IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

DEFENDERS OF WILDLIFE, et al.,	
Plaintiffs,	
vs.	
KEN SALAZAR, in his official capacity as Secretary of the Interior, et al.,	Case No. 08-cv-00945 (RJL)
Defendants,	
and	
STATE OF WYOMING,	
Defendant-Intervenor.	

MEMORANDUM IN SUPPORT OF PLAINTIFFS'
MOTION FOR SUMMARY JUDGMENT

TABLE OF CONTENTS

TABLE OF AUTHORITIES

FEDERAL CASES

STATUTES AND LEGISLATIVE MATERIALS

REGULATIONS AND ADMINISTRATIVE MATERIALS

INTRODUCTION

This case concerns the U.S. Fish and Wildlife Service's winter-time practice of feeding thousands of elk at the National Elk Refuge in Jackson Hole, Wyoming. Plaintiffs Defenders of Wildlife, et al., challenge the Service's new Bison and Elk Management Plan for the National Elk Refuge, which persists in authorizing elk feeding on the Refuge despite overwhelming information demonstrating that feeding practices foster the spread of harmful wildlife diseases among the fed elk population, along with myriad other disruptions to the biological integrity of the Refuge.

Each winter, the 24,700-acre Refuge hosts elk that migrate down from their summer and fall ranges at higher elevations of the Greater Yellowstone Ecosystem. In recent years, about 7,000 elk have wintered on the Refuge. The elk wintering on the Refuge have been fed by humans for almost every winter since 1910. Originally undertaken by residents of Jackson Hole, the feeding program has been administered by the Service itself since 1912, with the result that the region's elk annually congregate on the Refuge feedlines rather than passing the winter on their native range as they do in neighboring Idaho and Montana.

While this winter feeding program had for years been deemed benign, scientific evidence has now conclusively demonstrated that the winter crowding of elk on feedlines has created ideal conditions for the spread of wildlife diseases. Already, many Refuge elk are infected with brucellosis, a disease that causes female elk to abort their calves and is of great concern to the livestock industry because of fears that it will be transmitted from elk to cattle. Of even greater concern, the unnatural elk concentrations associated with winter feeding on the Refuge present a grave risk of a chronic wasting disease epidemic among the fed elk population. This highly contagious disease is the elk form of "mad cow disease," an affliction that is spread by abnormal

proteins known as "prions" and that results in brain lesions and ultimately death for all infected animals. While chronic wasting disease has not yet been documented in the Jackson elk herd, it has steadily advanced north and west across Wyoming in recent years and Refuge biologists deem its arrival among Jackson Hole's elk to be inevitable. Based on experience with chronic wasting disease's spread through similarly crowded elk on game farms, the disease threatens the Refuge elk population with widespread mortality. Even worse, the chronic wasting disease prions persist in the soil in areas where infected animals have lingered, and remain to infect healthy animals that feed in the same area even years after diseased animals have died or been removed.

Faced with this situation, which threatens the Refuge and the wildlife it was set aside to protect, the U.S. Fish and Wildlife Service has adopted a new management plan for the National Elk Refuge that essentially maintains the feeding status quo. The plan, released in April 2007, authorizes continued elk feeding on the Refuge with only the vaguest suggestion of a different approach in the future. In sum, despite the fact that winter-time feeding is known to cause high brucellosis prevalence among the fed elk and threatens a major chronic wasting disease die-off with associated environmental contamination, the Service has elected to perpetuate indefinitely the feeding practices that have given rise to this disease problem.

In adopting this plan, the Service violated federal law. First, the Service's continuation of elk feeding despite the known disease consequences violates the National Wildlife Refuge System Improvement Act, which requires the Service to administer the National Wildlife Refuge System "for the conservation of fish, wildlife, and plants, and their habitats within the System," and defines "conservation" as meaning "to sustain … healthy populations of fish, wildlife, and plants." 16 U.S.C. §§ 668dd(a)(4)(A), 668ee(4) (emphasis added). The Act also requires the

Service to "ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans." Id. § 668dd(a)(4)(B). The Service violated the Act's "healthy populations" duty by electing to continue winter feeding that sows brucellosis among the Refuge elk and subjects the elk to the lethal threat of chronic wasting disease, and violated the Act's "biological integrity" and "environmental health" duties by perpetuating conditions that threaten to contaminate the environment of the Refuge with chronic wasting disease prions that are deadly to the very elk that the Refuge was established to sustain.

Second, the Service's environmental impact statement for the Refuge's management plan violates the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321, et seq. NEPA requires a "hard look" at environmental impacts of major federal agency action, including "a detailed discussion of possible mitigation measures" so that the agency and other interested parties "can properly evaluate the severity of the adverse effects." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350-52 (1989) (internal quotations omitted). Here, however, the Service's proposed action—and the action ultimately adopted by the agency—was so devoid of detail regarding the key issue of winter feeding and the agency's chosen means to mitigate the adverse impacts of winter feeding as to frustrate these NEPA directives.

For these reasons, the Service's new management plan and associated environmental impacts analysis were unlawful and should be remanded by this Court.

BACKGROUND

I. The National Wildlife Refuge System

Unique among the nation's public lands, the National Wildlife Refuge System rests upon a single premise—that "[w]ild creatures, like men, must have a place to live." See Rachel L. Carson, Conservation in Action No. 1 (U.S. Dep't of the Interior 1947), available at http://training.fws.gov/history/carson/chincoteague.pdf; see also H.R. Rep. No. 105-106, at 1 (1997), reprinted in 1997 U.S.C.C.A.N. 1798-5 ("The National Wildlife Refuge System is the only system of Federal lands acquired and managed for the conservation of fish, wildlife, plants, and their habitat."). In 1903, President Theodore Roosevelt established the first of the nation's refuges in an effort to protect the imperiled birds of Florida's Pelican Island. H.R. Rep. No. 105-106, at 1. By century's end, more than 500 refuges had been created across the United States, securing some of the most critical wildlife habitat in the country. See id. at 2.

Though consolidated into a single system by the National Wildlife Refuge System Administration Act of 1966, the nation's refuges long lacked a clear, unified purpose. Id. at 2-3. "[U]nlike National Parks, National Forests and Bureau of Land Management lands, the National Wildlife Refuge System remain[ed] the only major Federal public lands system without a true 'organic' act, a basic statute providing a mission for the System, policy direction, and management standards for all units of the System." Id. at 3. Congress enacted such a statute in 1997. With the National Wildlife Refuge System Improvement Act ("Improvement Act"), Congress "provide[d] an organic act for the System similar to those which exist for other public lands"—one declaring that "the conservation of fish, wildlife, plants and their habitats is the mission of the National Wildlife Refuge System." Id. at 3-4; see also 16 U.S.C. § 668dd(a)(2) (same). Under the Improvement Act, the U.S. Fish and Wildlife Service, as steward of the

nation's refuges, is required to "provide for the conservation of fish, wildlife, and plants, and their habitats within the System"—in other words, "to sustain and, where appropriate, restore and enhance, healthy populations of fish, wildlife, and plants." 16 U.S.C. §§ 668dd(a)(4)(A), 668ee(4) (emphasis added); see also H.R. Rep. No. 105-106, at 10 (noting that the Improvement Act "provides a set of affirmative stewardship responsibilities for the Secretary with respect to the Refuge System"). The Service must accordingly "ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans." 16 U.S.C. § 668dd(a)(4)(B).

In short, "the fundamental mission of our Refuge System is wildlife conservation: wildlife and wildlife conservation must come first." H.R. Rep. No. 105-106, at 9. "[T]he Refuge System should stand as a monument to the science and practice of wildlife management." Id.

II. The National Elk Refuge and Winter Feeding

These statutory principles have been compromised at the feedlines of the National Elk Refuge. The National Elk Refuge—a 24,700-acre expanse flanked by the Teton and Gros Ventre mountain ranges, south of Yellowstone and Grand Teton national parks—is among the most prized units of the National Wildlife Refuge System. See U.S. Fish and Wildlife Service & National Park Service, Final Bison and Elk Management Plan and Environmental Impact Statement (Feb. 2007) (AR FR017a) ("FEIS"), at 3, 95.[1] First set aside by Congress in 1912, the Refuge provides crucial habitat for elk, bison, birds, and other wildlife within the Greater

[1] "AR" citations refer to the administrative record. Because the administrative record is not internally Bates stamped, record citations are to document number and internal page number. References to the agency's Draft Environmental Impact Statement (AR DD051a), Final Environmental Impact Statement (AR FR017a), Record of Decision (AR FR026), and Management Plan (AR FR018a) are to internal page number only.

