BEFORE THE SECRETARY OF THE INTERIOR

PETITION FOR A NATIONAL RECOVERY PLAN FOR THE WOLF (*CANIS LUPUS*) IN THE CONTERMINOUS UNITED STATES OUTSIDE THE SOUTHWEST UNDER THE ENDANGERED SPECIES ACT

Center for Biological Diversity

Photo: Gary Kramer, U.S. Fish and Wildlife Service

July 20, 2010

Ken Salazar, Secretary
Department of the Interior
Main Interior Building
18th and C Streets, N.W.
Washington, D.C. 20240

Rowan Gould, Acting Director
U.S. Fish and Wildlife Service
1849 C Street NW
Washington, D.C. 20240

Re: Petition to the U.S. Department of Interior and U.S. Fish and Wildlife Service, for Development of a Recovery Plan for the Gray Wolf (*Canis lupus*) in the Conterminous United States Outside of the Southwest.

Dear Secretary Salazar and Acting Director Gould:

Pursuant to 16 U.S.C. § 1533(f) of the Endangered Species Act and section 5 U.S.C. § 553 of the Administrative Procedure Act, the Center for Biological Diversity ("Center") hereby petitions the U.S. Department of the Interior ("DOI"), by and through the U.S. Fish and Wildlife Service ("Service"), to develop a recovery plan for the gray wolf (C*anis lupus*) in the conterminous United States outside of the Southwest. Our petition excludes the Southwest on the premise that the Mexican gray wolf (*Canis lupus baileyi*) will be listed either as a subspecies or distinct population segment, as requested in the Center's Mexican gray wolf listing petition of August 11, 2009. Should this not have occurred by the time the Service initiates development of a recovery plan for the wolf in the conterminous U.S. outside the Southwest, we hereby request that the Service include the Southwest in development of a national recovery plan for the gray wolf in the conterminous United States.

Since passage of the Endangered Species Act in 1973, the Service has pursued a fragmented approach to gray wolf recovery that does not adhere to the law's intention that listed species be recovered in all significant portions of their ranges. Instead, the Service has limited recovery efforts to three isolated and relatively small portions of the gray wolf's range – the northern Rocky Mountains, Gila headwaters (New Mexico and Arizona), and the Great Lakes region -- without identifying other significant ecosystems for the gray wolf and designating them as recovery areas. This is an abdication of the Service's responsibilities under the Endangered Species Act, and leaves wolves absent from significant areas of suitable habitat such as the Pacific Northwest, California and the Great Basin, the southern Rocky Mountains and Colorado Plateau, the Great Plains, and New England. It also flies in the face of fundamental principles of conservation biology, *e.g.*, that hundreds if not thousands of breeding individuals of a species are necessary in order to prevent inbreeding and ensure the long-term viability of populations (see Trail et al. 2007).

A national gray wolf recovery plan would incorporate and guide their recovery at the landscape level, at a level that is sufficiently broad to sustain a metapopulation in which wolves from regional populations interbreed and maximize genetic diversity.

Successful precedents for Service development of a national gray wolf recovery plan include the Service's recovery plans for the bald eagle (*Haliaeetus leucocephalus*), brown pelican

(*Pelecanus occidentalis*), and peregrine falcon (*Falco peregrinus*). In these and other recovery plans, regional targets for numbers of animals combine to form a metapopulation that better ensures a resilient, recovered distribution of the species as a whole.

A strong national gray wolf recovery plan – if implemented – would also conserve myriad ecosystems in which gray wolves evolved and which their presence has shaped, through their interactions with and influence on other species. In so doing, a national plan would fulfill the Endangered Species Act's first statement of purpose: "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved". 16 U.S.C. § 1532(b).

The **Center for Biological Diversity** ("Center") is a national, non-profit conservation organization based in Tucson, Arizona and supported by over 255,000 members and on-line activists. Founded in 1989, the Center has advocated for gray wolf recovery since our participation in a 1990 lawsuit, settled with the Fish and Wildlife Service, which led to the 1998 reintroduction of Mexican gray wolves in the Southwest. The Center has submitted comments on the myriad proposed rules for gray wolf downlisting, delisting, special management as a 10(j) population, and for issuance of "take" permits, and has challenged through litigation the Service's 2003, 2007, 2008 and 2009 final rules that disregarded scientific concerns and unlawfully reduced wolves' protections. The Center runs conservation programs in all regions of the United States, including in the regions in which new gray wolf recovery efforts are needed to conserve the species and its ecosystems.

