

**ENVIRONMENTAL ASSESSMENT
FOR
PROPOSED REVISION
OF SPECIAL REGULATION
FOR THE REINTRODUCTION
OF GRAY WOLVES
INTO THE CENTRAL IDAHO
AND YELLOWSTONE AREAS**

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1.0 PURPOSE OF THE PROPOSED ACTION

The U.S. Fish and Wildlife Service (Service/USFWS) has prepared this draft Environmental Assessment (EA) to analyze potential effects to physical and biological resources and social and economic conditions that may result from revisions to the special regulation governing management of gray wolves (*Canis lupus*) introduced as non-essential experimental populations (NEP) in the Central Idaho and Yellowstone areas of the northern Rocky Mountains. This draft EA has been prepared pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA) as implemented by the Council on Environmental Quality regulations (40 CFR §1500, et seq.).

We, the Service, are one of two Federal agencies charged with the administration and implementation of the Endangered Species Act of 1973, as amended (Act). The goal of the Act is the recovery of species listed as threatened or endangered to levels where protection under the Act is no longer necessary. In 1994, as part of the effort to recover the gray wolf, we promulgated two special rules codified at 50 CFR 17.84(i) under section 10(j) of the Act for the reintroduction of two nonessential experimental populations into the northern Rocky Mountains which subsequently occurred in 1995 and 1996. These rules also provided management flexibility to address potential negative impacts and concerns regarding wolf reintroduction. In 2005, we promulgated another 10(j) special rule (50 CFR 17.84(n)) to expand flexibility for managing wolves. We are now proposing to revise the 2005 special rule to modify the definition of “Unacceptable impact” to wild ungulate populations so that States and Tribes with Service-approved post-delisting wolf management plans can better address the impacts of a biologically recovered wolf population to ungulate herds. We also are proposing to expand a provision to allow any private citizen, rather than just landowners and Federal permittees, on tribal reservations or in States with approved post-delisting wolf management plans to take wolves that are in the act of attacking their stock animals or dogs.

2.0 NEED FOR ACTION

2.1 Addressing Unacceptable Impacts on Wild Ungulate Populations

Both the 1994 Environment Impact Statement (EIS) for wolf reintroduction (USFWS 1994, pp. 6, 8) and the 1994 NEP special rules addressed the potential impact of wolf restoration on State and Tribal objectives for wild ungulate management. Specifically, the 1994 rules stated States and Tribes may relocate wolves, provided the level of wolf predation is negatively impacting localized ungulate populations at an unacceptable level. The States and Tribes were to define such unacceptable impacts, how they would be measured, and identify other possible mitigation in their management plans for experimental wolves, which must be approved by the Service before such movement of wolves may be conducted (50 CFR 17.84(i)). No such State or Tribal plans have been developed.

On January 6, 2005, we published a final special regulation for nonessential experimental populations of the gray wolf (50 CFR 17.84(n)) for States with Service-approved post-delisting wolf management plans. In part, this rule was intended to allow greater flexibility for managing wolves causing unacceptable impacts to wild ungulate populations. The 2005 rule authorized

lethal take of wolves because the Service recognized that: 1) most of the suitable wolf habitat in Montana, Idaho, and Wyoming is occupied by resident wolf packs (Oakleaf et al. 2006); 2) absent high quality unoccupied suitable habitat, wolf translocations for control purposes were likely to fail (70 FR 1294, January 6, 2005; Bradley et al. 2005, p. 1506); 3) extra management flexibility was required to address conflicts; and 4) the wolf population had exceeded its recovery goals (USFWS 1987, p. 12).