Yellowstone Ecosystem. See id. at 3-7, 13; see also 16 U.S.C. § 673 (establishing the Refuge as a "winter game (elk) reserve"); id. § 673a (designating the Refuge provide "for the grazing of, and as a refuge for, American elk and other big game animals"); Exec. Order No. 3,596 (Dec. 22, 1921) (AR LC060) (designating National Elk Refuge land as a "refuge[] and breeding ground[] for birds"). The Refuge also hosts an extensive winter feeding operation that threatens the very wildlife its lands were set aside to sustain.

The feedlines of the National Elk Refuge are the product of history, not science. In 1910, after a series of severe winters that had strained the region's elk population, the people of Jackson, Wyoming began feeding the Jackson herd. FEIS at 6. Following the establishment of the National Elk Refuge, federal officials took over the feeding of elk on Refuge lands. See id. at 6, 123. By popular measures, the Refuge's feeding operation has been a success, having reduced elk winter mortalities; sustained a larger elk population than would have otherwise survived on the region's winter range, thereby allowing increased hunting; and reduced elk contact with private haystacks and livestock pastures. See id. at 10. As a result, the State of Wyoming has long remained a staunch advocate of artificial feeding. See, e.g., AR FR151 (Mar. 31, 2006 regional director briefing), at 2 ("To date, Wyoming has not supported the concept of phasing out feed grounds.").

From a scientific perspective, however, the Refuge's feedlines are widely acknowledged to threaten the wildlife and wildlife habitat of Jackson Hole. In the words of Dr. Tom Roffe, the U.S. Fish and Wildlife Service's regional chief of wildlife health,[2] "feeding elk is not management based on sound science related to biology and ecology." AR FR090 (May 15, 2006

[2] Many of those involved in the Service's planning effort are identified at the conclusion of the agency's environmental impact statement. See FEIS at 528-30. Others omitted from this list are identified elsewhere in the administrative record. See AR DD020 (July 24, 2004 memo), at 2 (identifying the recipients of the agency's draft environmental impact statement and their titles).

memo by Dr. Tom Roffe), at 5; see also, e.g., id. at 4 ("I cannot find a single wildlife health professional outside of the [Wyoming Game and Fish Department] who advocates the feeding of wildlife."); Bison and Elk Management Plan Environmental Impact Statement for the National Elk Refuge and Grand Teton National Park: August 2003 Briefing (AR DD442) ("August 2003 Briefing"), at 11 ("Existing scientific information cautions against feeding and concentrating wildlife."). As explained by former Refuge senior wildlife biologist Bruce Smith, "[w]inter feeding of elk can be viewed as a means of conflict resolution, generally spawned by intense public pressure. It is not based on scientific principle and sustainable resource management policy." Bruce L. Smith, Disease and Winter Feeding of Elk and Bison: A Review and Recommendations Pertinent to the Jackson Bison and Elk Management Plan and Environmental Impact Statement (Oct. 27, 2005) (AR S007) ("Smith Report"), at 24 (internal quotations omitted).

While the problems stemming from the National Elk Refuge's artificial feeding operation are numerous, their root cause is the same—namely, animal density. Each winter, thousands of elk and hundreds of bison are drawn to the Refuge by its feedlines, disrupting the natural distribution of the animals while resulting in "extensive damage" to Jackson Hole's native cottonwood, willow, and aspen stands. See, e.g., FEIS at 9, 106-08, 164-66; August 2003 Briefing (AR DD442), at 11 ("Feeding has caused extensive damage to and loss of important habitats, which conflicts with NER purposes."). As a result of this damage, "[m]any of the bird species associated with healthy aspen stands are rare or absent on the refuge." August 2003 Briefing (AR DD442), at 16. Once feeding operations begin, elk and bison are "concentrated along lines of alfalfa pellets" for an average of 70 days each winter. FEIS at 123, 260; see also id. at 65 (photograph of feedlines). The functional density of elk and bison along these feedlines

exceeds that attained at many elk farms. Smith Report (AR S007), at 3; Markus J. Peterson, Chronic Wasting Disease and the Greater Yellowstone Area (Nov. 4, 2005) (AR S008) ("Peterson CWD Report"), at 9. As a result, the National Elk Refuge's feeding operation has made a wildlife disease tinderbox of a national wildlife refuge. See, e.g., Smith Report (AR S007), at 15-19; Peterson CWD Report (AR S008), at 15; see also FEIS at 261 (acknowledging that supplemental feeding and resulting high elk densities "provide an ideal environment for … diseases to be spread and maintained in the Jackson elk herd").

III. The National Elk Refuge's Feedlines and Brucellosis

The significant disease impacts of the National Elk Refuge's feedlines are dramatically illustrated by the prevalence of brucellosis within Jackson Hole's elk and bison herds. See AR AD216 (Nov. 28, 2001 email from Dr. Bruce Smith, National Elk Refuge senior wildlife biologist) ("Brucellosis is a red flag that warns us that our management has created conditions under which this exotic bovine disease is maintained in both bison and elk."). While not fatal to the animals it infects, brucellosis—"[a]lso known as Bangs disease, undulant fever, and contagious abortion"—causes pregnant elk to abort their first calf following infection, leaving contaminated fetal tissues capable of transmitting the disease to other animals. FEIS at 129, 564. Among naturally free-ranging elk populations, exposure to such tissues is relatively limited due to the tendency of elk to isolate themselves during birth. Id. at 130. Brucellosis rates within Wyoming elk herds that do not frequent feedgrounds are approximately 2.3 percent; within unfed elk herds that do not share their range with infected elk, bison, or cattle, brucellosis prevalence is essentially zero. Id. Accordingly, "[n]o elk populations outside the Greater Yellowstone Area are known to be infected with brucellosis." Id. In contrast, brucellosis rates among elk on the National Elk Refuge have averaged around 17 percent in recent years, while rates in excess of 50

percent have been documented elsewhere within fed elk populations. Id.; Smith Report (AR S007), at 7. As noted by Bruce Smith, the former Refuge wildlife biologist, "elk management reliant on winter feeding to maintain excessively large populations of elk clearly perpetuates chronically infected elk herds." Smith Report (AR S007), at 6.[3] The "elimination of elk feedgrounds" is accordingly "the most practical means of greatly reducing brucellosis" in the Greater Yellowstone Ecosystem. Id. at 8; see also FEIS Vol. 2 at 200 ("By maintaining feedgrounds, it is unlikely that brucellosis would be eliminated in the bison and elk herds, at least not without the development of more effective vaccines. Whereas, if winter feedgrounds were eliminated, brucellosis levels in the long-term would likely be greatly reduced in elk.").

While the economic impacts of brucellosis can be substantial due to the possibility of wildlife-to-livestock transmission, the disease is not biologically capable of devastating the Jackson elk herd. See Smith Report (AR S007), at 5. The same cannot be said of chronic wasting disease ("CWD").

IV. The National Elk Refuge's Feedlines and Chronic Wasting Disease

Like its bovine equivalent, mad cow disease, chronic wasting disease is aptly named. See FEIS at 136. A slow, debilitating, and inevitably fatal illness, chronic wasting disease assaults the central nervous systems of elk, deer, and moose, resulting in brain lesions, behavioral changes, a loss of body condition, and death. Id.; Markus J. Peterson, Infectious Agents of Concern for the Jackson Hole Elk and Bison Herds: An Ecological Perspective (June 15, 2003) (AR DD008) ("Peterson Disease Review"), at 51.

[3] Due to their gregariousness, bison are capable of sustaining brucellosis in the absence of feedgrounds. FEIS at 130. However, the brucellosis rate within Jackson's bison herd has been exceptionally high (77 to 84 percent), a likely result of the Refuge's feeding program. See Smith Report (AR S007), at 5.

While much remains unknown about the illness, it appears that chronic wasting disease—like mad cow disease, Creutzfeldt-Jakob disease in humans, and scrapie in sheep—stems from abnormal, non-living proteins known as "prions." FEIS at 136; Smith Report (AR S007), at 10. In addition to being deleterious, these proteins are exceptionally resistant to degradation. FEIS at 140, 514; Smith Report (AR S007), at 10. In one study, for instance, scientists documented the contraction of chronic wasting disease by a mule deer confined within a paddock that had been occupied by an infected animal more than two years before. See AR DD121 (May 10, 2004 email from Dr. Tom Roffe, FWS regional chief of wildlife health), at 2; Peterson CWD Report (AR S008), at 4; AR S005 (Miller, et al. study). Whether an area contaminated with chronic wasting disease prions can ever be disinfected is not known, as the disease has demonstrated an "ability to persist in the environment for a long period of time, even after intensive efforts to eradicate it." See FEIS at 137, 140; see also id. at 514 (concluding that "[t]he potential exists for irretrievable commitments of elk resources if chronic wasting disease became established in the Jackson Hole area" as "it is not known how long contamination of the environment would persist"); Peterson Disease Review (AR DD008), at 52 ("So far, attempts to eradicate CWD from contaminated facilities have failed….").