I. INTRODUCTION

Gray wolves are one of the most adaptable mammals on Earth. They previously inhabited most of North America – excluding only portions of the driest deserts and today's southeastern United States, which is the historic range of a separate species, the red wolf (*Canis rufus*). Wolves are incredibly important to the ecosystems they inhabit; studies of wolves in Yellowstone National Park and elsewhere demonstrate that the wolf is a keystone species that profoundly shapes ecosystems. Wolves limit elk herbivory of saplings in sensitive riparian areas and thereby aid beavers, songbirds and fish whose habitat is enhanced through growth of riparian trees (Ripple and Beschta 2003). Wolves have also been found to aid fox (*vulpes ssp.*) and pronghorn (*Antilocapra americana*) populations by controlling coyotes (*Canis latrans*), which are intolerant of foxes and disproportionately prey on pronghorn fawns (Berger and Gese 2007; Smith et al. 2003, Berger et al 2008). These results indicate that broader recovery of wolves would benefit many species and overall ecosystem integrity.

The Service's 36-year recovery efforts for gray wolves to date have brought them back from the brink of extinction in certain regions of the U.S., including the Southwest, northern Rocky Mountains and the upper Midwest or Great Lakes region. These efforts, however, have failed to fully recover wolves in most of their historic range. Wolves are still absent from roughly 95 percent or more of their historic range in the U.S., including extensive areas of currently suitable habitat (Mladenoff and Sickley 1998, Carroll et al. 2006). This reflects the fact that the Service has never prepared a national recovery plan for wolves, but has instead developed region-specific recovery plans that have limited recovery to the northern Rocky Mountains, Great Lakes, and Southwest (Service 1978, 1982, and 1987, 1992).

Achieving full recovery of wolves in the U.S. represents our society's ability to learn from and correct past policy mistakes that have persecuted wolves and caused ecological devastation. In the past, county, state and federal agencies – including the Service and its predecessor agencies – targeted wolves for extermination (Robinson, 2005). By fully recovering wolves now, the Service would finally fulfill a fundamental purpose of one of our nation's foremost conservation laws, the Endangered Species Act, and chart a new course toward balance with the natural world.

Thus, with substantial gains toward wolf recovery made in certain regions, the time has come to recover wolves throughout all significant portions of their historic range. To accomplish this, the Center hereby formally petitions the Service to develop a national gray wolf recovery plan, excluding the Southwest, that ensures that wolves are recovered to ecosystems within their former range that still contain suitable habitat or can be restored to sustain them, including existing wolf recovery areas as well as the Northeast, Pacific Northwest, southern Rocky Mountains, California, and Great Plains regions.[1] Within these regions, the Plan should establish recovery goals that provide for connected and resilient wolf populations that have sufficient regulatory protections to achieve and maintain long-term recovery. Downlisting might be appropriate when wolf populations have met these criteria in fewer than all of these regions and

[1] We have separately addressed gray wolf recovery in the Southwest through petitions to the Service to list the Mexican gray wolf as a subspecies or distinct population segment, and to revise the outdated Mexican Wolf Recovery Plan (1982).

have achieved interim benchmarks in the remaining regions. Delisting could occur when wolves have fulfilled recovery criteria in all regions.

II. TAXONOMY

The gray wolf is a mammal in the order *Carnivora*, family *Canidae*, genus *Canis*, and species *Canis lupus*. E. A. Goldman first organized the systematics of wolf taxonomy in North America. Based on skeletal and cranial measurements and pelage, he identified 23 subspecies (Young and Goldman 1944). Hall (1959, 1981) revised Goldman's subspecies ranges slightly and identified an additional Arctic subspecies. Nowak (1995) consolidated the wolf into five subspecies:

1) *C. l. arctos*, an arctic form;
2) *C. l. occidentalis*, found in Alaska and the interior of the Canadian west;
3) *C. l. nubilus*, which ranged from eastern to western Canada excluding the interior (non-coastal) west, and across almost all of the midwestern and western U.S.;
4) *C. l. baileyi*, the southernmost gray wolf that lived in most of Mexico and parts of southern Arizona, New Mexico and Texas; and
5) *C. l. lycaon*, of southeastern Canada and the northeastern U.S.

Leonard et al. (2005) conducted an extensive study of mitochondrial DNA of gray wolves across North America utilizing samples from both pre-extermination specimens and modern wolves. One of the findings of this study was that wolves have lost a substantial portion of their genetic diversity because the greatest diversity was found in wolves that formerly occupied the southern portion of their range, which acted as a Pleistocene refugium, but where wolves were largely extirpated.

