to perpetual disease-ridden feedgrounds. The natural and community capital to do so is readily at hand. There are literally millions of acres of national public lands (e.g., Refuges, National Forests, Bureau of Land Management, and National Parks) in and adjoining the three western Wyoming counties that have elk feedgrounds. The three counties where elk are fed during winter in Wyoming, (Sublette, Lincoln, and Teton) are a combined 8.6 million acres, 83% of which are national public lands. Vast expanses of big game winter ranges have been designated by wildlife biologists on these public lands and adjacent open spaces of other jurisdictions. While there are some developments for oil and natural gas, highways, and other uses, the majority of these winter ranges are undeveloped and available for wintering wildlife. Indeed, these critical habitats have some better protections for wildlife than they did during settlement times in the late 19th and early 20th centuries that predated conservation laws and practices. No longer is unlimited take of game animals allowed. Wyoming has the fewest residents of any state in the U.S. and its three feedground counties are no exception. Again, Wyoming is approximately the same size as Colorado, but Colorado has ten times the human population as does Wyoming. Colorado has nearly 3 times the number of elk as Wyoming. Despite the larger human population, three times the number of elk, and twice as many cattle in Colorado as Wyoming, Colorado doesn't feed any of their 280,000 elk during winter.

Federal agencies and the WGFD restrict or prohibit human activities on winter ranges to protect wildlife. These landscapes in Sublette and adjacent counties are some of the very areas where elk and other big game roamed prior to the institution of Wyoming's elk feedgrounds which exist *only* in the western part of the state. (Cromley, 2000; Murie 1979, and others) Deer, pronghorn and moose roam these lands nowadays, as do some elk, migrating between their summer and winter ranges, and there's no reason why more elk should not; indeed, they are allowed to migrate from summer to winter ranges in the rest of Wyoming and in virtually all other states and provinces that have wild elk herds because they're *not* short stopped by winter feedgrounds. The Service must consider the benefits of elk using larger landscapes than just immediately around existing feedgrounds. Elk are capable of traveling through deep snow to reach winter ranges. "Rudd (1982) recorded that elk migrating eastward from Yellowstone National Park negotiated very deep snow while crossing the crest of the rugged Absaroka Divide in midwinter." (WMI 1982:508)

There are opportunities for the BTNF to transition elk from feedgrounds to winter range and re-establish migration routes. In the proximate area of the Hoback Elk Herd (HEH): "The HEH encompasses 296

mi square with 96%, 3.6%, and 0.6% in Sublette, Lincoln, and Teton counties, respectively. Of the HEH, 9.5% is in private ownership; the United States Forest Service (USFS) manages 89.5%, and the remaining 1% is managed by the Bureau of Land Management (BLM). . . . There are 83 mi square designated crucial winter yearlong range, 55 mi square considered winter yearlong range, and 118 mi square are considered elk parturition range.” (WGFD 2016 Hoback BMAP:1 and Figure 2. P.3). The Service must consider and capitalize on the natural ability of elk to travel long distances between seasonal ranges as described by Rudd and others. However, with some 88,000+ acres of designated winter range in the area, some 3 ½ times the size of the National Elk Refuge’s 24,600+ acres, the Service should capitalize on the USFS winter range lands and explore and develop conservation partnerships with private landowners to naturally winter some elk in that area and facilitate elk migrations to even lower elevation winter ranges.

The US Forest Service must describe and consider these winter rangelands in western Wyoming in a comprehensive analysis of elk feedgrounds. The Service must include historic, current, and potential winter ranges for elk and other big game- and describe the management of those ranges- as they consider phasing out elk feedgrounds. Many of the USFS and BLM ranges are permitted for livestock grazing during some months of each year, and the Service must describe and consider the requirements in those grazing permits to leave residual forage for wildlife uses and other ecological benefits.

7. Condition of the big game winter ranges

Both Chester Anderson (1958) and Bruce Smith (2012) recommend managing elk herds at or below the carrying capacity of healthy plant communities on winter ranges. “(B)etter a smaller elk herd than an overstocked range riddled with disease.” (Smith 2012:228) Even decades ago, Anderson determined that excessive numbers of elk, “cannot be maintained without further damage to the winter range.” (p157) The importance of healthy forage plants is such that, “The principal goal should be the preservation of the habitat.”(Id.) The Service or other experts should assess the health and condition of native plant communities and the big game carrying capacity of winter ranges in western Wyoming. The Service should disclose the forage offtake and residual forage left by grazing livestock each summer on USFS and BLM livestock allotments that encompass or overlap on big game winter ranges in western Wyoming and the impacts of domestic and wild large herbivores to the health and condition of plant communities on those winter ranges.

8. Impacts from recreation:

In some areas on the Forest, the BTNF has shown the ability to manage motorized and human powered recreation to mitigate conflicts with wildlife. The North Zone OHV Route Designation Project limits the timing and area where Off-Highway Vehicles can be used to protect wildlife and habitat (BTNF 2009 OHV Route Designation Project), and winter use on USFS lands in the Gros Ventre Valley by motorized and human recreationists is limited by the BTNF because of important wildlife winter range. (BTNF 2010 Winter Travel Map) Decades ago, hundreds more elk wintered out on native range in the Cliff Creek and Monument Ridge areas of the Hoback Elk Herd area. (WGFD 2007 Hoback BMAP:18 quoting Anderson (1958)) However, “Recreational snowmobile use initiated during the late 1970s and continuing on today has essentially eliminated winter elk use of the Monument Ridge area.” (WGFD 2007 Hoback BMAP:18) Given that the BTNF has shown that motorized and human powered recreation can be limited on USFS lands to benefit wildlife by implementing closed areas and route only areas, the BTNF must manage recreation on all USFS lands of historic and current important elk habitat to help re-establish functional winter ranges and migration routes for elk.

9. Winter range and livestock use

Some USFS big game winter ranges have ceased over time to be used by domestic livestock grazing. The US Forest Service ceased leasing much of the lower elevation lands in the Gros Ventre River Valley to season long cattle grazing early in the 20th Century. The Forest Service removed lands to the east of the National Elk Refuge from summer livestock grazing in 1918 in order to leave more forage for wintering wildlife. The west facing hillsides along US Hwy 189-191 south of Jackson, Wyoming, were also removed from most summer grazing, as was the south facing hillsides along US Hwy 191 east of Hoback Junction. Vast acreages of former grazing allotments on the BNTF in the Gros Ventre River, Spread Creek, and Buffalo Fork River watersheds (e.g., Fish Creek/Bacon Creek Allotment, and part of the Upper Gros Ventre Allotment) were bought out in recent decades and no cattle grazing is permitted on those lands. By an act of congress, beginning in 1912 and incrementally increasing in size over time, the now 24,600 acres of the National Elk Refuge isn't grazed by private livestock. There are vast expanses of big game winter range designated by the Wyoming Game and Fish Department and the federal agencies in Lincoln, Sublette, Teton Counties. (Dorsey 2015: see end notes 10-15) Some forage grown on these and other winter ranges are critically important to sustain wintering big game herds, and should be capitalized on as winter elk feedgrounds are phased out.

In the Gros Ventre River Valley livestock grazing has significantly decreased on currently occupied and formerly occupied USFS livestock grazing allotments. There is ample residual and available forage for thousands of elk and other big game to be sustained on those winter ranges without feedgrounds. (Dorsey, L. 2005; Bardenett, S. 2007)

Where summer grazing of livestock occurs on USFS and BLM winter ranges, it is critically important that the agencies ensure that more than enough forage is left for wintering wildlife after the livestock leave the range. The forage assessment done to facilitate a phase out of North Piney elk feedground in the Big Piney Elk Herd Unit (BPEHU) is an example:

"In 1995 and 2000, estimates of the amount of forage (lb/ac) required to sustain an elk through a worst-case scenario winter without supplemental feeding were determined for the area surrounding Bench Corral, including Bench Corral Individual and Upper and Lower Bench Corral Common allotments. Clippings of grass and forb production (following livestock grazing) were collected in September and October (following grazing season) at 11 sites and 29 sites in 1995 and 2000, respectively. . . . (T)hese results () suggest that a population of 1,010 elk could be maintained solely on native forage produced, as recorded in 2000."