While chronic wasting disease has yet to be documented within the National Elk Refuge, "[e]xperts believe that … [the] disease will at some time infect the [Jackson] herd." FEIS Vol. 2 at 200. Since its discovery in a captive population of Colorado mule deer in 1967, chronic wasting disease has been identified within the free-ranging elk and deer populations of numerous states, including Colorado, Wyoming, and Utah. FEIS at 137; Peterson CWD Report (AR S008), at 2. In 2003, mule deer infected with the disease were found 90 miles east of the Jackson elk herd's range, at the foot of the Owl Creek and Absaroka Mountains on the Greater

Yellowstone Ecosystem's southeastern periphery. FEIS at 137; Smith Report (AR S007), at 11, 14. In light of the Jackson herd's movements across the region, "[t]he apparently inexorable spread" of chronic wasting disease is likely to reach the National Elk Refuge sooner rather than later—assuming the disease is not already there. See AR DD297 (Feb. 20, 2003 email from Dr. Tom Roffe, FWS regional chief of wildlife health), at 6; FEIS Vol. 2 at 200; Ranking Report (AR DD017), at 97 (noting "apparently imminent disease threat"); Smith Report (AR S007), at 12-14 (noting that "[i]t is highly unlikely that the total distribution of CWD in wild cervid populations is known" due to sampling limitations and the disease's "lengthy incubation period"); Peterson CWD Report (AR S008), at 8-9.

When chronic wasting disease reaches the National Elk Refuge's feedlines, the outcome threatens to be "catastrophic." August 2003 Briefing (AR DD442), at 3-4, 11 (noting that a chronic wasting disease or tuberculosis outbreak along the Refuge's feedlines would have "devastating" and "catastrophic" impacts on wildlife in the region, "greatly hinder[ing]" the Service's ability to fulfill its legal obligations); see also AR DD449 (Jan. 2004 briefing statement), at 1 (noting "potential major adverse impacts if chronic wasting disease, bovine tuberculosis, or other non-endemic infectious disease were to be established in one or both herds"); AR DD297 (Feb. 20, 2003 FWS email chain), at 2 (noting "potential crisis" presented by chronic wasting disease and the Refuge's "large concentrations" of winter-fed wildlife).[4] The concentration of elk along the Refuge's feedlines creates "nearly ideal conditions for a CWD epidemic," maintaining animal densities similar to those in captive elk herds where chronic

[4] Compare AR DD271 (Sep. 22, 2003 interagency meeting notes), at 1 (documenting agencies' agreement "that the words 'disastrous' and 'catastrophic' are emotional terms … that … should not be used in the planning document/EIS"—and noting that "[t]here was no disagreement … that the prevalence of CWD and other non-endemic diseases would likely be considerably higher in fed populations of elk than in non-fed populations").

wasting disease prevalence has exceeded 90 percent—far above the 4 percent rate of overall prevalence observed in Wyoming's free-ranging elk populations. Peterson Disease Review (AR DD008), at 51-52; FEIS at 137. As the incubation period for chronic wasting disease can range from one to four years in elk, a substantial portion of the Jackson population could become infected before the presence of the disease is even detected. Peterson CWD Report (AR S008), at 3. All told, if the rate of chronic wasting disease infection on the National Elk Refuge "is even half that of game farmed elk"—a possibility, the Service concedes, under the challenged management plan, see FEIS at 294—"an escalating rate of CWD-induced mortality will drive [the] population[] toward extinction, based upon modeling of the disease in mule deer…." Smith Report (AR S007), at 16; see also Peterson Disease Review (AR DD008), at 52 (noting "the potential for local extinction" as a result of chronic wasting disease); FEIS at 274 ("Chronic wasting disease is generally fatal, and models for deer predict eventual extirpation of affected populations…. This means it can have population-wide lethal effects and lead to population decline, although whether whole populations would become extinct or not is unknown."). Moreover, once established within the Refuge, chronic wasting disease would likely spread across the 18-million-acre Greater Yellowstone Ecosystem. Peterson Disease Review (AR DD008), at 52; Smith Report (AR S007), at 16.

A chronic wasting disease outbreak on the National Elk Refuge would more than devastate the elk already gathered at the Refuge's feedlines. Infected animals—even those showing no sign of the disease—would contaminate the Refuge's soil with the prions that transmit chronic wasting disease. See Peterson Disease Review (AR DD008), at 51; see also FEIS at 514 ("Soil on the refuge feedgrounds could become a reservoir of chronic wasting disease that would continue to infect animals many years into the future."). In the words of the

U.S. Fish and Wildlife Service's regional refuge chief, even a reduced winter feeding operation would threaten to "creat[e] a Super Fund Disease Toxic Site on the refuge that would remain contaminated for a very long time." AR DD334 (Nov. 13, 2003 email from Rick Coleman), at 8. Such contamination would render the National Elk Refuge lethal to the very wildlife it was set aside to sustain, requiring the Service to "tak[e] [the] NER out of the habitat base for elk." AR DD331 (Nov. 13, 2003 email from Dr. Tom Roffe, FWS regional chief of wildlife health), at 2; see also AR DD334 (Nov. 13, 2003 email from Rick Coleman, refuge system regional chief), at 8 ("We would … have to fence off the contaminated portions of refuge from cervids … until it was safe (a very long time). I suppose the refuge could continue to be a haven for trumpeter swans. Maybe a NSR, National Swan Refuge. I'm being a little dramatic, but maybe not.").

As a result of the disease's protracted incubation period, resistance to early detection, and persistence in the environment, "[o]ptions for managing CWD once it exists in free-roaming cervid populations are practically nonexistent." Peterson CWD Report (AR S008), at 6; see also FEIS at 136 (acknowledging that "[c]urrent [CWD] management options are limited"). "[O]ur current understanding and available tools are insufficient to eliminate CWD, short of depopulation." Smith Report (AR S007), at 16. In short, "CWD management must be preventative"—"reacting to CWD AFTER it gets [to the Refuge] is likely more of an exercise than anything else." AR DD109 (Nov. 2003 emails from Dr. Tom Roffe, FWS regional chief of wildlife health), at 3, 15 (emphasis in original). Moreover, "as it is considered unlikely that even lowering the number of supplemental feeding years by half would substantially alter the high potential for transmission through environmental contamination," see FEIS at 274; see also, e.g., Rankings Report (AR DD015), at 13, a mere reduction in feeding cannot serve as a meaningful preventive measure.

V. The National Elk Refuge's Feedlines and Other Wildlife Diseases

Chronic wasting disease and brucellosis are not the only diseases threatening the National Elk Refuge and the surrounding ecosystem. Already, the "crowded, stressful, traumatizing," and feces-contaminated conditions along the Refuge's feedlines have resulted in a fatal footrot outbreak within the Jackson herd. AR FR080 (Apr. 18, 2006 email from Dr. Tom Roffe, FWS regional chief of wildlife health), at 2; AR FR079 (Apr. 18, 2006 "[t]alking points" from Dr. Tom Roffe) (addressing 2005-06 footrot mortalities and the difficulty of avoiding the disease on feedgrounds); FEIS at 133; see also Smith Report (AR S007), at 16 (noting that "[f]eces accumulate to depths on feedgrounds that require harrowing each spring to break up this mat of organic material that suppresses growth of new grasses"). While not yet established in Jackson Hole, bovine tuberculosis—another long-incubating and ultimately fatal illness—could flourish along crowded elk and bison feedlines if introduced into the Refuge, leading to more potentially "catastrophic" consequences. See, e.g., August 2003 Briefing (AR DD442), at 3-4, 11; FEIS at 134-35; Peterson Disease Review (AR DD008), at 42. Finally, bovine paratuberculosis, scabies (which already exists among the Refuge's elk), and other illnesses could similarly spread among the Refuge's concentrated wildlife. See, e.g., FEIS at 133-36; Peterson Disease Review (AR DD007-DD008). Simply put, there is no question that "[d]isease issues among elk and bison are greatly intensified on the Refuge due to the winter feeding program." U.S. Fish and Wildlife Service, Information Fact Sheet (AR FR085) ("Such diseases in elk as Necrotic stomatitus, Septicemic pasteurellosis, Fusobacterium necrophorum, scabies and Bovine Brucellosis are well established in the Jackson elk herd and erupt in periodic outbreaks.").