The 2005 rule's definition of "Unacceptable impact" is a "State or Tribally-determined decline in a wild ungulate population or herd, *primarily caused by wolf predation*, so that the population or herd is not meeting established State or Tribal management goals" (50 CFR 17.84(n)(3)) (emphasis added). This definition set a threshold that has not provided the intended flexibility to allow States and Tribes to resolve conflicts between wolves and ungulate populations. Current information does not indicate that wolf predation alone is likely to be the primary cause of reduction of any ungulate population in Montana, Idaho, or Wyoming (Bangs et al. 2004, p. 89-100). In addition, there are no populations of wild ungulates in Montana, Idaho, or Wyoming where wolves are the sole predator. Wolf predation is unlikely to substantially impact ungulate populations unless other contributing factors are in operation, such as habitat quality and quantity (National Research Council 1997, p. 185-186; Mech and Peterson 2003, p. 159;), other predators (bear predation on neonates) (Barber et al. 2005, p.42-43; Smith, B.L. et al 2006, p. vii), high harvest by hunters (Vucetich et al. 2005, p. 259; White and Garrott 2005, p. 942; Evans et al. 2006; p. 1372; Hamlin 2006, p. 27-32), weather (Mech and Peterson 2003, p. 138-139), and other factors (Pletscher et al. 1991, p. 545-548; Garrott et al. 2005, p. 1245; Smith et al. 2006, p. 246-250). However, in combination with any of these factors, wolf predation can have a significant impact to some wild ungulate herds (National Research Council 1997, p. 183; Mech and Peterson 2003, p. 155-157; Evans et al. 2006, p. 1377) with the potential of reducing the population below State and Tribal herd management objectives.

In the northern Rocky Mountains of Montana, Idaho, and Wyoming overall ungulate populations, particularly elk, are at or near historic high levels. However, there are a few herds (e.g., elk in northwestern Wyoming and north central Idaho) or species (e.g., moose in the Greater Yellowstone Area (GYA)) that are declining or at low levels. The State of Wyoming reported that nearly all elk herds are above State management objectives, but that a few elk herds in wolf range had declining calf/cow ratios that indicated those herds might fall below management objectives in the near future. Of the 35 elk herds in Wyoming, 7 have wolf packs present in the area the herds occupy and 4 of these have been exhibiting declining calf/cow ratios. Wyoming believes that wolves are a major factor in these declines and that wolf removal may be warranted in these situations.

In 2006, the Idaho Department of Fish and Game (IDFG) prepared a proposal under the 2005 special rule to remove wolves in the Lolo zone of north central Idaho (IDFG 2006). In their proposal, Idaho offered evidence that elk numbers in Game Management Units 10, 12, and 17 in the Lolo area were below State management objectives due to declining habitat quality, severe winter weather, past over-hunting, black bear predation on elk calves, mountain lion predation on adults, and wolf predation on adult cows. To increase elk numbers in those Game Management Units, IDFG had initiated programs to improve habitat, increase mountain lion and black bear harvests to reduce those populations, and reduce legal harvest of female elk. IDFG also

conducted elk herd density and composition surveys, and radio-collared both calf and adult elk to measure rates of survival and causes of mortality. Wolf predation of elk calves was low, but wolves were found to be a major cause of death among adult cows. IDFG concluded that wolf control was warranted to improve this herd.

The unattainable nature of the threshold set by the definition of “Unacceptable impact” in the 2005 rule became apparent with the submission of IDFG’s proposal to the Service. IDFG’s data and peer reviewers clearly concluded that wolf predation was not ‘primarily’ the cause of the elk population’s decline, but was one of the major factors maintaining the elk herd’s status below State management objectives from predation on adult cows. After discussions with the Service, Idaho put their proposal on hold because the proposal did not meet the regulatory standard for an ‘Unacceptable impact’ set by the 2005 special rule.

Although most ungulate herds and species currently appear to be at or over State and Tribal management objectives, the potential exists for situations to arise where States or Tribes would need the ability to lethally control wolves that are inhibiting or probably will soon inhibit maintenance of ungulate herd objectives. Therefore, we are proposing to redefine the term “Unacceptable impact” to achieve the intended wolf management flexibility. Specifically, we propose to define “Unacceptable impact” as “State or Tribally determined impact to a wild ungulate population or herd, *with wolves as one of the major causes* of the population or herd not meeting established State or Tribal population or herd management goals. The State or Tribal determination must be peer-reviewed and reviewed and commented on by the public prior to a final determination by the Service that an unacceptable impact has occurred and that wolf removal is not likely to impede wolf recovery.” (72 FR 36942, July 6, 2007) (emphasis added). This definition expands the potential impacts for which wolf removal might be warranted beyond direct predation or those causing immediate population declines. It would, in certain circumstances, approve wolf pack removal when wolves are a major cause of the population or herd not meeting established State or Tribal population or herd management goals. Management goals might include calf/cow ratios, movements, use of key feeding areas, survival rates, behavior, nutrition, and other indirect factors.