"Annually, the BLM assesses livestock forage utilization on permanently established monitoring transects throughout many allotments within the BPEHU. On allotments surrounding Bench Corral (i.e., Bench Corral Individual, Upper Bench Corral Common, Lower Bench Corral Common), monitoring of livestock forage utilization has occurred almost annually since 1988 on upland and riparian sites. These data provide an accurate assessment of the available forage utilized by livestock for the time periods before (1988 to 1995) and after (1996 to 2002) the elk migration from North Piney to Bench Corral was initiated.

"Utilization data derived from permanently established transects on upland sites from each allotment and all allotments combined suggest no differences before or after elk were relocated from North Piney to Bench Corral (Table 18). Additionally, utilization data derived from permanently established utilization cages on riparian areas suggest no differences before or after elk were relocated from North Piney to Bench Corral (Table 18). The substantial increase in elk density on and around Bench Corral feedground since 1995 has not increased the percentages of plants observed to be

utilized in any category (particularly Moderate to Severe). Ultimately, direct dietary competition between elk and cattle is unobservable and likely insignificant for all allotments on and around Bench Corral feedgrounds.” (WGFD 2007 Piney Elk BMAP)

The Service should consider forage production and utilization on big game winter ranges where elk from phased out feedgrounds may subsequently winter. If the data indicate not enough residual forage remaining after livestock leave the range, the USFS and BLM should consider adjusting the grazing of livestock to ensure enough forage remains for wildlife.

To reduce risk of brucellosis in cattle, put on dates for summer cattle grazing allotments should be delayed until after the timing of elk on parturition areas is completed, around June 15.

10. Disease

By their nature, densely concentrated feeding sites for cervids such as elk feedgrounds provide ideal conditions for infectious diseases that harm elk and other wildlife. This is unavoidable. Some of those diseases are brucellosis, necrobacillosis (hoof rot), and excessive and debilitating parasites. Brucellosis in elk can harm reproductive rates of females and cause debilitating joint disease. Necrobacillosis (hoof rot) is a horrific, painful, and deadly disease that is most common in calf elk on feedgrounds. The bacteria *F. necrophorum* invades the elk via cuts in hooves, causing swelling and pain which essentially prevents the elk from walking, eventually causes systemic infection throughout the animal which makes them vulnerable to predation. At this stage the disease is always fatal. During the winter of 2013-2014 many elk on feedgrounds suffered this agonizing disease and death. (WGFD 2014 News Release) While not yet found directly on densely crowded elk feedgrounds, the deadly prion disease chronic wasting disease (CWD) is amplified by artificially concentrating elk or deer above natural concentrations. “Free-ranging elk herds in Wyoming (Cross et al. 2013, Williams et al. 2014) and Canada (Vander Wal et al. 2013, 2014) have herd densities ranging from .21 to 1.2 elk/km² . . . Elk density at the average state feedground in Wyoming is 1976.6 elk/km², based on the reported average of 600 elk on 75 acres.” (Johnson 2014:8) Because of the potential for excessive mortalities from CWD and long-term environmental contamination of dense feeding sites with infectious prions, the Association of Fish and Wildlife Agencies strongly recommends that no baiting or feeding of wild cervids occur in the face of advancing or endemic CWD (AFWA 2018:33). Elk feedgrounds in western Wyoming are known to harbor several diseases harmful to elk and other wildlife and it is considered by wildlife and disease experts that elk feedgrounds will inevitably become contaminated by the infectious prions that cause CWD, elk will succumb to that disease, and such infections and mortalities will thus harm elk herds in the region. See below.

Indeed, a literature review and report on CWD by one of the Bridger-Teton Forest’s own staff, Tyler Johnson, in his Appendix 7 CWD review for the 2014 FEIS for the BTNF Winter Elk Management Activities, supports the assertion of AFWA:

Chronic Wasting Disease, “is an incurable, invariably fatal neurological disease of cervids (deer, elk, and their relatives) caused by a misfolded version (PrP^{Sc}) of the normal prion protein (PrP). . . . CWD is highly transmissible via multiple direct and indirect pathways between and among cervid species. . . . CWD can persist in the environment well after the infected animal has died. In this way, CWD differs from most other wildlife diseases in that environmental transmission plays an important role in the dynamics of the disease, something that isn’t common for bacterial or viral diseases, which tend not to persist in the environment.” (Johnson 2014:1 parenthesis in original)

“Studies on naturally occurring populations of elk have shown that mortality from chronic wasting disease by itself can exceed natural rates of mortality and reduce the overall survival of free roaming cow elk below 85% (Monello et al. 2014).” (Johnson 2014:7) It is evident that CWD can have a catastrophic effect on deer and elk on the Bridger-Teton National Forest. “(S)tudies on free-ranging and farmed elk and deer are clear in showing that population level impacts are to be expected from the introduction and spread of CWD in elk on the Bridger-Teton National Forest and nearby areas.” (Id.)

The dense concentrations of elk characteristic of elk feedgrounds will amplify the adverse effects of CWD on elk. “Cross et al. 2013 demonstrated that in areas where elk are artificially congregated at feedgrounds per capita rates of contact and duration of contact were more than twice as high as groups not receiving supplemental feed. . . . (E)lk feedgrounds attract elk from large catchments and congregate elk that might not otherwise contact each other, thereby increasing the chance that an infected elk from a distant locale would be the one to introduce the disease to a new herd area.” (Johnson 2014:6)

In *WWP v. Christiansen*, the Court observed, “There is no question that Alkali Creek Feedground could become a reservoir for CWD infection if it becomes established in elk populations in northwest Wyoming. That potential is increased with the concentration of elk at feedgrounds. If infected animals congregate, the environment will eventually be contaminated. This will significantly affect vegetation and soils, thus productivity, over a very long term (if not indefinitely) and may result in an irreversible and irretrievable loss of wildlife and habitat.” (*WWP v. Christiansen* 2018 parentheses in original)

Additionally, “CWD attacks the central nervous system of elk and other cervid species, including moose and both mule and white-tailed deer. (). Abnormal proteins, called prions, create sponge-like brain damage and cause lesions in the central nervous system of infected animals, producing behavioral and physiological changes with characteristic physical wasting and dementia in the final months before certain death.” (Am. Soc. Of Mammologists 2018:11) As of this writing, deadly chronic wasting disease (CWD) has recently been detected in at least two elk in the region of elk feedgrounds in western Wyoming. One in an elk harvested by a hunter in Grand Teton National Park adjacent to the National Elk Refuge, and one in an elk harvested south of Pinedale, Wyoming. Most elk in these elk herds attend feedgrounds during winter. Dell Creek and Forest Park elk feedgrounds are roughly in between and slightly west of where these two CWD positive elk were harvested. Numerous deer have also been found to be infected with CWD in this region; the most recent announced in February 2022, and at least one CWD positive moose years ago. A look at the Wyoming Game and Fish Department’s interactive online CWD map (WGFD 2022) and a comparison with the map of 23 elk feedgrounds in western Wyoming (WEST 2004 p.8) show that virtually all elk feedgrounds, including Dell Creek and Forest Park are within or surrounded by areas where deadly CWD has been found in cervids. It is generally conceded by agency wildlife professionals that CWD will eventually be found in elk on feedgrounds. As discussed above, virtually all the elk feedgrounds are within a day’s journey or so for elk from one to another; the elk that attend the feedgrounds mingle directly or indirectly with deer, elk, and moose throughout the area. They come into direct physical contact, they use the same habitats that may have been contaminated with infectious prions from the urine, feces, saliva or decomposed carcasses of infected cervids, or they contact or use habitats with cervids that, in turn, contact other cervids and habitats in the region and the cycle continues. “Infected animals can directly infect other animals through nasal or oral secretions. () CWD is indirectly transmitted through contact with soil, plants, and feed contaminated with saliva, urine, milk, or even carcass tissue of infected animals.” (Soc. Amer. Mammologists 2018:12) Some elk that attend Forest Park and Dell Creek feedgrounds mingle and/or use the same habitats during their life cycles with elk in other

herds throughout the region that possibly attend or mingle with elk that attend other feedgrounds including the National Elk Refuge. This is how CWD and other infectious diseases are spreading.