The significant wildlife disease threats posed by artificial feeding have not been lost on the public. In 2003, nearly a century after they began feeding the elk of Jackson Hole, the

citizens of Jackson and Teton County, Wyoming, sponsored bans on the private feeding of wildlife. See Smith Report (AR S007), at 18. Colorado, Montana, Wisconsin, and Nebraska have similarly eliminated artificial feeding. Id.; see also August 2003 Briefing (AR DD442), at 11 (noting that states "have become more restrictive [regarding feeding] in recent years with the increased prevalence of CWD"). Most recently, the "vast majority" of those commenting on the Service's draft management plan for the National Elk Refuge supported an end to artificial feeding. See AR FR151 (Mar. 31, 2006 regional director briefing); FEIS Vol. 2 at 195-96.

VI. The Development of the Challenged Management Plan

In 2000, spurred in part by a Court order requiring an assessment of the agency's feeding operation, see Fund for Animals v. Clark, 27 F. Supp. 2d 8 (D.D.C. 1998), the U.S. Fish and Wildlife Service began preparing a new elk and bison management plan for the National Elk Refuge.[5] See FEIS at 3, 8. To many within the agency, the necessary action was clear: the elimination of the Refuge's feedlines. In the words of the refuge system's regional chief, with the "broad wildfire" of chronic wasting disease headed toward the National Elk Refuge, even a program of reduced winter feeding would be akin to "continu[ing] to pile up dry brush (maybe even a few propane tanks)" in Jackson Hole. AR DD334 (Nov. 13, 2003 email from Rick Coleman), at 8. As summarized by then–National Elk Refuge manager Barry Reiswig,

> [e]lk don't get sick and come to the refuge. They come to the refuge and then they get sick. They get sick because of the way we manage them…. [W]e are playing with fire and setting ourselves up for a catastrophic event. There are a lot worse diseases on the horizon that could devastate this elk herd if current management continues.

[5] Because the plan was also to address the management of elk and bison in Grand Teton National Park, the National Park Service joined in the effort. FEIS at 3.

AR FR113 (Nov. 4, 2006 memo), at 4; see also AR DD275 (Feb. 12, 2004 planning meeting notes), at 2, 6 (documenting lack of objection to the statement that "winter feeding needs to be phased out"—and noting that the phaseout "should be completed in a short time period, 10 years or less"); AR DD133 (Aug. 9, 2005 email exchange), at 2 ("USFWS personnel … believe that the most effective way to deal with the CWD threat would be to quickly phase out supplemental feeding and transition the elk to depend on native winter range in all winters.").

Internally, agency planners acknowledged that a continuation of the Refuge's feeding operation would be at odds with the laws governing the Refuge. See, e.g., Summary and Prioritization of Management Authorities Governing the Management of the National Elk Refuge (Dec. 2002) (AR AD192), at 8 ("[E]lk densities that are sufficiently high to increase the risk of diseases and threaten the long-term health of the elk herd by causing irreversible or long-term adverse impacts to the herd … would conflict with the [National Wildlife Refuge System Improvement Act] … and [Service] policy…."). As lamented by many engaged in the process, however, the Service's planning effort was not ultimately guided by law and science:

> [While] [t]here had been some discussion at the beginning of the process to go through a process of developing objectives based on goals and legal directives, policies, scientific information, and management principles, and to develop strategies to meet these objectives based on policies, scientific information, and wildlife management principles (all of this done while considering public input), … this was not the process used to develop the management alternatives.

AR DD275 (Feb. 12, 2004 planning meeting notes), at 1. Instead, the Service allowed its planning effort to be dominated by the State of Wyoming's persistent and "strong opposition" to the elimination of artificial feeding on Refuge lands. See, e.g., id.; AR DD337 (Dec. 1, 2003 email from Barry Reiswig, National Elk Refuge manager) (noting the early absence of a "'biological' alternative" due to "strong opposition by [Wyoming] Game and Fish"). Of the six

alternatives initially developed by the Service, "none … consistently fulfill[ed] FWS … legal directives." AR DD272 (Feb. 4, 2004 interagency meeting minutes), at 1-2; see also, e.g., AR DD275 (Feb. 12, 2004 planning meeting notes), at 1 (noting "the need for an alternative to be designed specifically to fulfill legal directives since none of the alternatives developed as yet consistently meet the directives"); AR DD336 (Nov. 28, 2003 email from Dr. Tom Roffe, FWS regional chief of wildlife health), at 2 (advocating inclusion of "an ecological/biological alternative … that has an overarching goal of eliminating winter feeding of wildlife and restoration of as much of the natural ecosystem and biodiversity as possible").

This included the Service's first "preferred" alternative, which would have continued feeding in five of ten winters, thereby "balanc[ing] between competing interests and … outlin[ing] an approach that the administration appear[ed] willing to support." AR DD272 (Feb. 4, 2004 interagency meeting minutes), at 1. Such an approach, the agency acknowledged, "would do little to reduce the prevalence of brucellosis or reduce the risks of adverse consequences for other diseases." AR FR148 (Dec. 6, 2005 briefing), at 1 (noting that "[a]lternatives in which large numbers of elk are wintered on the NER … pose potential conflicts with the Service's policies directing that densities do not reach levels that result in habitat damage, and management actions that result in outbreaks of disease"); see also, e.g., AR DD462 (Apr. 26, 2005 briefing), at 1 (under the Service's first proposed action, "[t]he risks/consequences of a CWD outbreak and brucellosis prevalence would remain high"); AR DD133 (Aug. 10, 2005 email from Dr. Tom Roffe, FWS regional chief of wildlife health), at 4 (concluding that it would be "disingenuous" for the agency to assert a reduction in chronic wasting disease prevalence as a result of its proposed action).

While the Service ultimately developed a "biological alternative" designed to conserve the habitat of the National Elk Refuge and ensure the health of its wildlife populations, the alternative was not given serious consideration. Under this alternative—included in the agency's draft and final environmental impact statements as "Alternative 6"—the Refuge's feeding operation was to be phased out within five years, thereby eliminating the dense feedline conditions that threaten the Refuge's wildlife. See FEIS at 52 (Alternative 6, with five-year phaseout); U.S. Fish and Wildlife Service & National Park Service, Draft Bison and Elk Management Plan and Environmental Impact Statement (Feb. 2007) (AR DD051a) ("DEIS"), at 50 (same).

Such a phaseout was regarded as politically untenable by some within the Service because the State of Wyoming was unwilling to endorse an end to feeding practices on the National Elk Refuge. See, e.g., AR FR151 (Mar. 31, 2006 regional director briefing), at 2 ("To date, Wyoming has not supported the concept of phasing out feed grounds."); AR FR088 (Feb. 10, 2006 Wyoming memo), at 3; AR DD330 (Nov. 10, 2003 email from Dr. Tom Roffe, FWS regional chief of wildlife health), at 2 ("I have been advised that any serious consideration of a non-feeding alternative would simply not be acceptable to Wyoming."); AR AD154 (Aug. 8, 2002 memo), at 2 (documenting Wyoming's unwillingness to be part of process resulting in decision "significantly reducing or eliminating feeding"). Ultimately, the Service capitulated. See AR DD084 (Jan. 27, 2004 email from Dr. Bruce Smith, National Elk Refuge senior wildlife biologist), at 1 (noting the absence of "farsighted leadership at the highest levels of state and federal government"—leadership needed to abandon "management [that] predisposes animals to disease").

VII. The Challenged Management Plan

The Service published its Final Environmental Impact Statement ("FEIS") on February 2, 2007, more than six years after the beginning of its planning process. See AR FR017a. The agency's Record of Decision ("ROD") followed on April 26, 2007. See AR FR026. In both documents, the Service acknowledged that a phaseout of the National Elk Refuge's feeding operation would best satisfy the demands of science and law. According to the agency's Record of Decision, a five-year phaseout of supplemental feeding was "environmentally preferable" to all other considered alternatives due to the habitat benefits and "greatly reduced" disease risks that would result from decreased elk and bison concentrations on the Refuge. U.S. Fish and Wildlife Service & National Park Service, Record of Decision: Final Bison and Elk Management Plan and Environmental Impact Statement (Apr. 26, 2007) (AR FR026) ("ROD"), at 14-15. In contrast, the Service recognized that the perpetuation of artificial feeding would maintain ideal conditions for disease transmission on the Refuge, resulting in elevated brucellosis rates and the possibility of a chronic wasting disease epidemic not unlike those documented in confined wildlife populations. See, e.g., FEIS at 261, 287-94, 298. In light of the reduced disease risks that would result from ending the Refuge's artificial feeding operation, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service ("APHIS")—as well as Idaho's Department of Fish and Game ("IDFG") and Montana's Department of Fish, Wildlife and Parks—urged the Service to adopt the five-year phaseout alternative. See FEIS Vol. 2 at 3-4 (May 20, 2005 APHIS comments on DEIS) ("APHIS encourages adoption of Alternative 6 (environmentally preferred alternative) as the proposed action alternative as Alternative 6 is the superlative alternative for meeting the disease management goals and objectives."); id. at 47 (Oct. 31, 2005 IDFG comments on DEIS) ("IDFG believes that alternative 6 incorporates the

best overall combination of actions to achieve habitat conservation goals and best manages wildlife disease and its transmission."); id. at 51 (Dec. 21, 2005 Montana comments on DEIS) ("It would be in the best interest of Montana if elk and bison feeding were gradually discontinued as is suggested in alternative six of the EIS.").