2.2 Addressing Take To Protect Stock Animals and Dogs

The 1994 experimental population rules stated that any livestock producers on their private land may take (including to kill or injure) a wolf in the act of killing, wounding, or biting livestock (cattle, sheep, horses, and mules or as defined in State and Tribal wolf management plans as approved by the Service) (50 CFR 17.84(i)(3)(ii)). Similar provisions applied to producers on public land if they obtained a permit from the Service (50 CFR 17.84(i)(3)(iii)). The 1994 rules also provided the opportunity for the States and Tribes to expand the definition of livestock in their wolf management plans (50 CFR 17.84(i)(3)(i), (ii)).

The 2005 experimental population rule expanded this provision to allow landowners in States with approved post-delisting wolf management plans to also lethally take wolves that were “in the act of attacking” their livestock and any kind of dog on private land (50 CFR 17.84(n)(4)(iii)(A)), where “In the act of attacking” is defined as “the actual biting, wounding, grasping, or killing of livestock or dogs, or chasing, molesting, or harassing by

wolves that would indicate to a reasonable person that such biting, wounding, grasping, or killing of livestock or dogs is likely to occur at any moment.” (50 CFR 17.84(n)(3)). The definition of “livestock” was expanded in 50 CFR 17.84(n)(3) as, “Cattle, sheep, horses, mules, goats, domestic bison, and herding and guarding animals (llamas, donkeys, and certain breeds of dogs commonly used for herding or guarding livestock). Livestock excludes dogs that are not being used for livestock guarding or herding.” The 2005 rule also provided Federal land permittees the ability to take wolves in the act of attacking livestock under the expanded definition on active public grazing allotments or special use areas (50 CFR 17.84(n)(4)(iv)).

The 1994 and 2005 rules did not cover some circumstances for potential damage of private property by wolves. For instance, landowners could lethally take wolves in the act of attacking dogs on their own private land, but could not do the same when on public lands unless the dogs were certain breeds commonly used for herding or guarding livestock and were being used for work on Federal lands under an active permit. Recreationalists also could not lethally take wolves in the act of attacking stock animals used to transport people or their possessions. Although wolf depredation on stock animals that were accompanied by their owners have not been documented in the past 12 years, there have been a few reports of stock animals spooked by wolves. Replacement and training of stock animals can be costly to the individual owner, thus these owners have a need to protect their stock animals from wolf depredation. Therefore, to reduce the risk of loss of private property, the Service is proposing to add a new provision for lethal take of wolves in States with approved post-delisting wolf management plans when such take is necessary to defend “stock animals” (defined as “a horse, mule, donkey, or llama, used to transport people or their possessions”) (72 FR 36948, July 6, 2007).

No pet dogs have been confirmed to be killed by wolves while they were accompanied by their owners. However, 35 hunting hounds have been killed by wolves, primarily on public land. In a few of those instances, the hounds’ owners were close enough that they might have been able to better protect their dogs by shooting at the wolves involved. The 2005 special rule does not allow those owners to lethally control wolves in such a situation on public lands. Only permittees with Federal land-use permits for livestock purposes would be able to take wolves in protection of only herding or guarding dogs under the current rule. Therefore, it is necessary to expand the 2005 rule to provide the flexibility to allow private citizens to lethally control of wolves in the act of attacking any type of dog that is legally present on private or public land in those States or Tribes with Service-approved management plans.

Specifically, the proposed modification states that “Any legally present private citizen on private or public land may immediately take a wolf that is in the act of attacking the individuals’ legally present stock animal or dog, provided there is no evidence of intentional baiting, feeding, or deliberate attractants of wolves. The citizen must be able to provide evidence of stock animals or dogs recently (less than 24 hours) wounded, harassed, molested, or killed by wolves, and we or our designated agents must be able to confirm that the stock animals or dogs were wounded, harassed, molested, or killed by wolves. To preserve evidence that the take of a wolf was conducted according to this rule, the citizen must not disturb the carcass and the area surrounding it. The take of any wolf without such evidence of a direct and immediate threat may be referred to the appropriate authorities for prosecution.” (72 FR 36948-49, July 6, 2007).