Regarding the population of the Jackson Elk Herd which attend the National Elk Refuge, “Initial forecasts suggested CWD may reach a mean prevalence in the population of 12% but uncertainty in this forecast is large and we cannot rule out a mean forecasted prevalence in the population as high as 20%. Using recruitment rates observed during the last two decades, the model predicted that a CWD prevalence of 7% in females would cause the population growth rate (λ) to drop below 1, resulting in population declines even when females harvest was zero.” (Galloway, et al. 2021. In Summary.). This level of CWD infection could well apply to all the elk feedgrounds.

The Service must also consider the very clear counsel of the Association of Fish and Wildlife Agencies: *“To reduce the risk of CWD transmission and establishment of CWD through unnatural concentrations of cervids, states and provinces should eliminate the baiting and feeding of all wild cervids using regulatory mechanisms such as jurisdictional bans.”* (AFWA 2018:33) The Service needs to consider the Best Management Practices for CWD recommended by AFWA.

11. Infectious Prions in Soil and Plants:

“Researchers also found that plants can uptake prions from contaminated soil and transport them to different parts of the plant, which can act as a carrier of infectivity. This suggests that plants may play an important role in environmental prion contamination and the horizontal transmission of the disease.” (Pritzkow et al. 2015 as described in a University of Texas online bulletin report [UTHealth] about research on prions in plants).

In the September 2018 decision, the Court noted, “There is no question Alkali Creek could become a reservoir for CWD infection if it becomes established in elk populations in northwest Wyoming. That potential is increased with the concentration of elk at feedgrounds. If infected animals congregate, the environment will eventually be contaminated. This will significantly affect vegetation and soils, thus productivity, over a very long term (if not indefinitely) and may result in an irreversible and irretrievable loss of wildlife and habitat.” (*WWP v. Christiansen* 2018 parentheses in original). The BTNF must consider that this applies to Dell Creek, Forest Park and all other feedgrounds. “Managing the disease may become extremely difficult if the environment becomes too saturated with prions, and feedgrounds could become reservoirs of these infectious agents.” (Maloney 2018). The Service must consider the effects of such long term harm to the environment from infectious prions.

12. Human health concerns

Both brucellosis and Bovine Tuberculosis (TB) are diseases that can affect elk, cattle, humans and many other mammals. These diseases are known to be easily transmissible in the field when susceptible potential hosts are densely concentrated such as on feedgrounds, and can also be transmitted when one-on-one contact occurs. The Service must consider the impacts from Bovine TB on wildlife, livestock, and people when analyzing the effects of crowding elk on feedgrounds for months each winter.

The Service must consider the advice of the Centers for Disease Control and Prevention and Wyoming Department of Health for some of the recommendations regarding potential human health risks associated with CWD. Since 1997, the CDC and the World Health Organization have recommended that agents of any prion disease should not enter the human food chain. (CDC 2018) Bovine spongiform encephalopathy (BSE,

aka, mad cow disease), a prion disease, became epidemic in the United Kingdom in the 1980s and 1990s after infected beef was consumed by people, thus causing significant social and economic disruption. Farm animals were slaughtered in an attempt to mitigate the spread of the prion disease to people. But many people died after becoming infected by consuming tainted meat.

While no case of CWD in humans has yet been documented, researchers are very concerned about the risk of transmission of CWD to humans concluding that “(t)he past century has provided compelling evidence that effective public health interventions are needed to prevent the transmission of prion-related transmissible spongiform encephalopathies (TSEs) between animals and humans and between humans . . . Available data indicate that the incidence of CWD in cervids is increasing and that the potential exists for transmission to humans and subsequent human disease.” (Osterholm, et al. 2019). Recommendations for mitigating human exposure and potential cross species (cervids to humans) transmission include immediately improving management practices to diminish CWD transmission among cervids. “While research to date has not empirically demonstrated a human health risk, preliminary experimental studies suggest that risk cannot be completely ruled out.” (AFWA 2018:88) Experts counsel, “Given the long incubation period of prion-associated conditions, improving public health measures now to prevent human exposure to CWD prions and to further understand the potential risk to humans may reduce the likelihood of a BSE-like event in the years to come.” (Osterholm, et al. 2019)

The Service must consider the potential impacts to people from the diseased conditions inherent in elk feedgrounds that harbor and spread pathogens.

13. Alternatives to the status quo: Examples of phased out or significantly reduced elk feedgrounds

In their *amici curiae* brief filed by the American Society of Mammologists in 2018 in a case concerning Alkali Creek elk feedgrounds, scientists stated, “The scientific evidence clearly shows that the supplemental feeding of elk can be eliminated, or at least phased out over a reasonable period of time, in a manner that will benefit regional wildlife populations without causing any long-term harm to the Jackson elk herd or other wildlife species.” (Amer. Soc. Of Mammologists 2018:5). The Service needs to consider examples where private and/or government winter elk feeding grounds in the Rocky Mountain region have been significantly reduced or phased out which offer empirical evidence that the status quo of feedgrounds can be changed significantly. There are several examples that are close to the elk feedground region in western Wyoming.

“Idaho has also decommissioned four winter feeding operations in Northeast Idaho (Rainey Creek, Victor, Teepee Creek, and Conant Creek) at the recommendation of the Idaho Governor’s Wildlife Brucellosis Taskforce in an effort to reduce disease transmission risk.” (Wise 2021, parentheses in original; see also Idaho Fish & Game Fall 2016 report).

On the Deseret Ranch in northern Utah and western Wyoming, the managers fed elk during winter for more than 20 years. Due to concerns over diseases and potential predation they undertook a program to decrease or eliminate winter feeding of elk and still maintain viable livestock and hunting programs on the ranch. “In 2 mild winters we completely eliminated elk feeding without incident and were able to reduce the quantity and duration of feeding during the 1 severe winter. Since the conclusion of my study, DLL (Deseret Land and Livestock) has further reduced quantity and duration of feeding during severe winters, and has completely eliminated feeding in light winters.” (Mangus 2011)

Western Wyoming:

“Historically, the Blackrock feedground, located in the Buffalo Valley, was used on an annual basis beginning in the early 1930s. It was moved several times and was finally terminated in 1971 (North 1990, WGFD 1991).” (WGFD 2015 Jackson Elk JCR:79)

“In 1995, elk were relocated from North Piney feedground to Bench Corral feedground after WGFD personnel baited hay from North Piney to Bench Corral.” (WGFD Piney 2007 BMAP:8). “Since about 2001, the majority of elk from North Piney have migrated to Bench Corral (citations omitted).” (Id:87). **“The WGFD will continue to not feed elk at North Piney feedground as elk no longer attend the site, there have been no increases in elk-cattle/human conflicts, and there have been no affects (sic) on elk mortality of population size.”** (WGFD 2016 Piney Elk BMAP:13) No elk were counted on North Piney elk feedground from 2015 to 2020. (WGFD Pinedale Elk JCR 2020: Appendix A)

Alkali Creek on the BTNF in the Gros Ventre River Valley is apparently no longer being used as a feedground but the WGFD may have an emergency feeding only Special Use Permit for that site. As far back as the winter of 2017-2018, no elk were observed at Alkali Creek. (WGFD 2017 Jackson Elk JCR:15) The last feeding season at Alkali Creek was the winter of 2015-2016. (USFS 2022: statement by R. Griebel) No hay is being stocked at Alkali Creek feedground haybarns. (L. Dorsey personal observation October 2021)