Although it was not a primary objective of their study, Leonard et al. (2005) did not find support for many of the above subspecies. They did, however, find evidence of distinct southern and northern clades. These findings support elevation of the Mexican gray wolf to independent listing either as a subspecies or DPS consistent with our petition filed in 2009 and currently being considered by the Service. Moreover, Leonard et al. concluded: "[s]equences from Mexican grey wolves (*C. l. baileyi*) and some historic grey wolves defined a unique southern clade supporting a much wider geographical mandate for the reintroduction of Mexican wolves than currently planned." These results highlight the need to both recognize the importance of Mexican gray wolves for preserving the genetic diversity and adaptability of wolves and the need to expand the current recovery program to a larger area regardless of whether it is listed as a subspecies, DPS or along with gray wolves in the remainder of North America.

That wolves formed a distinct northern clade also supports development of a national recovery plan, including all of the historic habitats where this clade occurred. A comprehensive approach to wolf recovery in a national plan will also help address complications related to a mixed origin for some existing wolf populations. Leonard and Wayne (2008) found that the original population of wolves in the Great Lakes, which they referred to as the Great Lakes wolf and contained unique haplotypes, has been replaced by a mixed population descending from the original wolves, wolves of Old World origin and coyotes, leading the authors to conclude that wolves have not been restored in the Great Lakes. Likewise, one reason cited for the lack of

action to restore wolves in the Northeast has been confusion over the identity of wolves that once roamed the area (USFWS 2003). A national wolf recovery plan can address these issues and set appropriate recovery goals for particular regions.

III. WOLF ECOLOGY

Gray wolves are cursorial, social predators and scavengers that live in family groups called packs, which cooperate in preying on ungulates. Individually and opportunistically, wolves also feed on other mammals, birds, reptiles, fish and large invertebrates. Wolves are typically but not always monogamous, become fertile at age two, and give birth once a year in the spring after a 63-day gestation period. Wolves usually bear litters of two to five pups in dens excavated from earth, downed logs, or other geologic or vegetative features, or areas that have previously been appropriated and enlarged after use by another animal. Adult wolves move pups from their den during their first summer or fall, cooperate in rearing, and cultivate and inculcate the pups' hunting and social behaviors. Wolves establish home territories through urinary scent marking and howling, and by defending their territories from interloping wolves. Adult and subadult wolves often leave their natal packs through dispersal to locate other single wolves, establish their own packs, and claim new territories (Mech 1970, Mech and Boitani 2003).

Wolves compete for carcasses with coyotes, mountain lions (*Puma concolor*), grizzly bears (*Ursus horriblis*), black bears *(U. americanus*), and jaguars (*Panthera onca*). Wolves have been known to be preyed upon by mountain lions and to suffer fatal wounds from ungulates they were attacking. (Audubon & Bachman 1854, Mech and Boitani, 2003). Wolves have the physiological capacity to live 15 or more years, although anthropogenic mortality (primarily) and natural hazards (secondarily) typically result in much shorter lifespans (Mech 1970; Mech and Boitani 2003).

Wolves profoundly influence ecosystems in a variety of ways (Miller et al. 2001, Ray et al. 2005). Wolves create stronger ungulate herds by preying on vulnerable ungulates, which allows greater numbers of healthier, more robust, and more alert animals to survive and pass on genes. Wolves may also prevent the spread of epizootic diseases among prey species by culling sick animals before they infect others. Prey animals also modify their behavior, distribution and movements in response to wolves (Ripple and Beschta 2004, White and Garrott 2005). For example, in Yellowstone National Park, reintroduced wolves have led elk (*Cervus elaphus*) to spend less time in low-visibility areas where they are more vulnerable to surprise attack, such as in valleys with steep embankments, and this has resulted in recruitment and growth of riparian trees that previously were eaten as saplings; such localized reduction in elk herbivory has provided trees for food and dams for beavers (*Castor canadensis*), and those dams have, in turn, increased riparian extent (Ripple and Beschta 2003, 2004). Bird numbers have also increased as a result of the re-growth of trees along stream banks, and fish have benefitted from beavers' transformation of hydrology of creeks and streams and from the trees' shading of streams (Berger et al. 2001, Hebblewhite et al. 2005). Wolves have also created a decline in coyote densities, which led to increases in foxes and increased survival of pronghorn fawns due to reduced predation by coyotes (Berger and Gese, 2007; Smith et al., 2003, Berger et al. 2008).

IV. HISTORY OF RECOVERY EFFORTS

Gray wolves wwere originally listed under the Endangered Species Act as four subspecies: the eastern timber wolf (*C. l. lycaon*), northern Rocky Mountains wolf (*C. l. irremotus*) Mexican gray wolf (*C. l. baileyi*), and Texas gray wolf *C. l. monstrabilis*). In 1978, recognizing that the taxonomy of wolves was outdated, the Service consolidated these four listings into a single listing of gray wolves as endangered throughout Mexico and the conterminous U.S., except for Minnesota where the species was listed as threatened (USFWS 1978).