2.3 Background

2.3.1 Provisions under Section 10(j) of the Act

Congress made significant changes to the Act in 1982 with the addition of section 10(j), which provides for the designation of specific reintroduced populations of listed species as “experimental populations.” The Service has the authority to reintroduce populations into unoccupied portions of a listed species’ historical range when doing so would foster the conservation and recovery of the species. However, local citizens often oppose these reintroductions due to concern over the placement of restrictions and prohibitions on Federal and private activities. Under section 10(j) of the Act, the Secretary of the Interior can designate reintroduced populations established outside the species’ current range, but within its historical range as “experimental.” Based on the best available information, we must determine whether an experimental population is “essential” or “nonessential” to the continued existence of the species. Regulatory restrictions are reduced under a nonessential experimental population designation.

Section 10(j) is designed to increase our management flexibility by allowing us to treat experimental populations as threatened, regardless of the species’ designation elsewhere in its range. The ‘threatened’ designation gives the Service more discretion in developing and implementing management programs and special regulations for the species, and the development of any regulations we consider necessary to provide for the conservation of a threatened species. In situations where we have experimental populations, certain section 9 prohibitions relating to take would no longer apply. The special rules written for this proposed action include redefining allowable take of wolves.

2.3.2 Previous Federal Actions on the Northern Rocky Mountain Gray Wolf

The gray wolf was common in the northern Rocky Mountain States prior to 1870. After bison, deer, elk, and other ungulates were decimated by unregulated hunting and human settlement, people tried to exterminate all remaining large predators, primarily because of conflicts with livestock. Wolf populations disappeared from the western United States by 1930. In 1973, the Act listed wolves as endangered.

In 1974, four subspecies of gray wolf were listed as endangered including the Northern Rocky Mountain gray wolf (*Canis lupus irremotus*). In 1978, the Service re-listed the gray wolf as endangered at the species level (*C. lupus*) throughout the conterminous 48 States and Mexico. An exception for Minnesota was made, where the gray wolf was classified as threatened.

On November 22, 1994, we promulgated two special rules under section 10(j) of the Act to designate unoccupied portions of Idaho, Montana, and Wyoming as two NEP areas for the gray wolf. These rules are codified at 50 CFR 17.84(i). These special rules also provided management flexibility to address potential negative impacts and concerns regarding wolf reintroduction. One NEP area was the Yellowstone experimental population area which included all of Wyoming, and parts of southern Montana and eastern Idaho. The other was the central Idaho experimental population area which included most of Idaho and parts of

southwestern Montana. In 1995 and 1996, we reintroduced wolves from southwestern Canada into these areas (Bangs and Fritts 1996, pp. 407–409; Fritts et al. 1997, p. 7; Bangs et al. 1998, pp. 785–786).

This reintroduction and accompanying management programs greatly expanded the numbers and distribution of wolves in the northern Rocky Mountains. At the end of 2000, the northern Rocky Mountain population first met its numerical and distributional recovery goal of a minimum of 30 breeding pairs and over 300 wolves well-distributed among Montana, Idaho, and Wyoming (68 FR 15804, April 1, 2003; USFWS et al. 2001, Table 4). This minimum recovery goal was again exceeded in 2001, 2002, 2003, 2004, 2005, and 2006 (USFWS et al. 2002–2006, Table 4).

On January 6, 2005, we published a revised NEP special rule increasing management flexibility for these recovered populations (50 CFR 17.84(n)). Among a number of revisions, the 2005 special rule included a mechanism for States and Tribes with post-delisting Service-approved wolf management plans to resolve conflicts when wolf predation is the primary cause of unacceptable impacts to ungulate herds or populations or herds.