There are currently 2 other elk feedgrounds operated by the WGFD in the Gros Ventre Valley, Fish Creek and Patrol Cabin. There are several hundred thousand acres of USFS land in the Gros Ventre River watershed east of Grand Teton National Park, including at least 100,000 acres of designated elk winter range. There’s also designated winter range in the Buffalo Valley and winter range on and around the National Elk Refuge. These winter ranges are connected in that there are no anthropogenic impediments to elk or other big game to travel from area to area. There are some private lands in the Gros Ventre watershed east of GTNP with very few wintering livestock. Several conservation organizations crafted a feedground phase out proposal for the 3 feedgrounds in the Gros Ventre and presented it to the Wyoming Governor’s Brucellosis Coordination Team in 2005 and 2012 (Wy Dept of AG 2022). Attending those presentations were staff of the Wyoming Game and Fish Department, the Bridger-Teton National Forest, and several other agency personnel and interested parties. In response to the 2005 presentation, the WGFD crafted the “Evaluation of a Proposal from the Wyoming Outdoor Council, Greater Yellowstone Coalition and Jackson Hole Conservation Alliance for a Phase Out of Elk Feeding in the Gros Ventre, April 28, 2006. In that response from the WGFD, they concluded, in part, “(B)ased on all the data reviewed, it appears the only way a trial phase out of feeding could be attempted is if the current population of elk wintering in the Gros Ventre is reduced by 1,000-1,500 animals, mitigation measures to prevent livestock and elk comingling are implemented by landowners in areas of highest potential for damage and comingling, and the NER agrees to accommodate any additional elk that could move from the Gros Ventre winter range to the NER.” (WGFD 2006) The wintering population of elk has been reduced over time since 2006 and now numbers less than the 3,000 the WGFD determined there was sufficient winter forage for during “most winters”; “There were a total of 1,486 elk counted in the Gros Ventre drainage during the trend count, including 1,087 elk on the Patrol Cabin feedground and 399 on native winter range.” (WGFD 2020 Jackson Elk JCR:21) The Elk Refuge has not refused any elk coming into the Wildlife Refuge during winter. While the WGFD “does not support a phase-out trial and firmly believes continuation of feeding is necessary to maintain elk management objectives and current elk hunting opportunities,” the decision to operate an elk feedground on USFS lands is not up to the WGFD, it is a USFS decision. Again, a high percentage of the land in the Gros Ventre River watershed is USFS east of the boundary with GTNP and the National Elk Refuge, and feedgrounds on USFS land cannot operate without a Special Use Permit from the BTNF. The BTNF US Forest Service should consider the elements in the proposal from the conservation organizations to phase out the 3 Gros Ventre elk feedgrounds when they consider phase out alternatives for Dell Creek, Forest Park, and other elk feedgrounds.

In the WGFD's own words, "Forest Park has the highest potential for phase out in the AEH (Afton Elk Herd)." (WGFD 2016 AEH BMAP) The Service should consider the information included in the several WGFD Brucellosis Management Action Plans since 2006; however, the Service must not be bound by the decisions year after year by the WGFD to maintain elk feedgrounds on USFS land. As the Court notes, regardless of the WGFD deciding whether or not to feed elk in the winter, "this does not excuse the Service from taking a hard look at the consequences of *its* action to allow the long-term use of NFS lands at Alkali Creek as a feedground." (WWP v Christiansen: 25 emphasis in original) The Court continues: "Relevant to the Service (and not simply within WGFD jurisdiction) are the problems that artificial feeding increases the risk of disease transmission, increases the risk that the site will be contaminated with prions for a very long time, and also appears to blindly support WGFD's goal of managing elk movements to prevent commingling with livestock and danger to agricultural land, notwithstanding the BTNF Land and Resource Management Plan that includes a stated goal, "[h]elp re-establish historic elk migration routes to provide increased viewing and hunting opportunities for outfitters and clients." AR119. Based on the record, feedgrounds seem to undermine this goal. For all the reasons, the 2015 FSEIS is inadequate in that it fails NEPA's hard look requirement." (Id.)

Merely reducing the duration of elk feeding in a given year, or reducing the numbers of seasons fed per decade, is not sufficient to assure healthy elk for the future. However, significantly reducing winter feeding may be an appropriate step in the direction of phase out if feeding ends completely in a few years. It is incumbent on the Service to consider the steps taken to phase out or significantly reduce the winter elk feeding in these and other cases, and consider the consequences on the health of elk and other big game, livestock and private property, hunting opportunities, regional economics and other values.

14. "Good fences make good neighbors."

Despite the occurrence of elk feedgrounds, conflicts with elk and livestock on private lands occurs virtually every year in western Wyoming throughout the feedground area. So, baiting, feeding and otherwise attracting and confining elk on feedgrounds as a means of eliminating comingling and risk of and actual brucellosis transmission to livestock is a failed policy especially when balanced against the fact that *feedgrounds amplify diseases in elk*. Treating wildlife, in this case elk, as domestic livestock by artificially feeding and confining them is the exact *opposite* management program that should be used for wildlife management. The BTNF must consider better solutions such as elk-proof fencing at or near the *hay storage* and *livestock* feeding locations to maintain separation of elk from livestock where appropriate, or producers shipping livestock to winter elsewhere, that can solve many of these conflicts. And, then, allow elk to range freely as they do everywhere else. These are solutions that have been used throughout the Rocky Mountain states, including in Wyoming. Indeed, in the Gros Ventre Valley east of Jackson Hole, the WGFD admits that, "*some of the private lands have erected fencing to protect stored crops and livestock from elk.*" (WGFD 2016 JEH BMAP:5) The WGFD gives fencing materials to some livestock owners to keep wildlife out of haystacks, (WGFD 2007 Hoback Elk BMAP:36) **but fencing livestock winter feeding areas** is also necessary to achieve separation of elk and livestock and reduce the risk of disease transmission. In eastern Idaho, if there's risk of elk to livestock disease transmission, it's required. (Sierra Club et al 2017:4) The BTNF must be an active partner in seeking and implementing such solutions.

Besides the Soda Lake elk fence near Pinedale, Wyoming (WGFD 2006 Upper Green BMAP:37), other examples of elk-proof fencing partially on the BTNF include the Muddy Creek elk fence southeast of Boulder, Wyoming, (WGFD 2006 Pinedale BMAP:40) and the elk fence extending southeast and south from the Greys River (aka, Alpine) feedground in Star Valley, Wyoming (WGFD 2006 Afton Elk BMAP:17). Even though these fences need to be elk-proof, they may be of a kind that is entirely or partially removable or otherwise adjusted

during the summer months to allow passage of wildlife, livestock, and people. Fences that enforce separation of elk from livestock should, of course, be constructed to as minimal length as possible, and affect as little of the landscape as possible. The Soda Lake elk fence is far too expansive and should be shortened and adapted to facilitate elk movements to native winter ranges. The USFS undeniably has expertise in building elk proof fences. (USDA-FS 1993)

The BTNF should consider elk proof fences can also be used to keep elk off busy highways to mitigate the risk of traffic/wildlife collisions. See the examples of such fences miles in each direction along US Highway 191 around Daniel, Wyoming. Such fencing is also being erected south of Jackson, Wyoming, along Highway 89/191; such fences have existed north of Jackson along the same highway for decades. Now common, fencing along highways can be accompanied by electronic signs warning drivers to beware of migrating wildlife, also reduced speeds and wildlife underpasses or overpasses to allow wildlife to cross safely and thus use broad landscapes and important seasonal habitats.