Yet, despite listing wolves as a species, the Service developed recovery plans for the previously-listed subspecies, approving plans for the eastern timber wolf, northern Rocky Mountain wolf, and Mexican gray wolf in 1978, 1980 and 1982 respectively (USFWS 1978, 1980 and 1982). Revised recovery plans were developed for the northern Rocky Mountains in 1987 and the Great Lakes in 1992 (USFWS 1987 and 1992). Subsequent recovery efforts have been largely restricted to these areas. All of the existing recovery plans for wolves were developed prior to considerable research and major gains in our understanding of genetics and population viability.

At the time of listing, the one remaining population of wolves in the conterminous U.S. occurred in northeastern Minnesota, with an estimated 1,000-2,000 wolves in 1976 (USFWS 2009). The recovery plan for the eastern timber wolf set a goal for this population to grow to a total of 1,250-1,400 wolves in at least 40 percent of the state, and for another population of at least 200 wolves to be established that was geographically disjunct from the Minnesota wolves (USFWS 1978 and 1992). These goals were apparently met by 1998. As of 2004, there were an estimated 3,020 wolves in Minnesota and in 2008, there were 465 wolves in Wisconsin and 434 in Michigan (USFWS 2009). Although the wolf population has clearly grown in the upper Midwest, wolves remain absent from a majority of their former and current habitat in the eastern U.S., including large areas of the Northeast and Great Plains.

In 1995 and 1996, the Service reintroduced wolves to Yellowstone National Park and central Idaho, and designated wolves throughout Wyoming and most of Idaho and Montana as an experimental, non-essential population under section 10(j) of the Endangered Species Act. 16 U.S.C. § 1540(j). The recovery plan for the northern Rocky Mountains set a population goal of at least 10 breeding pairs in three areas – the Greater Yellowstone Ecosystem, northwestern Montana, and central Idaho – with connectivity between the three populations (USFWS 1987). The goal of establishing 10 pairs in the three areas was reached by about 2000, but connectivity with the Greater Yellowstone Ecosystem has remained elusive (USFWS 2009a, Vanholdt et al. 2007). As of 2008, there were 1,639 wolves with 95 breeding pairs in the northern Rocky Mountains (Ibid.) Wolves remain absent, however, from extensive areas in the western U.S. (Carroll et al. 2006).

In 1998, the Service began reintroducing Mexican wolves to the Apache and Gila national forests in respectively Arizona and New Mexico, also as an experimental non-essential population, and designated these forests as the Blue Range Wolf Recovery Area. The 1982 recovery plan for the Mexican gray wolf did not establish recovery goals, but the reintroduction program established an objective of 100 wolves in the wild and projected this objective would be reached by 2006. As of the end of 2009, there were a total of 42 wolves in the wild, meaning the

reintroduction objective has, to date, not been met (USFWS 2010). The reasons for this include illegal take, federal wolf control, and regulatory mechanisms that limit introductions to a small proportion of the recovery area and require recapture of wolves that establish territories outside of this area (Ibid.)

In summary, although substantial progress has been made to recover wolves in the northern Rocky Mountains and Great Lakes, wolves remain endangered throught the vast majority of their historic range.

V. POPULATION STATUS

The gray wolf originally inhabited almost the entirety of North America. The only significant region in which the gray wolf was not native was the southeastern U.S., in which the red wolf (*Canis rufus*), a separate species, historically roamed. Gray wolves are otherwise known from almost every ecosystem type in North America (Fryxell 1926, Young and Goldman 1944).

Based on an analysis of historic wolf genetic diversity utilizing museum specimens, Leonard et al. (2005) estimated that the population of wolves in the western U.S. and Mexico likely numbered 380,000 wolves, with a 95 percent confidence interval of 290,000–560,000 wolves. This estimate was considered an underestimate because it assumed "identical contributions to reproduction by all females" and only included "the part of the North American geographical range of the grey wolf," leading the authors to conclude that an earlier estimate of about two million wolves in North America was likely consistent with their results (Seton 1929, Leonard et al. 2005).

Today, wolves occupy roughly five percent of their historic range in the U.S., in the three population centers discussed above, with a total population of between 5,000 and 6,000 wolves. This is less than one percent of the gray wolf's likely historic population size (Carroll et al. 2006, Leonard et al. 2005, USFWS 2009ab). This severe diminution of both wolf range and abundance resulted directly from a concerted effort over decades on the part of government to exterminate wolves (Robinson 2005). With protection under the Endangered Species Act, wolves have been given a stay of execution, but their populations remain small and isolated, and continue to be threatened by poaching and government control.