Nonetheless, citing "social" and "political" barriers, the Service declined to protect the Refuge and ensure the health of its wildlife populations by eliminating the Refuge's feedlines. See, e.g., ROD at 5, 8-10, 11-14. At the conclusion of its six-year planning process, the agency simply punted. Under the agency's 15-year Bison and Elk Management Plan, the Service will continue feeding elk and bison on the National Elk Refuge indefinitely. See Management Plan at 125-26. The Service—"in collaboration with the Wyoming Game and Fish Department"—is to "develop" and implement a "structured" yet "dynamic framework" of "adaptive management criteria and actions for transitioning from intensive supplemental winter feeding of bison and elk herds to greater reliance on natural forage on the refuge." Id. at 125-26, 135. In developing this framework, "some or all" of six factors are to be considered: (1) the "level of forage production and availability on the National Elk Refuge;" (2) the "desired herd sizes and sex and age ratios" in the region; (3) the "effective mitigation of bison and elk co-mingling with livestock on private lands;" (4) the "winter distribution patterns of elk and bison;" (5) the "prevalence of brucellosis, chronic wasting disease, and other wildlife diseases;" and (6) "public support." Id. at 125-26. Critically, the Service's plan allows Wyoming's Game and Fish Department to veto any proposal to end feeding, thereby abdicating the Service's responsibility to manage the Refuge in a manner consistent with law and science. See Management Plan at 137 (providing for a "complete transition to free-standing forage if and when several established criteria are met, including support from the Wyoming Game and Fish Department"); see also Def.-Intervenor State of

Wyoming's Motion to Transfer Venue (Dkt. No. 13), at 3 ("Essentially, the Management Plan will continue the winter feeding operation on the Elk Refuge and gives the [Wyoming Game and Fish Department] an effective veto with respect to any future decision to eliminate the feeding program."). In sum, with respect to any phaseout of winter feeding, the Service promulgated a mere "plan to make a plan" based on consideration of "some or all" of several factors and subject to a final veto by the State of Wyoming.

Despite the substantial uncertainty surrounding the "adaptive management actions" that will take place under the challenged plan, the Service has projected that "5,000 elk would be expected to winter on the refuge"—a "moderate reduction" from current levels. FEIS at 48, 288; see also id. at 297 (noting that "densities on the refuge outside the feedlines" could "remain the same" as current conditions under the Service's plan due to elk numbers and habitat exclosures). By the agency's own admission, the benefits of the plan are accordingly difficult to identify. "[T]he risk of chronic wasting disease becoming established in the Jackson elk herd," will be "similar to the risk under [present conditions] due to similar numbers of elk and frequent winter feeding." Id. at 294. Once established, chronic wasting disease is likely to flourish along the Refuge's feedlines. While the Service has stated that infection rates on the Refuge will "likely … fall within the range seen in free-ranging elk, about 4% on average … , and ranging up to 59% or higher in confined elk," it acknowledges that chronic wasting disease prevalence in the Jackson elk herd "might be … closer to that experienced in confined situations, because elk are very concentrated in the winter when on feedlines." See id. As a result, a "high risk" of "future population declines or de-population events from … non-endemic disease … could continue to be maintained by the level of supplemental feeding" provided for under the challenged plan. Id. at 296 (emphases added). With respect to brucellosis, the Service predicts only a "minor to

moderate" reduction in the rate of transmission among the Refuge's elk. Id. at 293. Thus, while the need for a management plan was largely driven by the "increased risk of possibly serious disease impacts" and other harms stemming from the unnatural concentrations of animals wintering on the Refuge, see id. at 9, the Service elected to continue practices that sustain brucellosis and other diseases while exposing elk wintering on the Refuge to the severe threat of a "catastrophic" chronic wasting disease epidemic.

ARGUMENT

In electing to perpetuate the National Elk Refuge's feedlines—and in granting Wyoming's Game and Fish Department the power to veto any future decision to end feeding in order to conserve the Refuge and ensure the health of its wildlife populations—the U.S. Fish and Wildlife Service acted arbitrarily and contrary to law, in violation of the National Wildlife Refuge System Improvement Act and the National Environmental Policy Act.

I. Standard of Review

Under the Administrative Procedure Act, federal agency actions are to be held unlawful and set aside where they are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," or "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right." 5 U.S.C. § 706(2)(A), (C). While this standard does "not empower[] [courts] to substitute [their] judgment for that of the agency," it requires "a thorough, probing, in-depth review" of challenged decisions. Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 415-16 (1971). Accordingly, an administrative action must be vacated where the agency:

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

Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co., 463 U.S. 29, 43 (1983). With respect to an agency's statutory interpretations, "[i]f the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837, 842-43 (1984).

II. The Service's Decision to Perpetuate the National Elk Refuge's Artificial Feedlines Violated the National Wildlife Refuge System Improvement Act

In electing to take the affirmative action of maintaining an artificial feeding operation in the National Elk Refuge, the Service failed to ensure the integrity of the Refuge and the health of its wildlife populations, contrary to the National Wildlife Refuge System Improvement Act and the purposes for which the National Elk Refuge was set aside.

A. The National Wildlife Refuge System Improvement Act

With the Improvement Act, Congress "provide[d] an organic act for the [National Wildlife Refuge] System"—one "establish[ing] clearly the conservation mission of the System, provid[ing] clear Congressional guidance to the Secretary for management of the System, provid[ing] a mechanism for unit-specific refuge planning, and giv[ing] refuge managers clear direction and procedures for making determinations regarding wildlife conservation and public uses of the System and individual refuges." H.R. Rep. No. 105-106, at 3 (emphases added); see also id. at 4 ("The Committee expects that this legislation will diminish the likelihood of future litigation by providing … a clear conservation mission for the System….") (emphasis added); FEIS at 535 (noting that the Improvement Act "[c]learly defines a unifying mission for the Refuge System" and "establishes the responsibilities of the Secretary of the Interior for managing and protecting the System") (emphasis added).

Under the statute, "[t]he mission of the [National Wildlife Refuge] System is to

administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans." 16 U.S.C. § 668dd(a)(2). In furtherance of this mission, the Improvement Act mandates that the U.S. Fish and Wildlife Service administer refuge lands to "provide for the conservation of fish, wildlife, and plants, and their habitats within the System" and to "ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans." Id. § 668dd(a)(4)(A), (B) (emphases added). The statute specifically defines the Service's "conservation" duty as requiring it to "sustain and, where appropriate, restore and enhance, healthy populations of fish, wildlife, and plants utilizing … methods and procedures associated with modern scientific resource programs." Id. § 668ee(4) (emphasis added). All told, the Improvement Act requires that "wildlife and wildlife conservation … come first" within the nation's National Wildlife Refuge System, which is to "stand as a monument to the science and practice of wildlife management." H.R. Rep. No. 105-106, at 9.