15. Vaccinate cattle and Hunter Management Areas

Besides considering fencing in cattle to virtually eliminate the risk of brucellosis transmission from elk to livestock, the Service must consider the benefits of vaccinating vulnerable cattle in the region of elk feedgrounds to mitigate the risk of transmission of brucellosis from elk to livestock. “Ranchers can invest in self-protection measures to reduce the risk of brucellosis infection during the winter. Those measures have varying levels of cost, ranging from low-cost options such as vaccination to high-cost options such as building elk-proof fence and delaying grazing (Roberts et al.2012)” (in Maloney et al, 2020). For livestock owners, “Two of the least expensive self-protection measures to prevent brucellosis transmission are fencing haystacks and an adult vaccine booster.” (Maloney 2018) “The government subsidies, in the form of payments for vaccinations, are nearly as high as the private ranchers’ total self-protection expenditures (which include the private portion of vaccination costs as well as fencing costs).” (Id. parentheses in original). “It is estimated that the vaccine booster protects 65 to 75% of cattle (Roberts et al. 2012), **so it is reasonable to assume that effective fencing combined with vaccination might approach the 100% protection assumed in our model.**” (Id. emphasis added).

An additional tool to mitigate the risk of elk commingling with livestock is the use of Hunter Management Areas (HMAs). “(P)hase-out is currently feasible for the North Piney Staging area. To reduce the risk of transmission of brucellosis among elk attending North Piney feedground, where the feeding season lasted an average 146 days (1989-1999), the elk were baited down-drainage to Bench Corral feedground (feeding duration averaged 84 days for 1989-1999) during winter 1995-96. Despite efforts to hold elk at North Piney, elk continued to migrate from North Piney to Bench Corral around late January. During the 1990’s, there were concerns that these elk may cause damage to stored crops or co-mingle with wintering livestock, yet these concerns have not materialized, and **the expansion of the Big Piney Hunter Management Area in 2007 has greatly reduced or eliminated elk-cattle conflicts in the area.** In 2011, feeding ceased at the North Piney staging area when the feeder could no longer drive a truck into the site or January 1st, whichever came first. However, no elk have attended the North Piney feedground in recent years. There have been no increases in elk damage to stored crops or instances of elk-cattle commingling in the area since 2011, and no damage to range conditions or reductions to livestock grazing on BLM lands adjacent to Bench Corral has resulted. Additionally, elk populations have remained at or above WGFC objectives. The North Piney feedground has operationally been phased-out and elk that once attended North Piney are now fed at Bench Corral feedground.” (WGFD 2016 Piney Elk BMAP:5 emphasis added).

16. Economy

In the conclusion of a model done at University of Wyoming it states in part, “Our results suggest that the concerns of biologists, ecologists, and epidemiologists about the consequences of the impending introduction of CWD are warranted, and that the continuation of feeding could result in welfare losses of over \$20 million.” (Maloney 2018).

Data show that hunters, anglers and wildlife watchers spent an estimated \$788 million in Wyoming, with the total economic importance up to \$1 billion in business activity. (WGFD, 2018) Direct expenditures (plus a multiplier effect of expenditures) of wildlife watchers in Wyoming during 2016 were \$556 million dollars. In addition, hunters in Wyoming spent \$288.7 million dollars in 2011. (USFWS 2012:7-8) While the three counties in western Wyoming where elk feedgrounds are located are only a portion of the state of Wyoming, the annual revenue from wildlife-related recreation in Sublette, Teton and Lincoln counties is undoubtedly many millions of dollars annually. The allowance of elk feedgrounds that promulgate diseases in elk and other wildlife threatens the tourism and wildlife-based economies of western Wyoming and the Greater Yellowstone Ecosystem. In addition to the impacts of disease in wildlife, a human health epidemic traceable to CWD, TB, or brucellosis in cervids could cause significant disruptions with resulting economic consequences for the economy of Wyoming and neighboring states dependent on wildlife-related recreation. The BTNF must consider the impacts of disease-ridden elk feedgrounds on the economy, and must consider a prompt transition to a healthier more sustainable paradigm of wildlife and habitat management, which will positively support the regional economy in the future. To protect the wildlife dependent sectors of our economy, phasing out feedgrounds will pay long term dividends.

17. Management Indicator Species, Threatened and Endangered and Sensitive Species, and Species of Conservation Concern

The Resource Management Plan (LRMP) and regulations implementing the National Forest Management Act (NFMA) both mandate the designation and population monitoring of “management indicator species,” or “MIS,” to serve as bellwethers for the purpose of ascertaining the impact of forest development activities on wildlife populations. The Bridger-Teton Forest selected aspen as the MIS for the aspen community type.

The BTNF must consider the impacts from elk feedgrounds on all federally protected Threatened, Endangered, and Sensitive Species (TES), including mammals, amphibians, fish, birds, insects, and plants. (USDA Region 4 Threatened, Endangered, and Sensitive Species List 2016) The BTNF must consult with the US Fish and Wildlife Service about any activities that may harm such federally protected species or their habitats.

The BTNF may not permit abusive and harmful activities on USFS land that harm MIS species, especially when other options exist, such as ending feedgrounds and allowing elk to range free. Allowing elk to disperse across the landscape in winter and not concentrate on feedgrounds which harms, and even eliminates, nearby aspen stands is the action which best serves to conserve important species like aspen.

Elk are a harvest MIS on the BTNF and the BTNF should take a more active role in seeing that this important species and its habitat are appropriately managed. Much to the detriment of elk on the Bridger-Teton Forest the WGFD prefers the elk feedground paradigm for elk management in western Wyoming rather than the free-ranging elk model implemented in virtually all other regions. For

several decades now on the BTNF elk are clustered together through the lure of hay, plus hazing and fences, forced to eat unnatural food, forced to adopt unnatural behaviors, and they contract diseases as a result. Elk are put at grave risk of succumbing to diseases such as, but not limited to, pasteurella, necrotic stomatitis and hoofrot, and put at risk for CWD and Bovine TB. The BTNF should not be a passive bystander and permit the WGFD to mismanage an important species native to the Bridger-Teton National Forest and the Greater Yellowstone Ecosystem. The BTNF has a responsibility to ensure the health of natural resources, and the existence of elk feedgrounds do not allow that to occur. The best way forward is to carefully but expeditiously phase out elk feedgrounds.

18. Conservation of large carnivores and scavengers:

When considering the widespread harmful impacts of elk feedgrounds the BTNF must also consider the impacts to scavengers and large predators if diseases amplified by feedgrounds reduce, eliminate, or contaminate prey species such as deer, elk, and moose. A comprehensive analysis must consider capitalizing on the extensively documented natural role predators play in control of diseases in prey species as shown in “The role of predation in disease control: a comparison of selective and nonselective removal on prion disease dynamics in deer.” (Wild, et al. 2011; see also Wilkinson, 2017 in online *Mountain Journal*: The Undeniable Value of Wolves, Bears, Lions and Coyotes in Battling Disease.) The Forest Service should be a leader in the science of wildlife biology and CWD by increasing the distribution and abundance of scavengers (e.g., coyotes and wolverines) and large carnivores including gray wolves, bears, and mountain lions and engaging in and supporting such studies of the influence of predation and scavenging on diseases in prey species. The BTNF must conserve predators and scavengers because of their innate value to the ecosystem by culling sick prey animals and influencing the health of the herds, especially in the current endemic brucellosis and CWD circumstances in cervids in and around the GYE. “(S)cavengers are likely a viable form of biological control for brucellosis.” (WGFD 2007 Hoback Elk BMAP:37) The BTNF must stop the indiscriminate recreational and sport killing of coyotes, foxes, and other scavengers on USFS lands.