In most cases, existing wolf populations in the U.S. are below what scientists consider to be viable. For example, Trail et al. (2007) standardized estimates of minimum viable population ("MVP") size for 212 species, including the gray wolf, and documented a median MVP of 4,169 individuals with a 95 percent confidence interval of 2,261 to 5,095. Likewise, Reed et al. (2004) used population viability analysis to estimate MVPs for 102 species, including the gray wolf, and found mean and median MVPs of 7316 and 5816 respectively, leading the authors to conclude:

> The results of our simulations suggest that conservation programs, for wild populations, need to be designed to conserve habitat capable of supporting approximately 7000 adult vertebrates in order to ensure long-term persistence.

(Ibid.) Based on these extensive studies, only the Minnesota population of wolves with somewhat over 3,000 individuals, and likely interchange with smaller populations in Wisconsin and Michigan, approaches what scientists consider to be a viable population. In the northern Rocky Mountains, even if combined, the three sub-populations are well below viability, and the Mexican gray wolf population is a couple of orders of magnitude below necessary levels for viability.

Wolf populations are also below levels considered necessary to avoid genetic inbreeding. A number of studies have concluded that an effective population size of 500 individuals is necessary to avoid the effects of genetic inbreeding (Soule and Wilcox 1980, Frankel and Soule 1981, Soule 1986, Franklin and Frankham 1998). Because effective population size is typically defined as the number of breeding individuals, an effective population size of 500 individuals typically translates into a total population count of 2,500-5,000 individuals (Frankham 1995).

Thus, none of the wolf populations approach viability and most are considerably below that crucial benchmark, and thus face a serious risk of inbreeding. In the northern Rocky Mountains, for example, the three wolf sub-populations are all well below numbers necessary to avoid inbreeding depression and, particularly in the case of the Yellowstone sub-population, are isolated from each other. Vonholdt et al (2007:1) suggest that "future projections of the [Yellowstone] population at carrying capacity suggest significant inbreeding depression will occur without connectivity and migratory exchange with other populations." Specifically, they project that in approximately 60 years inbreeding depression will "increase juvenile mortality from an average of 23 to 40 percent, an effect equivalent to losing a pup from each litter" (Vonholdt et al. 2007:19).

The risk of inbreeding depression is magnified by the fact that wolves in North America have already lost substantial genetic diversity related to the severe diminution of their overall numbers and range and hybridization with coyotes and other subspecies of wolves. Leonard et al (2005) found that substantial genetic diversity occurred in the southern portion of the wolf's range, which had likely served as a Pleistocene refuge, and that much of this diversity has been lost because wolves were exterminated from this area. Specifically, the authors conclude pre-extermination populations of wolves "had more than twice the diversity of their modern conspecifics." Inbreeding depression not only threatens to reduce gray wolf recruitment, but also threatens the species' future fitness, viability and resilience.

In a different problem, Leonard and Wayne (2008) found that the original population of wolves, which they referred to as the Great Lakes wolf and contained unique haplotypes, has been replaced by a mixed population descending from the original wolves, wolves of Old World origin and coyotes, leading the authors to conclude that "the pre-recovery population has not been restored, casting doubt on delisting actions."

For all of these reasons, there is continued cause for concern for U.S. wolf populations, and therefore their continued protection under the Endangered Species Act is still required. More than that, however, existing populations' continued vulnerability to genetic inbreeding – and the corresponding need to end their isolation from other populations – illustrates why a comprehensive national strategy for recovery is needed.

VI. EFFORTS TO REDUCE AND REMOVE PROTECTIONS FOR WOLVES UNDER THE ENDANGERED SPECIES ACT

For the last decade, the Service has repeatedly attempted to reduce or remove protections for wolves under the Endangered Species Act by claiming that the increases in wolf numbers in the northern Rocky Mountains and Great Lakes constitutes recovery. These efforts have failed because even with recovery in these areas, wolves remain absent from significant portions of range and because it is questionable that wolves have truly recovered even within these areas.

In 2003, the Service changed the classification of the gray wolf under the Endangered Species Act by dividing the species into three distinct population segments ("DPS") – the eastern, western and southwestern DPSs – and downlisting the eastern and western DPSs from endangered to threatened status (USFWS 2003). For a variety of reasons, this rule was overturned by two federal courts. In *Nat'l Wildlife Fed'n v. Norton*, the court found that the Service improperly downlisted wolves in the Northeast by lumping them with the Great Lakes, stating: "[t]he FWS simply cannot downlist or delist an area that it previously determined warrants an endangered listing because it 'lumps together' a core population with a low to non-existent population outside of the core area." *Nat'l Wildlife Fed'n v. Norton*, 386 F. Supp. 2d 553, 565 (D. Vt. 2005). The court also found that downlisting to threatened was arbitrary because wolves remain endangered in a significant portion of range, stating that because "[t]he Final Rule makes all other portions of the wolf's historical or current range outside of the core gray wolf populations insignificant and unworthy of stringent protection," it is "contrary to the plain meaning of the ESA phrase 'significant portion of its range,' and therefore, is an arbitrary and capricious application of the ESA." *Id*. at 566.