As the Service has itself affirmed, the "overarching goal" of the Refuge System is accordingly "to conserve a diversity of fish, wildlife, and plants and their habitats for the benefit of current and future generations," thereby "maintain[ing] the biological integrity, diversity, and environmental health of each refuge … and contribut[ing] to the conservation, and … restoration of representative ecosystems and ecological processes in the United States." U.S. Fish and Wildlife Service Manual ("Service Manual"), Part 601, § 1.9(A); see also id. Part 601, § 3.7(A) ("The Refuge Administration Act, as amended, clearly establishes that wildlife conservation is the singular National Wildlife Refuge System mission."). Under the agency's own definition,

"biological integrity" exists where "[b]iotic composition, structure, and functioning at genetic, organism, and community levels [are] comparable with historic conditions, including the natural biological processes that shape genomes, organisms, and communities." Id. Part 601, § 3.6(B); FEIS at 563 (Glossary) (same); see also Service Manual, Part 601, § 3.6(A) (defining "biological diversity" as "[t]he variety of life and its processes, including the variety of living organisms, the genetic differences among them, and communities and ecosystems in which they occur"); FEIS at 563 (Glossary) (abbreviated version of same); Service Manual, Part 601, § 3.6(C) (defining "environmental health" as "[c]omposition, structure, and functioning of soil, water, air, and other abiotic features comparable with historic conditions, including the natural abiotic processes that shape the environment"); FEIS at 565 (Glossary) (modified version of same). Accordingly, populations are to be "manage[d] … for natural densities and levels of variation." Service Manual, Part 601, § 3.14(C). Even when managing a refuge to support population levels within the larger ecosystem, the Service does "not … allow densities to reach excessive levels that result in adverse effects on wildlife and habitat"—such as "disease." Id. Part 601, § 3.14(E).

B. The Service's Artificial Feeding Operation Violates the Improvement Act's "Healthy Populations" Mandate

The Service's decision to continue feeding elk and bison on the National Elk Refuge, thereby maintaining unnaturally dense concentrations of wildlife along the Refuge's feedlines, cannot be reconciled with the "healthy populations" mandate at the center of the Improvement Act. The Service's obligation "to sustain … , restore and enhance … healthy populations of fish, wildlife, and plants" in our nation's wildlife refuges has not previously been addressed in any court, making this an important case of first impression. See 16 U.S.C. § 668ee(4) (defining "conservation"); id. § 668dd(a)(4)(A) ("conservation" mandate). Nonetheless, the requirements of the Improvement Act's "healthy populations" mandate are clear in this litigation. When

evaluated "us[ing] the traditional tools of statutory interpretation—text, structure, purpose, and legislative history," Tax Analysts v. Internal Revenue Serv., 350 F.3d 100, 103 (D.C. Cir. 2003) (evaluating the clarity of a statute under Chevron) (internal quotations omitted)—the Improvement Act unambiguously prohibits the Service from taking affirmative actions that create chronic rates of disease infection within the National Elk Refuge while subjecting the Refuge's elk to the risk of a devastating chronic wasting disease epidemic.

Under the plain language of the Improvement Act's "healthy populations" mandate, the Service is required to sustain "sound[]" and "vital[]" wildlife populations that are largely "free[] from disease, pain, or defect." See 16 U.S.C. § 668ee(4); Webster's New World College Dictionary 656 (4th ed. 2001) (defining "health" as "physical and mental well-being; freedom from disease, pain, or defect; normalcy of physical and mental functions; soundness" and "soundness or vitality, as of a society or culture"); id. (defining "healthy" as "having good health; well; sound"); see also Engine Mfrs. Ass'n v. S. Coast Air Quality Mgmt. Dist., 541 U.S. 246, 252 (2004) ("'Statutory construction must begin with the language employed by Congress and the assumption that the ordinary meaning of that language accurately expresses the legislative purpose.'") (quoting Park 'N Fly, Inc. v. Dollar Park & Fly, Inc., 469 U.S. 189, 194 (1985)). This construction is supported by the Service's own discussion of the provision. While the agency has not published a regulation addressing its obligations under the "healthy populations" mandate, the Service's FEIS—referencing a regulation promulgated under the Alaska National Interest Lands Conservation Act—states that "[c]haracteristics of a healthy wildlife population include a stable and continuing population (i.e., the population returns to an initial equilibrium after being disturbed) and a minimized likelihood of irreversible or long-term effects (50 CFR 100.4)." See FEIS at 12 (emphases added); see also id. at 34, 566 (citing 50

C.F.R. § 100.4).

In electing to continue feeding the elk and bison of Jackson Hole, thus maintaining nearly ideal conditions for the transmission of disease, see, e.g., Peterson CWD Report (AR S008), at 15; Smith Report (AR S007), at 15-19; see also FEIS at 261, the Service unlawfully failed to provide for the health of the National Elk Refuge's wildlife populations. Already, the Service's artificial feeding operation has resulted in elevated and unnatural rates of brucellosis, footrot, and other ailments within Jackson Hole's elk and bison populations. See, e.g., FEIS at 129-30 (discussing the Jackson herds' "chronic[]" brucellosis infection); id. at 133 (discussing the fatal footrot outbreak during the Refuge's 2005-2006 feeding operation); AR FR080 at 2 (Apr. 18, 2006 email from Dr. Tom Roffe, FWS regional chief of wildlife health) (noting that footrot "will infect otherwise healthy elk when these otherwise healthy elk are subjected to crowded, stressful, traumatizing, heavy bacterial contamination of their environment such as found on densely occupied feedgrounds"); AR FR085 (U.S. Fish and Wildlife Service Information Fact Sheet) (identifying multiple diseases that are "well established in the Jackson herd and erupt in periodic outbreaks"). The same conditions render the Jackson elk herd vulnerable to a "catastrophic" outbreak of fatal chronic wasting disease. See, e.g., August 2003 Briefing (AR DD442), at 11; AR AD216 (Nov. 28, 2001 email from Dr. Bruce Smith, National Elk Refuge senior wildlife biologist) ("Brucellosis is a red flag that warns us that our management has created conditions under which this exotic bovine disease is maintained in both bison and elk. Those same conditions may prove favorable to transmission, maintenance, and mortality from more virulent disease (e.g. TB, CWD) in elk, bison, and possibly other populations. So are we managing for healthy populations?"). By the Service's own estimation, "the risk of chronic wasting disease becoming established in the Jackson elk herd" will be "similar" to current conditions under the

challenged plan "due to similar numbers of elk and frequent winter feeding." FEIS at 294. "[B]ecause elk are very concentrated in the winter when on feedlines," chronic wasting disease prevalence rates could approach those documented within confined elk herds, id., raising the prospect of high mortality and even localized extinction, see Smith Report (AR S007), at 16; Peterson Disease Review (AR DD008), at 52; FEIS at 274. In the words of the Service, "the level of supplemental feeding" that will continue under the challenged plan "could continue to … maintain[]" a "high risk" of "future population declines or depopulation events from … non-endemic disease"—be it chronic wasting disease, bovine tuberculosis, or some other ailment. FEIS at 296 (emphases added).

In light of these impacts, the challenged management plan is at odds with the plain language and purpose of the Improvement Act's "healthy populations" mandate. Rather than ensuring sound, "stable and continuing population[s]," and "minimiz[ing] [the] likelihood of irreversible or long-term effects," see id. at 12, the Service's decision will perpetuate elevated rates of infection within the Jackson herds and subject the region's elk to a significant risk of population decline or extirpation, see supra; see also, e.g., id. at 83-84 (Tables 2-5, 2-7, and 2-8) (acknowledging that the Service's plan is less consistent with Improvement Act mandates than that providing for a five-year phaseout of artificial feeding); id. at 296-97 (acknowledging that the "long-term health and sustainability of the elk herd would be lower" under the Service's plan than the phaseout alternatives). The agency's conclusion to the contrary was arbitrary and contrary to law. See State Farm Mut. Auto Ins. Co., 463 U.S. at 43; 5 U.S.C. § 706(2)(A), (C).[6]

[6] The Service's decision to continue artificial feeding on the National Elk Refuge falls short of the Improvement Act's "conservation" mandate in a second respect, as well. Under the statute, the Service is required "to sustain and, where appropriate, restore and enhance, healthy populations of fish, wildlife, and plants utilizing, in accordance with applicable Federal and State laws, methods and procedures associated with modern scientific resource programs." 16 U.S.C.

C. The Service's Artificial Feeding Operation Violates the Improvement Act's Habitat Conservation Mandate and the Purposes for which the National Elk Refuge Was Set Aside

By continuing an artificial feeding operation that threatens to convert the National Elk Refuge into a "Super Fund Disease Toxic Site" fatal to elk, see AR DD334 (Nov. 13, 2003 email from Rick Coleman, refuge system regional chief), at 8, the challenged management plan further violates the Improvement Act. Under the statute, the Service is required to "provide for the conservation" of the National Elk Refuge's critical "wildlife … habitat[]." See 16 U.S.C. § 668dd(a)(4)(A) (emphasis added); see also id. § 668dd(a)(2). Moreover, the Improvement Act obligates the Service to "ensure that … the purposes of each refuge are carried out." Id. § 668dd(a)(4)(D); see also id. ("[I]f a conflict exists between the purposes of a refuge and the mission of the System, the conflict shall be resolved in a manner that first protects the purposes of the refuge, and, to the extent practicable, that also achieves the mission of the System."); id. § 668dd(a)(3)(A) ("With respect to the System, it is the policy of the United States that … each refuge shall be managed to fulfill the mission of the System, as well as the specific purposes for which that refuge was established."). With respect to the National Elk Refuge, this requires the Service to maintain the land of Jackson Hole as a reserve for elk, among other things. See, e.g., 16 U.S.C. § 673 (establishing the Refuge as "a winter game (elk) reserve"); FEIS at 13 (summarizing Refuge purposes).