Given that, “predators may decrease CWD outbreak size substantially and delay the accumulation of symptomatic deer and elk(,)” (Brandell et al. 2022) and that the BTNF is at the advancing wave of the CWD epidemic, by decreasing predators and scavengers and promoting elk feedgrounds, the BTNF is managing exactly opposite of how experts advise predators and prey *should* be managed. Dell Creek and Forest Park are located in critical Canada lynx habitat (USFWS 2014,), grizzly bear occupied and Demographic Monitoring Area (WGFD 2016), a wolverine dispersal corridor (BTNF 2016b), and gray wolf habitat (USFWS, et al. 2015). Grizzly bears and Canada lynx are protected under the Endangered Species Act. All these large carnivores are rare but important to the dynamic ecosystem function of predator/prey interactions. Since the promulgation of elk feedgrounds by the BTNF adversely affects the health of prey species such as deer, moose and elk, elk feedgrounds have the potential to adversely affect carnivores including those protected under the ESA. Due to these impacts on ESA-listed species, the Forest Service also needs to consult with the US Fish and Wildlife Service about potential effects to listed species or their habitats under the ESA on any elk feedground permit regardless of term.

19. National Forest Management Act (NFMA) and Multiple Use Sustained Yield (MUSYA) Act

Under the 1960 Multiple Use Sustained Yield Act (MUSYA) the US Forest Service must balance the various uses for outdoor recreation, range, timber, watershed, and wildlife purposes to provide for the multiple use and sustained yield of the various products and services provided by the National Forest System lands. The National Forest Management Act (NFMA) of 1976 affirms the US Forest Service’s responsibility as

“leader in assuring the Nation maintains a natural resource conservation posture that will meet the requirements of our people in perpetuity.” (16 U.S.C. Section 1600(6)) The Forest Service has a duty to ensure the protection of Forest System resources including the wildlife that resides thereon. The Service must take into account its statutory obligations to: provide for healthy and diverse forest ecosystems; ensure the sustained yield of forest resources, including wildlife; and balance environmental and commercial considerations. 16 U.S.C. Sections 528, 529, 1604(g)(B). The Service must also provide for a “diversity of plant and animal communities” based on the suitability and capability of the specific forest to enable the agency to meet its multiple-use objectives. (16 U.S.C. Section 1604(g)(3)(B)) Under this authority, the Forest Service’s regulations require it to provide ecosystem components including ecosystem integrity, ecosystem diversity, and maintain viable populations of species of conservation concern. (36 CFR Part 219.9) Elk feedgrounds are the opposite of healthy ecosystems, they prevent healthy wildlife populations and, thus, do not comply with NFMA.

The Forest Service must address consistency of a permitted action with the current BTNF Forest Plan including objectives, standards, and guidelines for all affected resources. (BTNF 2015) The proposed use must be consistent “with applicable State and local health and sanitation laws”; and must ensure that “[t]he proposed use will not pose a serious or substantial risk to public health or safety.” 36 C.F.R. Section 251.54(e)(1)(i)-(iii). The USFS is required to “reject any proposal” for a special use permit that “would be inconsistent or incompatible with the purposes for which the lands are managed,” or “would not be in the public interest.” *Id.* section 251.54(e)(5)(i)-(ii).

The Forest Plan assigns the highest quality of Desired Future Conditions (DFCs) to the area of Dell Creek: DFC 10 and DFC 12. DFC 10 is “An area managed to allow for some resource development and roads *while having no adverse and some beneficial effects on wildlife.*” (BTNF LRMP 1989: map for Alternative F, Preferred Alternative) DFC 12 is “An area managed for high-quality wildlife habitat and escape cover, big game hunting opportunities, and dispersed recreation activities.” (*Id.*) The language describing these two DFCs makes it clear that the Plan intended for wildlife to be conserved and managed to the very highest standards. All the scientific evidence concerning elk feedgrounds indicates that feedgrounds are the *opposite* of “high-quality wildlife habitat,” and that the combined effects of feedgrounds are *not* beneficial for wildlife and, thus, not in the public interest.

20. Wilderness Quality

Dell Creek feedground is approximately 2 miles away, south, from the Shoal Creek Wilderness Study Area, and approximately 5 miles southwest of the Gros Ventre Wilderness. Congress has been clear that designated Wilderness shall be managed to certain standards. The Wilderness Act mandates that the USFS protect the wilderness character of Wilderness. Per Forest Plan DFC 6B, C, and D, the BTNF may not permit facilities or actions on USFS land that adversely affect the Wilderness qualities in those Wilderness areas as expressed in the Wilderness Act and the BTNF LRMP. The protection of Wilderness qualities is not intended to be discretionary as to allow the USFS to pick and choose whether to fulfill their duties or not. Unnaturally dense concentrations of brucellosis-infected elk associated with and caused by feedgrounds are not representative of natural population levels and distributions “affected by natural processes” as is mandated in the Forest Plan for DFC 6. Hundreds or of elk loafing or milling about in dense groups on USFS lands after being fed baled hay are not examples of “Natural agents of ecological change operating freely,” nor are aspen stands that have been “over-browsed and debarked” to death. Nor would feedground elk affected by CWD, staggering about, shedding infectious prions, infecting other deer and elk, and prematurely succumbing to this insidious disease qualify as “natural agents of ecological change operating freely.” (BTNF 2015)

The BTNF Forest Plan is also clear that certain standards that perpetuate “natural biophysical conditions” are required for Wilderness. It is also clear that actions that “tend to alter the natural behavior of wildlife” are prohibited by visitors and presumably by agencies as well. Therefore, the BTNF may not continue to permit any elk feedground, whose operations would cause management of forest resources- including wildlife and habitat- to fall short of the Wilderness Standards, Guidelines, and Prescriptions as prescribed in and required by the Forest Plan. (Id.)

21. National Environmental Policy Act (NEPA)

Under the National Environmental Policy Act (NEPA), the Service must “(r)igorously explore and objectively evaluate all reasonable alternatives,” and “(d)evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.” (40 C.F.R. Sections 1502.14(a), (b)). This rigorous alternatives analysis is “the heart of the [EIS]” because it “present(s) the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public.” 40 C.F.R. Section 1502.14. Although the scope of reasonable alternatives is informed by a permit applicant’s objectives, it is the federal agency that must “take responsibility for defining the objectives of an action and then provide legitimate consideration to alternatives that fall between the obvious extremes.” *Colo. Envtl. Coal v. Dombeck*, 185 F.3d 1162, 1175 (10th Cir. 1999). The Service must take a hard look and consider multiple viable alternatives and not merely alternatives that are essentially identical. There is ample evidence submitted here and by others over the years that elk feedgrounds are a harmful practice, and that there are reasonable, indeed empirically observable alternatives to such actions.

The Service must consider the irreversible and irretrievable commitment of resources arising from this decision including, but not limited to, the long term effects on soils, water, plants and wildlife from infectious prions and other pathogens inherent in feedgrounds. (42 U.S.C. Section 4332(C))

In considering continuing the practice of elk feedgrounds in USFS lands, the Service must consider information and opinions from experts both within and outside the agency and must not shirk its responsibilities to manage resources on USFS lands under its legal directives, nor may it turn a blind eye to significant impacts from proposed actions.

22. Cumulative Impacts

Cumulative impacts result from the incremental effect of the action when added to other past, present, and reasonably foreseeable actions undertaken by federal agencies, state agencies, or non-federal parties. (40 C.F.R. Section 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over time. (Id.). Given that individuals from elk and deer herds spread across the vast region of western Wyoming and eastern Idaho come into contact with each other, significant agency or non-federal actions that are specific to or affect those animals or their habitats are relevant and must be considered in this analysis.

23. Climate Change

It is clear that climate change is affecting the natural ecosystems of Wyoming and the Greater Yellowstone Ecosystem. “The frequent warm years coincide with a reduction in the frequency of extremely low (<-20 degrees C) January temperatures . . .” (Shuman 2011) Wildlife are affected by changes in climate.