For the purposes of controlling wolves attacking private property, the 2005 rule expanded the definition of “In the act of attacking” in 50 CFR 17.84(n)(3) to “The actual biting, wounding, grasping, or killing of livestock or dogs, or chasing, molesting, or harassing by wolves that would indicate to a reasonable person that such biting, wounding, grasping, or killing of livestock or dogs is likely to occur at any moment.” It also expanded the definition of livestock on public and private lands to include a larger array of livestock animals, including herding and guarding dogs (50 CFR 17.84(n)(3)). On private lands, the 2005 rule expanded the ability of landowners to take wolves in defense of any kind of dog (50 CFR 17.84(n)(4)(iii)(A)). Provisions for reporting lethal take of wolves within 24 hours and providing physical evidence of an actual or imminent attack on livestock or dogs still applied as in the 1994 rule (50 CFR 17.84(i)). For additional detailed information on previous Federal actions see the 1994 and 2005 special rules (59 FR 60252, November 22, 1994; 59 FR 60266, November 22, 1994; 70 FR 1286, January 6, 2005), the 2003 reclassification rule (68 FR 15804, April 1, 2003), the Advanced Notice of Proposed Rulemaking to designate the NRM gray wolf population as a Distinct Population Segment (DPS) and remove the Act’s protections for this population (71 FR 6634, February 8, 2006) and the 2007 proposal to designate the NRM gray wolf population as a DPS and remove the Act’s protections for this population (i.e., delist) (72 FR 6106, February 8, 2007). These documents can be viewed at: <http://www.fws.gov/mountain-prairie/species/mammals/wolf/>. The relevant Code of Federal Regulations (50 CFR 17.84 (i) and (n)) can be viewed at: <http://www.gpoaccess.gov/index.html>.

2.3.3 Geographic Scope of the Proposed Action

This draft EA focuses on the geographic areas of the NEPs of the gray wolf, located in Idaho, southern Montana, and Wyoming in the northern Rocky Mountain region. Other wolf population areas are not evaluated because the Act’s 10(j) special rules apply only to the central Idaho and Yellowstone NEPs. The proposed modifications would not apply in the National Parks within these NEP areas.

The central Idaho NEP area encompasses the portion of Idaho that runs south of Interstate 90 and west of Interstate 15; and the area of Montana which runs south of Interstate 90, west of Interstate 15 and south of Highway 12 west of Missoula (50 CFR 17.84(i)).

The Yellowstone NEP area includes the portion of Idaho east of Interstate 15; the portion of Montana east of Interstate 15 and south of the Missouri River continuing to the eastern Montana border, and all of Wyoming (50 CFR 17.84(i)).