Similarly, in *Defenders of Wildlife v. Norton*, the court concluded that the decision to downlist wolves across large expanses of their range, where they remained absent, violated the plain mandate of the Endangered Species Act to protect species throughout significant portions of their range, with the court concluding: "[b]y ruling out all other portions of the wolf's range because a core population ensures the viability of a DPS, the Secretary's interpretation 'has the effect of rendering the phrase [significant portion of its range] superfluous.'" *Defenders of Wildlife v. Sec'y, U.S. Dep't of Interior*, 354 F. Supp. 2d 1156, 1168 (D. Or. 2005) (quoting *Defenders of Wildlife v. Norton*, 258 F.3d 1136, 1142 (9th Cir. 2001)). The court also concluded that the delisting rule violated the Service's own policy on recognition of distinct populations segments because the policy was "designed to draw a line around a population whose conservation status differs from other populations within that species," but instead the Service had drawn a line that includes populations that differed in their conservation status, leading to the conclusion that the wolf delisting rule inverted the purpose of the policy. *Id*. at 1170.

In response to these court decisions, the Service established DPSs for the western Great Lakes and the northern Rocky Mountains regions, and simultaneously delisted those DPSs (USFWS 2007 and 2008). Although the Service has argued that it cannot designate DPSs in areas where wolves currently do not comprise a population – including in a recent finding on a petition to list the Northeast wolf (USFWS 2010) – the Service has also maintained in these decisions that it was retaining protection of wolves in the remaining lower 48 states (Ibid.)

In 2008, these decisions were again vacated by two federal district courts. The western Great Lakes rule was vacated for failing to explain the legal basis for the assumption that a DPS could be designated simultaneously with and for the purpose of delisting, with the court concluding:

> It is common ground for the parties that because the ESA authorizes FWS to list endangered or threatened "species," and because the term "species" is defined to include "distinct population segments," FWS may list a distinct population segment of a vertebrate species even "when the species as a whole is neither threatened nor endangered." Pls.' Mot. at 5; *see also Defenders of Wildlife v. U.S. Dep't of the Interior*, 354 F. Supp. 2d 1156, 1169 (D. Or. 2005). In this way, the "DPS tool" (as the parties frequently refer to it) permits FWS to "protect and conserve species and the ecosystems upon which they depend before large-scale decline occurs that would necessitate listing a species or subspecies throughout its entire range." Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722, 4725 (Feb. 7, 1996) (the "DPS Policy").6 The central issue in this case is whether FWS may use the DPS tool in a different way as well: to simultaneously designate and "delist" a distinct population of animals that is thriving even though the broader species of which it is a part remains endangered (and listed as such) elsewhere.

Humane Soc'y of the U.S. v. Kempthorne, 579 F. Supp. 2d 7, 21 (D.D.C. 2008)

Delisting of wolves in the northern Rocky Mountains was struck down because of lack of evidence of genetic exchange between populations, and because the Service's approval of Wyoming's wolf management plan, which was clearly injurious to wolf recovery and survival, was deemed arbitrary and capricious. *Defenders of Wildlife v. Hall*, 565 F. Supp. 2d 1160 (D. Mont. 2008).

In 2009, the Service again delisted distinct population segments of wolves in the Great Lakes and northern Rocky Mountains (USFWS 2009ab). In the Great Lakes, rather than explaining the legal basis for simultaneously designating and delisting a DPS as the court requested, the Service instead stated that the court had not accurately characterized the action it had taken, arguing that "the court's question does not accurately describe what we did in the Final Rule," but rather that: "[w]hat we actually did, under the precise language of the Act, was to determine, pursuant to section 4(a)(1), that gray wolves in the Western Great Lakes area constituted a DPS and that the DPS was neither endangered nor threatened, and then revised the List of Endangered and Threatened Wildlife, pursuant to section 4(c)(1), to reflect those determinations" (USFWS 2009b). This delisting rule was again challenged and based on the grounds that the Service had failed to seek notice and comment on the rule, the agency agreed to again withdraw listing and wolves currently retain protection under the Endangered Species Act in the Great Lakes.