“The ecology of ungulates in the (Rocky Mountains and Upper Columbia Basin) is strongly influenced by climate.” (NPS 2010:48) “One of the key issues for ungulate management is wildlife disease, the spread and virulence of which is likely to be exacerbated by climate change (Harvell 2002).” (Id.) It is known that elk feedgrounds exacerbate the incidence of diseases in elk.(Smith 2001; Peterson 2003) “Climate change will likely increase the range, frequency, severity, and impact of plant and wildlife disease (Harvell et al 2002).” (NPS 2010:17) “Plant communities and wildlife that are faced with multiple stressors are the least likely to resist the emergence of novel diseases.”(Id.) The BTNF must consider the effects of climate change on elk and elk habitat, positive and negative impacts, and must consider alleviating stressors on elk (such as density dependent diseases and diseased habitats) and implementing less harmful alternatives to managing elk than confining them on feedgrounds for months every winter.

The BTNF must also consider available natural forage for elk on important habitats such as native winter ranges. The impacts of seasonal livestock grazing on USFS and BLM lands that also serve as big game winter ranges must be considered and managed to allow for residual forage to sustain wintering elk and other big game.

24. Funding mitigation projects:

In order to phase out elk feedgrounds it is reasonable to consider mitigating potential conflicts with private property and livestock. There are several sources of funding for fencing and other projects to mitigate such conflicts. The Natural Resources Conservation Service, local Conservation Districts, the Wyoming Game and Fish Department, the US Fish and Wildlife Service all have funding for such projects. Additionally, the Wyoming Wildlife and Natural Resource Act of 2005 provides funding expressly, “To mitigate conflicts and reduce potential for disease transmission between wildlife and domestic livestock “ (Wyoming Statutes 2010 9-15-103 (d) (viii)). Landowners and livestock owners can share the cost of such mitigations, along with other partners such as the US Forest Service, the BLM, the Wyoming Department of Agriculture, the Livestock Board, private Foundations, individuals, and conservation groups. An example from a neighboring state is where Idaho passed regulations to effectively achieve and maintain spatial separation between wildlife and vulnerable livestock during winter and spring to prevent transmission of disease. (Idaho Administrative Code IDAPA 02.04.25).

Elk-proof fences can be erected around haystacks and around private livestock feeding pastures in the three western Wyoming counties during the winter and spring livestock feeding periods to achieve spatial separation between elk, bison and livestock. As small an area as possible should be fenced in order to enable unhindered landscape movements of wildlife and minimize costs. Other mitigation options that the Service must consider are changing the types of livestock operations (e.g., from cow/calf to steers) and making temporal changes in livestock operations to mitigate conflicts (e.g., shipping vulnerable livestock elsewhere during wildlife-livestock disease transmission periods.). It is common throughout the Rocky Mountain states and provinces to mitigate conflicts using these and other methods rather than treating wild elk as domestic livestock and confining them on winter elk feedgrounds. Conservation agreements with and compensation for private landowners can be achieved among landowners, government agencies, and nongovernmental organizations to facilitate elk transitioning from feedgrounds to free ranging.

As Bruce Smith counsels in his excellent book, *Where Elk Roam*, agencies could redirect the millions of dollars spent annually propping up the winter elk feeding program “to partner with landowners in resolving conflicts that have fostered animosity towards Wyoming’s wildlife for years. Such an effort could net thousands more acres of habitat where elk are now unwelcome. Fee title purchase of private parcels may be beyond fiscal reach, but acquiring large-tract conservation easements- from those (landowners) open to the

precepts of keeping rangelands undeveloped for wildlife's sake- could conceivably foster a new conservation direction." (Smith 2012:225)

The BTNF can no longer claim ignorance of how elk feedgrounds can and have been phased out; staff of the BTNF have had a seat for years on the Wyoming Governor's Brucellosis Coordination Team (WY Dept of Ag 2022) and years before that on the Greater Yellowstone Interagency Brucellosis Committee (GYIBC) where conservation groups presented the Gros Ventre Feedground Phase Out proposal, and the Deseret Ranch presented their successful program of weaning elk from winter feeding. The state of Idaho also presented at those forums about their ending longstanding winter elk feeding in eastern Idaho in response to the recommendations from the 1998 Idaho Governor's Wildlife Brucellosis Task Force. (Id.) The BTNF has repeatedly received information about phasing out elk feedgrounds during the public comment opportunities during NEPA processes for elk feedgrounds on USFS lands. The WGFD Brucellosis Management Action Plans, archived at wgfd.wyo.gov, describe the habitat improvement projects throughout the western Wyoming elk herd areas. Through the GPS documentation and mapping by the Wyoming Migration Initiative and others, elk, mule deer, pronghorn and other big game make clear that despite and since the massive near extinctions a century ago, some big game populations and migration routes on and around the BTNF can be restored and function naturally.

The BTNF knows full well that Wyoming has more elk than the Game and Fish Commission directs it to manage for, and has for many years. Without including seven herds "with landowner/hunter satisfaction objectives" (WGFD 2021: A-3), the 2020 population estimate for elk (the most recent available) is 110,200 and the objective (minus those seven herds) is 79,125. Elk in all the Rocky Mountain states including Wyoming were nearly extinct (with few exceptions) in the late 19th and early 20th centuries due to the massive overkill by market hunters and white settlers. Due to effective modern conservation laws, elk are no longer rare and they've proven resilient although certainly not impervious to diseases such as CWD, and most definitely do not need winter supplemental feeding to survive and flourish. Hunter success for elk in Wyoming is 46% (Id.) and has been well into the 40 percentile range for years (Backcountry Chronicles 2022). In surrounding states, it's in the 20 percentile range. Wyoming has so many elk that the harvest success chance is double that of neighbor states. (Id.) Wyoming shouldn't be stockpiling excess elk to appease special interests. The methods are well known, the tools are at hand, elk are abundant, and there is no reason for delaying ending elk feedgrounds.

25. Impacts to populations of other big game species

When most or all elk feedgrounds are phased out, there will likely be more elk on native winter ranges in western Wyoming than now. As shown in the Gros Ventre Valley estimations of carrying capacity for elk and other big game when there's no longer winter feeding of elk (WGFD 2006 Evaluation), and in the Greater Teton Ecosystem including and surrounding the National Elk Refuge (Hobbs et al, 2003), and the 2007 and 2016 North Piney/Bench Corral Piney Elk BMAPs, and the Deseret example (Mangus 2011), there is undeniably additional capacity on public and other range lands to winter more elk. As for concerns about impacts from additional elk on winter ranges shared with other big game species, in Ecological Dynamics on Yellowstone's Northern Range, the National Academies of Sciences, Engineering, and Medicine states, "(Yellowstone) still has all the species present there 150 years ago. (NAS 2002:122) It's also stating the obvious that Wyoming, in most all counties, and all surrounding states still have populations of other big game species that share habitats with free ranging elk.

While the WGFD maintains that ceasing feeding elk at any of the feedgrounds including the NER will have detrimental impacts to bighorns and other big game, they are apparently denying the

obvious fact that these species all used the same or adjacent habitats in the Rocky Mountain region successfully for thousands of years. The WGFD and others also ignore the facts surrounding the fluctuating populations of bighorn sheep and moose in the very geographic areas in western Wyoming where there have been elk feedgrounds for 50-90 years. Additionally, surrounding states with bighorn sheep, deer, and moose and naturally wintering elk have shown no inclination to increase populations of those other big game species by placing most or any elk on winter feedgrounds. As the myriad policy statements from wildlife professional organizations plainly state, it is most definitely *not* an acceptable tenet of modern wildlife management to feed or bait big game. Indeed, making elk more vulnerable to diseases such as Bovine TB, brucellosis, and CWD that can infect other large mammals by keeping thousands of elk densely crowded on elk feedgrounds each winter actually places other species at greater risk in the long term.