. The Service's decision cannot be reconciled with these mandates. In 2003, chronic wasting disease was identified in a mule deer herd only 90 miles east of the Jackson elk herd's

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§ 668ee(4) (emphases added); see also id. § 668dd(a)(4)(A) ("conservation" mandate). The Refuge's artificial feeding operation is a discredited anachronism, not part of a "modern scientific resource program[]." See id.; see also, e.g., August 2003 Briefing (AR DD442), at 11 ("Existing scientific information cautions against feeding and concentrating wildlife."); Rankings Report (AR DD017), at 84-87 (literature review noting lack of scientific support for long-term feeding programs).

range, FEIS at 137; "[e]xperts believe that … [the] disease will at some time infect the [Jackson] herd," FEIS Vol. 2 at 200. By perpetuating unnatural densities of elk along the Refuge's artificial feedlines, the Service's plan will maintain "the potential … for rapid spread of … [chronic wasting] disease and extensive contamination of the environment" within the National Elk Refuge. FEIS at 514. As "chronic wasting disease contaminates the environment for long periods of time[,] … [s]oil on the refuge feedgrounds could become a reservoir of chronic wasting disease that would continue to infect animals many years into the future." Id. (emphasis added). Rather than conserving the National Elk Refuge as habitat and grazing land for elk, therefore, the challenged management plan threatens to "tak[e] [the] NER out of the habitat base for elk." See AR DD331 (Nov. 13, 2003 email from Dr. Tom Roffe, FWS regional chief of wildlife health), at 2; see also AR DD334 (Nov. 13, 2003 email from Rick Coleman, refuge system regional chief), at 8 ("We would … have to fence off the contaminated portions of refuge from cervids … until it was safe (a very long time). I suppose the refuge could continue to be a haven for trumpeter swans. Maybe a NSR, National Swan Refuge. I'm being a little dramatic, but maybe not."). In deciding to continue feeding elk and bison in Jackson Hole, the Service accordingly violated the habitat conservation mandate of the Improvement Act and the purposes of the National Elk Refuge. The Service's conclusion to the contrary was, again, arbitrary, capricious, and contrary to law. See State Farm Mut. Auto Ins. Co., 463 U.S. at 43; 5 U.S.C. § 706(2)(A), (C).[7]

[7] Indeed, the portions of the Service's environmental impact statement assessing the potential impacts of the challenged plan on "soils" and "habitat" do not even address the possibility of chronic wasting disease contamination. See FEIS at 194-97, 211-54; see also Rankings Report (AR DD015), at 3 ("While the potential introduction of a non-endemic infectious disease such as chronic wasting disease … was considered in the assessments related to long-term herd health, the rankings pertaining to habitat, contributions to regional populations, and ungulate densities … do not account for the possibility of their introduction and spread.").

D. The Service's Artificial Feeding Operation Violates the Improvement Act's "Biological Integrity, Diversity, and Environmental Health" Mandate

The challenged management plan also fails to "ensure that the biological integrity, diversity, and environmental health of the [National Wildlife Refuge] System are maintained for the benefit of present and future generations of Americans," as required under the Improvement Act. See 16 U.S.C. § 668dd(a)(4)(B). Under the plain language of the Improvement Act's "biological integrity" and "environmental health" provisions, the Service must ensure that the National Elk Refuge and the broader ecosystem are maintained in a "sound[]" and "unimpaired" condition. See Webster's New World College Dictionary 742 (4th ed. 2001) (defining "integrity" as "the quality or state of being unimpaired; perfect condition; soundness"); id. 656 (defining "health" as "physical and mental well-being; freedom from disease, pain, or defect; normalcy of physical and mental functions; soundness" and "soundness or vitality, as of a society or culture"). This the Service has acknowledged in its own definitions of the terms. According to the agency, "biological integrity" exists where "[b]iotic composition, structure, and functioning at genetic, organism, and community levels [are] comparable with historic conditions, including the natural biological processes that shape genomes, organisms, and communities," Service Manual, Part 601, § 3.6(B) (emphasis added); see also FEIS at 563 (Glossary) (same), and "environmental health" exists where "[c]omposition, structure, and functioning of soil, water, air, and other abiotic features [are] comparable with historic conditions, including the natural abiotic processes that shape the environment," Service Manual, Part 601, § 3.6(C) (emphasis added); see also FEIS at 565 (Glossary) (further defining "environmental health" as "[a]biotic composition, structure, and functioning of the environment consistent with natural conditions, including the natural abiotic processes that shape the environment.") (emphasis added); see also id. at 566 (Glossary) (defining "historic conditions"

as "the composition, structure, and functioning of ecosystems resulting from natural processes that were present prior to substantial human-related changes to the landscape") (emphasis added) (quoting Service Manual, Part 601, § 3.6(D)).

Rather than managing the National Elk Refuge in a manner that "ensure[s] that the biological integrity, diversity, and environmental health of the [National Wildlife Refuge] System are maintained for the benefit of present and future generations of Americans," see 16 U.S.C. § 668dd(a)(4)(B), the Service has elected to maintain an extensive artificial feeding operation and the "unnatural situation" it sustains, see FEIS at 9. Again, the Service's decision to continue crowding elk and bison along the Refuge's artificial feedlines jeopardizes Jackson Hole's wildlife and threatens to contaminate the region with chronic wasting disease prions. See supra. The agency's decision to take action that threatens to convert the Refuge into a "Super Fund Disease Toxic Site," see AR DD334 (Nov. 13, 2003 email from Rick Coleman, refuge system regional chief), at 8, is fundamentally at odds with the Improvement Act's "biological integrity" and "environmental health" requirements. Moreover, the Refuge's artificial feeding operation disrupts the natural distribution and population fluctuations of wildlife across the region, further undermining the integrity of the broader ecosystem. See, e.g., FEIS at 9-10, 123-25, 150-52, 288-97, 336-39; Rankings Report (AR DD015), at 7, 17-18 (noting that management that increases human intervention and decreases natural population fluctuations undermines the "biological integrity" of a system). For this reason, too, the Service acted arbitrarily and in violation of the Improvement Act. See State Farm Mut. Auto Ins. Co., 463 U.S. at 43; 5 U.S.C. § 706(2)(A), (C).

E. The Service's Decision to Grant Wyoming the Authority to Veto Any Decision to Eliminate Feeding Violates the Improvement Act and the Purposes of the National Elk Refuge

In attempting to justify its decision to perpetuate indefinitely an artificial feeding operation that jeopardizes the habitat and wildlife of Jackson Hole, the Service made little effort to argue that its "plan to make a plan" will "ensure that the mission of the [National Wildlife Refuge] System … and the purposes of … [the National Elk Refuge] are carried out." See 16 U.S.C. § 668dd(a)(4)(D). Instead, the agency emphasized the "political" and "social" barriers to the elimination of feeding, going so far as to provide that the Refuge's feedlines will be shut down only "if and when several established criteria are met, including support from the Wyoming Game and Fish Department." See Management Plan at 137; see also, e.g., ROD at 5 ("As herd sizes and habitat objectives are achieved, further reductions in feeding or elk numbers could occur based on established triggers and changing social, political, or biological conditions."); id. at 4-5, 7-10, 13-14 (addressing social and political pressures to maintain feeding). In other words, as the State of Wyoming has already declared in this case, the Service elected to "continue the winter feeding operation on the Elk Refuge and give[] the [Wyoming Game and Fish Department] an effective veto with respect to any future decision to eliminate the feeding program." Def.-Intervenor State of Wyoming's Motion to Transfer Venue (Dkt. No. 13), at 3.

The Service's decision to abdicate its conservation duties by granting Wyoming's Game and Fish Department the ability to veto any plan eliminating artificial feeding cannot be reconciled with the Improvement Act or the purposes of the National Elk Refuge. While the Improvement Act encourages cooperation between state and federal wildlife managers, it emphasizes that the products of such cooperation must be consistent with statutory requirements.