In the northern Rocky Mountains, the Service responded to the court decision by again delisting the DPS, but retained listing for wolves in Wyoming, which it argued constituted a significant portion of range. The novel idea that species can be listed in portions of their range is based on a controversial 2007 memorandum from the Solicitor of the Department of the Interior reinterpreting the phrase "significant portion of range" in the Endangered Species Act (Solicitor DOI 2007, Greenwald 2009). The most recent decision to designate and delist a northern Rocky

Mountains DPS has been challenged and in response to a motion for a preliminary injunction, the court concluded that plaintiffs had demonstrated a likelihood of success based on the merits, concluding that listing just Wyoming appeared to be unlawful under the Endangered Species Act because wolves in Wyoming do not qualify as a species, subspecies or DPS, which are the only entities that qualify for listing under the Endangered Species Act. *Defenders of Wildlife, et al. v. Salazar, et al.*, Nos. 09-77, 09-82, slip op. (D. Mont. Sep. 8, 2009). A decision on the merits in this case is imminent.

Thus, the Service's efforts to delist the wolf in those portions of its range where it currently survives has been repeatedly rebuffed by the courts. One consequence of these failed efforts is that instead of celebrating substantial progress toward recovery in the Great Lakes and northern Rocky Mountains – and emulating the measures that led to this success in other regions – substantial resources have instead been devoted to failed attempts to remove protection. It is time to chart a new path for recovering the gray wolf in the conterminous U.S. by developing a national recovery plan that sets clear goals for recovering the species to all significant portions of its range. Such a plan should set regional goals, including for the Great Lakes and northern Rocky Mountains, as well as for other areas, and should base decisions to downlist or delist on the wolf's status across its range.

VII. THE NEED FOR A NATIONAL RECOVERY PLAN FOR THE WOLF IN THE CONTERMINOUS U.S. OUTSIDE OF THE SOUTHWEST

The Center hereby petitions the Service to develop a national gray wolf recovery plan that includes recovery goals for wolf numbers, reproduction, distribution, genetic status and regulatory protection in at least seven interconnected regions throughout the conterminous United States: 1) the Pacific Northwest, including the Olympic and Cascade Mountains, 2) the Great Basin, including portions of California, Nevada, and Utah, 3) the southern Rocky Mountains, 4) the northern Rocky Mountains, 5) the Great Plains, 6) the Midwest, and 7) New England. These are all areas where studies have shown there is sufficient habitat to recover wolves (Mladenoff and Sickley 1998, Carroll et al. 2006).

A national recovery plan is needed for a number of reasons, including to correct the geographically-limited approach of past recovery efforts that have failed to restore wolves to many ecosystems that once benefited from their presence, an increased recognition of the important role played by wolves in shaping North American ecosystems, substantial advances in our understanding of conservation biology (particularly in the area of conservation genetics) since recovery plans were developed for portions of the wolf's range, and the failure of delisting efforts to date.

Wolves currently occupy a substantially-reduced portion of the landscape at a fraction of their historic numbers (Leonard et al. 2005, Carroll et al. 2006). A number of studies have identified substantial wolf habitat outside of the current recovery areas. In particular, Carroll et al. (2006) modeled the capability of areas in the western U.S. to support viable wolf populations under different management scenarios, finding that a number of areas could support wolves, including the central and southern Rocky Mountains in both Colorado and Utah, Grand Canyon and surrounding areas in northern Arizona, Olympic Peninsula in Washington, Cascade Mountains in

Oregon and California, Sierra Nevada in California, Sierra Madre in Mexico, and others (Figure 1). Likewise, Mladenoff and Sickley (1998) used logistic regression to model wolf habitat in the Northeast and determined that there is more than77,000 square kilometers of habitat from upstate New York to Maine that could support a population of 1,312 wolves (90% CI = 816-1,809) based on habitat distribution and ungulate prey, leading the authors to conclude: "[t]his estimate is equivalent to new, much higher potentials estimated for northern Wisconsin and Upper Michigan, where wolves are rapidly recovering in the U.S. Midwest."