26. Ethics and Professional Standards

“A number of biologists, ecologists, and epidemiologists have expressed concerns about the consequences of continuing supplementary feeding of elk in the GYE, especially given the impending introduction of CWD.” (Maloney 2020) Since deadly CWD is expanding throughout Wyoming at an alarming pace, expanding on average 2.3 million acres per year (Wyoming Wildlife Advocates and Sierra Club 2018. Map) time is of the essence to manage elk and habitat on and adjacent to the BTNF in a more holistic way. Indeed, CWD has already stricken deer, elk, and moose on and adjacent to the BTNF in western Wyoming. The very nature of elk feedgrounds, crowding elk in dense concentrations for months every winter, dooms the elk herds to high prevalence of CWD and eventual significant decrease in populations if such conditions are perpetuated. Rather than manage elk according to artificial objectives such as numbers of elk as determined by the Wyoming Game and Fish Commission regardless of their health or the health of the habitat, the BTNF and other agencies must strive for a healthier ecosystem and more sustainable objectives to manage the public’s wildlife and better serve the long term public interest. Protecting extensive, connected habitats, managing free ranging elk herds, and conserving predators can improve the health of the elk herds that are currently sick, at high risk, and confined on small feedgrounds months at a time. Predators can, if conserved in abundance, steward the game herds, remove infected individuals, and help ensure healthy wildlife over the long term. Elk feedgrounds are an error of wildlife management whose time has passed. The threats from feedgrounds to this world renowned ecosystem are dire and in this third decade of the 21st Century it’s time that the BTNF stop being complicit in this extremely harmful and outdated wildlife management program promulgated by the WGFD to appease special interests. The BTNF should rise up as a leader in wildlife and habitat conservation and lead the effort to phase out elk feedgrounds.

The BTNF needs to consider the Habitat Extension Bulletin No.27, “Rocky Mountain Elk” from the Habitat Extension Services, Wyoming Game and Fish Department, unknown year, by Evin Oneale. In part it reads:

“The supplemental feeding of elk, or any big game species, is not recommended. Concentrating animals in such a manner increases the potential for disease transmission (including brucellosis and scabies), as well as dependence upon unnatural food sources. This may result in less healthy populations and reduced reproduction. . . . Keep in mind that elk populations are neither stagnant nor constant. They fluctuate annually, higher in years of mild weather and/or plentiful forage and lower in years of severe weather and/or poor forage production. Big game herds do not, nor should they be expected to, remain at a constant level year after year. . . Only through the involvement of

knowledgeable, concerned citizens can we assure that the Rocky Mountain elk will remain a free-ranging part of our state's wildlife heritage."

The BTNF needs to acknowledge and consider that in this 21st century reality of chronic wasting disease spreading throughout North America (USGS map 2022) it's virtually impossible outside the WGFD to find a contemporary endorsement by professional wildlife managers or scientists of elk feedgrounds. The clear standard of modern wildlife management using sound scientific principals as expressed by virtually all wildlife scientists and professional organizations is to NOT feed wildlife, and to manage wildlife and habitat according to science-based evidence that informs best practices for the health of the species, other species affected, and their habitats. The Wildlife Management Institute of Washington, D.C., has a pamphlet titled, "Feeding Wildlife . . . Just Say No!" (WMI). "The Idaho Fish and Game Commission recognizes that big game populations should be maintained under natural conditions and by naturally available forage." (Wise 2021) There is unanimity among wildlife professionals that management of wildlife and habitat must serve the long term public interest. For example, the Western Association of Fish and Wildlife Agencies (WAFWA) promotes high standards of science-based wildlife management, and has as its goal, *"Since 1922, WAFWA's goal has been to support sound resource management and build partnerships at all levels to conserve wildlife for the use and benefit of all citizens, now and in the future."* WAFWA's Mission is *"To advance collaborative, proactive, science-based fish and wildlife conservation and management across the West."* It's Core Values, are, *"Leadership, Integrity, Excellence, Support, Respect, and Accountability."* Scientists agree that elk feedgrounds are not sound resource management, they are not an example of excellent wildlife management, and there's nothing respectable about disease infested elk feedgrounds. As explained above in these comments, the larger Association of Fish and Wildlife Agencies explicitly counsels that states, *"should eliminate the baiting and feeding of all wild cervids using regulatory mechanisms such as jurisdictional bans."* (AFWA 2018:33)

Another renowned organization of wildlife professionals is The Wildlife Society (TWS) that has a Wyoming Chapter. In the TWS Code of Ethics, among the Standards For Professional Conduct it describes members' "prime responsibility to the public interest, conservation of the wildlife resource, and the environment. They shall exercise professional judgement, and avoid actions or omissions that may compromise these broad responsibilities. They shall cooperate fully with other professionals in the best interest of the wildlife resource." TWS policy on Baiting and Supplemental Feeding of Game Wildlife Species explains that "public baiting and feeding of game is often detrimental to wildlife resources," and maintains as a policy to, "Encourage fish and wildlife agencies, wherever possible, to phase-out supplemental feeding of wild ungulate populations, both in-house and by the general public, and to manage populations at levels that are compatible with the long-term carrying capacity of the habitat." The Service should follow the advice of such professional organizations.

The BTNF needs also to consider the text and sentiment of the article, "Feeding wildlife: A recipe for disaster", in the March-April 2000 Wyoming Game and Fish Department's *Wyoming Wildlife News*. Here are two paragraphs near the end of the article:

"Finally, it can be questioned whether feeding wildlife is even ethical. Wildlife have evolved and adapted over millions of years to exist on natural forage. A given amount of habitat can only support a given number of animals. Often, we destroy habitat, which then leads to wildlife dying of starvation. Feeding allows us to think we are compensating for habitat destruction when, in fact, it makes a bad situation worse. We need to face the fact that the only way to offset habitat destruction is via habitat improvement.

“The evidence is undeniable. Wildlife are adapted to survive winter without supplemental feeding. Feeding causes many more problems to wildlife than it solves. Additionally, it can be harmful to humans and domestic animals.”

“Although the practice was initiated with good intentions, the research carried out by several of the *Amici* and other scientists now demonstrates that the continuation of supplemental feeding has significant health consequences for elk. The practice contributes to “[t]runcated migrations, habitat degradation, loss of biodiversity, the de-wilding of wildlife, and the perception that hay can be substituted for habitat. “ () Most concerning today- and the primary reason the National Park Service (NPS) and the Fish and Wildlife Service (FWS) jointly decided to phase out supplemental feeding on the NER- is the serious threat it presents for a widespread epidemic of CWD and other diseases.” (Amer. Soc. of Mammologists 2018:10). “If CWD arrives at Alkali Creek or other supplemental feedgrounds in Wyoming, the disease could devastate elk herds and damage the Greater Yellowstone Ecosystem. The feedgrounds could become continuous sources of CWD transmission from animal to environment and back to animal, quickly making it extremely, if not impossible, to remove the disease from infected herds and contaminated environments.” (Id:14).

In light of the above, my recommendation is that the Bridger-Teton National Forest act as the progressive leaders they “aim to be” and conduct a comprehensive analysis of the processes to expeditiously phase out *all* elk feedgrounds on USFS lands including Dell Creek and Forest Park, and disassociate the US Forest Service from this regressive practice of maintaining superspreader facilities for wildlife by ending the permitting of elk feedgrounds on USFS lands. The Service should require a reasonable deadline of no more than three years for the WGFD to cease operating elk feedgrounds on USFS lands.

Thank you for considering these comments. Please keep me apprised of this issue and process.

Sincerely,

Lloyd Dorsey
Jackson, WY 83001

" We cannot solve our problems with the same thinking we used when we created them."

Albert Einstein

Attachments:

- What Happens When Elk Feeding Ends. 2015. By L. Dorsey for Wyoming Wildlife Advocates.
- Reducing Reliance on Supplemental Winter Feeding in Elk (*Cervus canadensis*): An Applied Management Experiment at Deseret Land and Livestock Ranch, Utah. A Master of Science graduate thesis. 2011. Mangus, Dax L. Utah State University. Logan, UT.

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