See 16 U.S.C. § 668dd(b)(4) ("Subject to standards established by and the overall management oversight of the Director, and consistent with standards established by this Act, [the Secretary is authorized] to enter into cooperative agreements with State fish and wildlife agencies for the management of programs on a refuge.") (emphasis added); id. § 668dd(e)(1)(A)(iii) ("[T]he Secretary shall … issue a final conservation plan for each planning unit consistent with the provisions of this Act and, to the extent practicable, consistent with fish and wildlife conservation plans of the State in which the refuge is located….") (emphasis added); id. § 668dd(e)(3) ("In preparing each comprehensive conservation plan … , and any revision to such a plan, the Secretary … shall, to the maximum extent practicable and consistent with this Act … consult with … affected State conservation agencies … and … coordinate the development of the conservation plan or revision with relevant State conservation plans for fish and wildlife and their habitats.") (emphasis added). This the Service recognized in its prioritization of the "decision criteria" that governed the planning process, relegating Wyoming's herd objectives and "stakeholder" opinion to a secondary position relative to "the long-term protection of elk winter habitat," "sustainable, healthy populations of elk and bison," and other statutory requirements. See FEIS at 11 (prioritizing decision criteria "based on legal responsibilities contained in the purposes of the refuge, the mission of the National Wildlife Refuge System, and other legal and policy mandates"); see also, e.g., August 2003 Briefing (AR DD442), at 7 ("The FWS must coordinate with the State's herd objectives to the extent this does not conflict with refuge purposes and other legal directives."). In its final decision, however, the Service reversed itself, elevating the political preferences of Wyoming over the biological needs of the Refuge and its wildlife populations. In so doing, the Service acted arbitrarily and unlawfully.

III. The Service's Environmental Analysis Violates the National Environmental Policy Act

In electing to devise a plan to address and mitigate the adverse impacts of the Refuge's artificial feedlines only after authorizing their continued operation, the Service also violated the requirements of the National Environmental Policy Act ("NEPA"). NEPA "is our basic national charter for protection of the environment," 40 C.F.R. § 1500.1(a), a statute that "prohibits uninformed … agency action" by requiring federal agencies to "take a hard look at [the] environmental consequences" of their conduct before reaching decisions, Robertson, 490 U.S. at 350-51 (internal quotations omitted). For every major action that will significantly affect the quality of the human environment, NEPA requires federal agencies to prepare an environmental impact statement ("EIS") that "[r]igorously explore[s] and objectively evaluate[s] all reasonable alternatives," thereby "sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.14. Environmental impact statements are "more than … disclosure document[s]," their "primary purpose" being to "serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government." 40 C.F.R. § 1502.1. Accordingly, an EIS must include a "detailed statement" regarding "the environmental impact of the proposed action," 42 U.S.C. § 4332(2)(C)(i), and "a detailed discussion of possible mitigation measures" that allows the agency and other interested parties to "properly evaluate the severity of the adverse effects," Robertson, 490 U.S. at 351-52; see also 42 U.S.C. § 4332(2)(C)(ii); 40 C.F.R. §§ 1502.14(f), 1502.16(h), 1505.2(c), 1508.25(b). These requirements "serve[] NEPA's 'action-forcing' purpose in two important respects"—"ensur[ing] that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts," and "guarantee[ing] that the relevant

information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision." Robertson, 490 U.S. at 349.

The Service's environmental impact statement violates these standards. Rather than providing a detailed discussion of the proposed action and the mitigation measures that might be taken to mitigate its environmental impacts, the Service punted, offering nothing more than an amorphous "plan to make a plan" to transition away from winter feeding. See FEIS at 48. The Service neglected, even, to determine which considerations would ultimately govern the development of its "framework … of adaptive management actions," stating only that "some or all" of six factors would be considered—namely, the "level of forage production and availability on the National Elk Refuge," the "desired herd sizes and sex and age ratios," the "effective mitigation of bison and elk co-mingling with livestock on private lands," the "winter distribution patterns of elk and bison," the "prevalence of brucellosis, chronic wasting disease, and other wildlife diseases," and "public support." Id. (emphasis added). As a result, the Service's FEIS fails to provide a rigorous and detailed assessment of the proposed action and possible mitigation measures, thus depriving decisionmakers and the public of "a clear basis for choice among options." See 40 C.F.R. § 1502.14; see also Robertson, 490 U.S. at 351-52; 42 U.S.C. § 4332(2)(C)(i);.

This approach violates NEPA, which requires a "detailed discussion" of mitigation measures. See Robertson, 490 U.S. at 351-52. For this reason, "[a] mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA." Neighbors of Cuddy Mountain v. U.S. Forest Serv., 137 F.3d 1372, 1380 (9th Cir. 1998) (emphasis added, internal quotations omitted). If a list of mitigation measures is insufficient, then, a fortiori, merely offering a list of the factors that might be considered in later developing mitigation

measures cannot satisfy the requirements of NEPA. Moreover, "[t]he public is … entitled to an accurate EIS that indicates whether a project's environmental impacts 'can be fully remedied by, for example, an inconsequential public expenditure, [or whether they will be] only … modestly ameliorated through the commitment of vast public and private resources.'" Envtl. Def. v. U.S. Army Corps of Eng'rs, 515 F. Supp. 2d 69, 84 (D.D.C. 2007) (second alteration in original). The Service cannot avoid preparing such an assessment by "rel[ying] on a detailed plan to be developed in the future." See Friends of the Earth v. Hall, 693 F. Supp. 904, 939 (W.D. Wash. 1988). Were this allowable, federal agencies could avoid meaningful discussion of their actions and potential mitigation measures simply by declaring an intent to develop a mitigation strategy at some later date. See Envtl. Def., 515 F. Supp. 2d at 84-85 (an agency may not "paper over the flaws" in its mitigation analysis by offering repeated assurances that mitigation measures will in fact be implemented, monitored, and adjusted, as this "would effectively gut the environmental safeguards that Congress enacted in … NEPA"). Because the Service failed to provide an adequate discussion of possible mitigation for its decision to perpetuate indefinitely the winter feeding of elk and bison on the Refuge, its Final EIS and ROD are arbitrary, capricious, and contrary to law, in violation of NEPA.

IV. This Court Should Remand the Challenged Actions

To remedy the Service's violations of the Improvement Act and NEPA, this Court should (1) issue declaratory relief to memorialize the agency's legal violations, and (2) remand the agency's Final EIS, Record of Decision, and Management Plan. In this regard, plaintiffs recognize that an immediate cessation of elk feeding on the Refuge (as opposed to an orderly phase-out of feeding as contemplated by, for example, the Service's Alternative 6) is not feasible without significant adverse environmental consequences. Moreover, although it is

fundamentally flawed for the reasons already stated, the challenged Management Plan does include certain environmentally beneficial measures, including, for example, expanded hunting zones that help to disperse elk across the Jackson Hole landscape during the late fall season and reduce the number of elk wintering on the Refuge. Accordingly, plaintiffs do not ask this Court to vacate the Record of Decision or Management Plan during the requested remand process. See North Carolina v. Envtl. Prot. Agency, 550 F.3d 1176, 1178 (D.C. Cir. 2008) (per curiam) (recognizing that "it is appropriate to remand without vacatur in particular occasions where vacatur 'would at least temporarily defeat … the enhanced protection of the environmental values covered by'" a challenged agency action) (citation omitted).

Nevertheless, the threat that chronic wasting disease poses to the Refuge and its elk population has only grown more urgent since this case was filed. In October 2008, Wyoming officials identified chronic wasting disease in a moose in the Star Valley, located approximately 40 miles south of Jackson Hole, marking the closest to the Refuge that the disease has yet been detected. See Wyoming Game & Fish Dept., Star Valley Moose Tests Positive for CWD (Oct. 17, 2008), available at http://gf.state.wy.us/services/news/pressreleases/08/10/17/081017_1.asp.[8] Accordingly, to prevent undue agency delay in the face of the urgent threat posed by chronic wasting disease, plaintiffs ask this Court to order the Service to complete its remand process and prepare a revised Final EIS, Record of Decision, and Management Plan that are consistent with the requirements of the Improvement Act and NEPA within one year of this Court's summary judgment order. See Sierra Club v. Envtl. Prot. Agency, 719 F.2d 436, 469-70 (D.C. Cir. 1983) (setting deadline for completion of agency remand in light of, inter alia, "the now urgent need to

[8] This Court may consider such extra-record material in assessing remedial issues. See Esch v. Yeutter, 876 F.2d 976, 991 (D.C. Cir. 1989) (explaining that "courts have developed a number of exceptions countenancing use of extra-record evidence" including "in cases where relief is at issue").

implement Congress's commands").

CONCLUSION

For the reasons set forth above, plaintiffs request that this Court grant their motion for summary judgment and order the requested relief.

Respectfully submitted this 18th day of February, 2009,

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