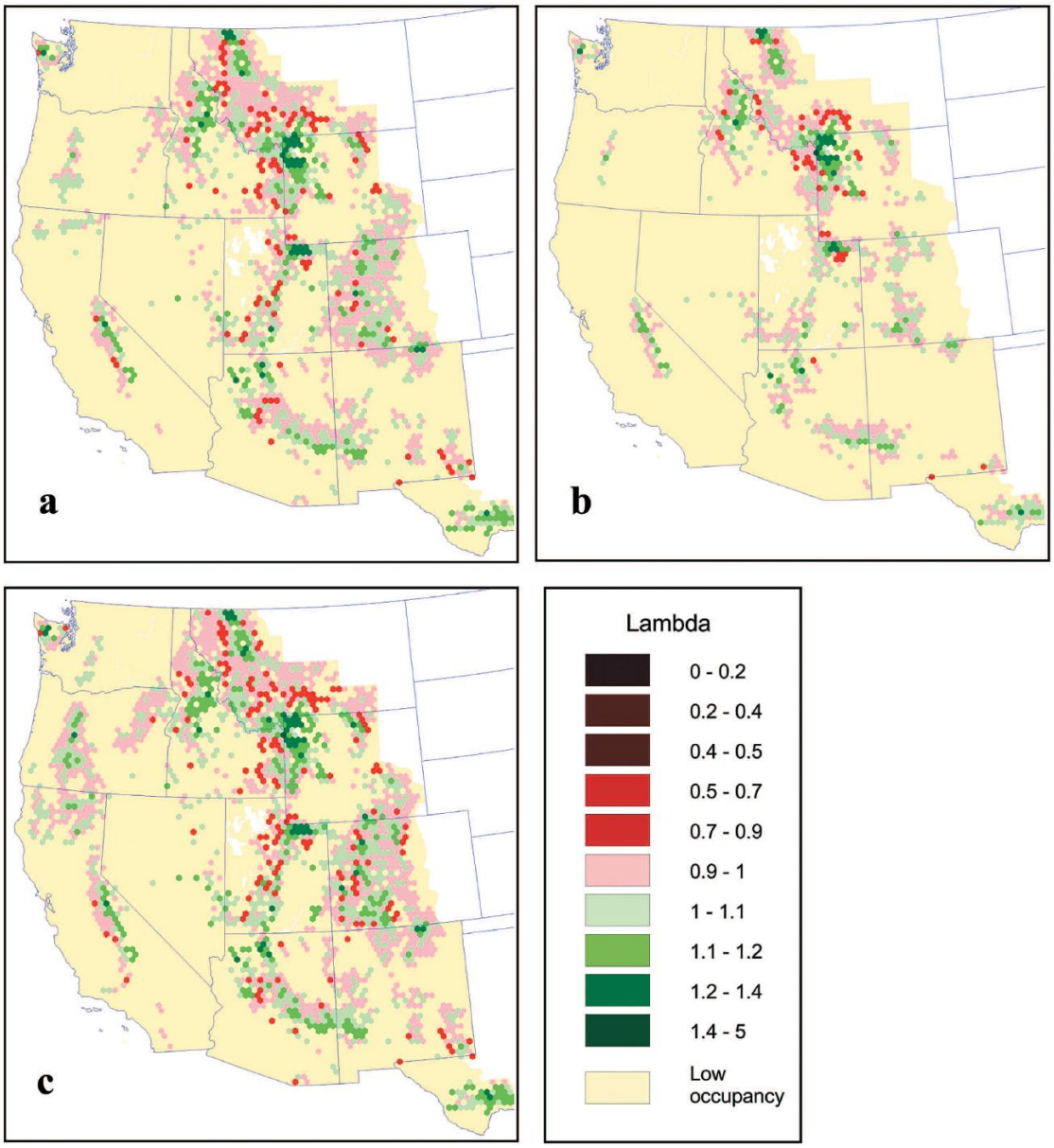

Figure 1. Map of suitable habitat under three scenarios from Carroll et al. (2006). Landscape scenarios are as follows: (a) current conditions; (b) future conditions, with human population as of 2025, with increased road development on both private and unprotected public lands; and (c) current conditions, with human population as of 2000, with restoration (reduction in roads) on public lands (Ibid.)

Restoring wolves to these areas would fulfill the Endangered Species Act's mandate to recover threatened or endangered species throughout all significant portions of their ranges and to conserve the ecosystems upon which they depend (16 U.S.C. §§ 1531(b). 1532(6)(20), Vucetich et al. 2006). Numerous studies have documented the importance of wolves in the functioning of ecosystems. A national recovery plan would facilitate restoration of ecosystems in a broader swath of the gray wolf's historic range.

Existing recovery plans are out of date and set recovery goals that are no longer supported by the best available science. Efforts to delist wolves based on the existing recovery plans have failed to pass legal muster three times. Formation of a recovery team made up of the many highly-qualified wolf biologists and other scientists could ensure that considerable recent science is brought to bear and ultimately produces a scientifically- and legally-defensible recovery strategy that specifies the conditions under which wolves are downlisted and ultimately delisted in all or portions of the species' range. A national (excluding Alaska and the Southwest) gray wolf recovery plan would also comport with the current understanding of wolves' taxonomic and genetic status – in contrast with the recovery programs in the northern Rockies and western Great Lakes that were premised and structured around the historic ranges of subspecies that are no longer acknowledged.

For all of the above reasons, we hereby request that you develop a national recovery plan.

Sincerely,

Michael J. Robinson
Conservation Advocate

David Noah Greenwald
Endangered Species Program Director

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