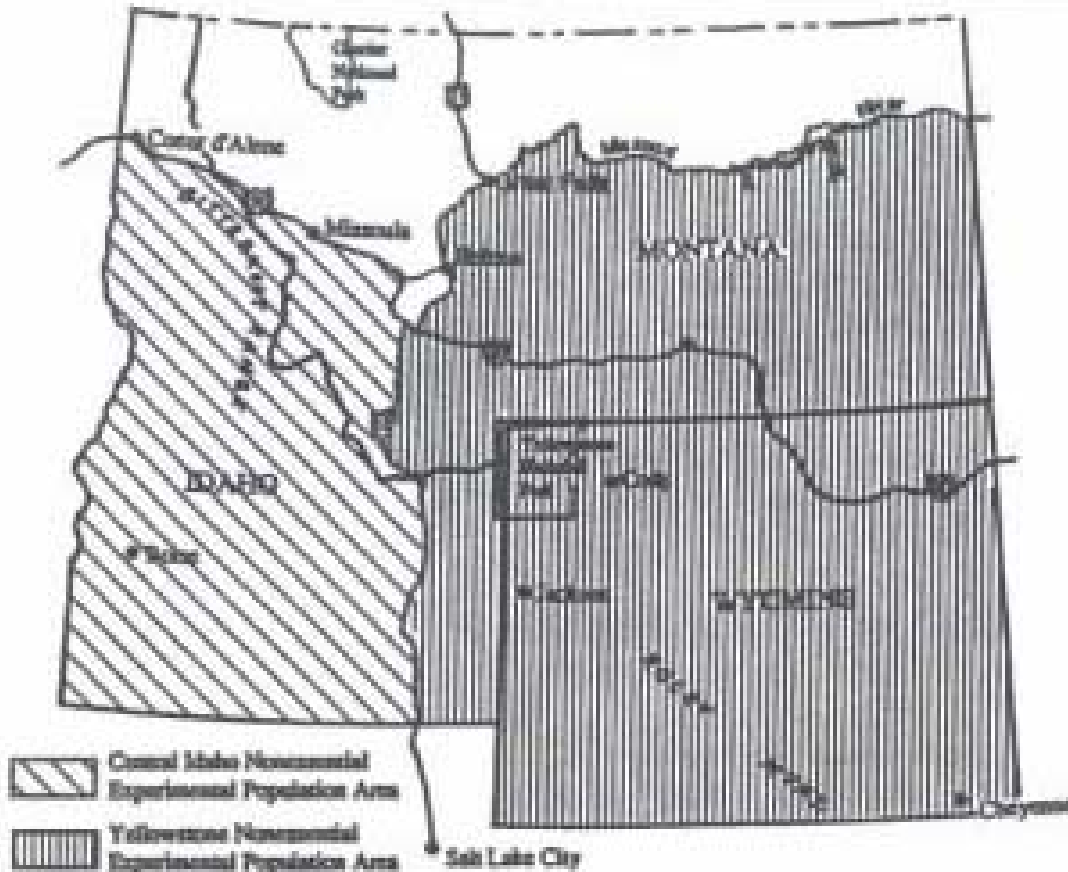


Figure 1. Gray Wolf Nonessential Experimental Population Areas in Central Idaho (South of Interstate 90 and West of Interstate 15) and the Yellowstone Area (South of the Missouri River From the Montana-North Dakota Border to Great Falls and East of Interstate 15).

2.4 Decisions to Be Made

This draft EA is intended to assist the Service in determining the effects to physical and biological resources and social and economic conditions resulting from the proposed modifications to wolf management. The Service will decide whether or not the environmental consequences of any of the alternatives would be significant and whether or not to prepare a Finding of No Significant Impact (FONSI) or an EIS. If the determination is made that the proposed action does not constitute a major Federal action significantly affecting the quality of

the human environment under the meaning of Section 102(2)(c) of NEPA, then an EIS is not required. Depending on any new information provided during the public comment period and peer review of the proposed 10(j) revisions, the Service also will decide whether or not to finalize the revisions as proposed.

3.0 ALTERNATIVES, INCLUDING THE PROPOSED ACTION

3.1 Alternatives

The alternatives considered include the following: 1) Alternative A (the no-action alternative); 2) Alternative B (the proposed action and preferred alternative) is to modify the 2005 rule, establishing a more flexible definition of “Unacceptable impact” on ungulate populations resulting from wolf activity. Further modification also is proposed to allow private citizens to take wolves that are in the act of attacking their stock animals or dogs; 3) Alternative C is to modify the definition of “Unacceptable impact” as in Alternative B, but not to include the modification regarding wolves in conflict with stock animals and dogs.; 4) Alternative D is to allow private citizens to take wolves that are in the act of attacking their stock animals or dogs as in Alternative B, but not include the modification establishing a more flexible definition of “Unacceptable impact” on ungulate populations resulting from wolf activity. A section regarding alternatives considered but not analyzed also is included.

3.1.1 Alternative A (No Action) - The 2005 Special Regulation Remains Unmodified

Definition of “Unacceptable Impact” on Wild Ungulate Populations

The no-action alternative would preserve the 2005 special regulation as it currently stands regarding lethal removal of wolves causing unacceptable impacts to wild ungulate populations. A State or Tribe could lethally remove wolves it has determined to be having an unacceptable impact on wild ungulate populations (deer, elk, moose, bighorn sheep, mountain goats, antelope, or bison) primarily caused by wolf predation. In this alternative, the definition of “Unacceptable impact” in 50 CFR 17.84(n) would remain intact as follows: “State or Tribally-determined decline in a wild ungulate population or herd, primarily caused by wolf predation, so that the population or herd is not meeting established State or Tribal management goal. The State or Tribal determination must be peer-reviewed and reviewed and commented on by the public, prior to a final determination by the Service that an unacceptable impact has occurred, and that wolf removal is not likely to impede wolf recovery.”

In order for this provision in the current regulation to apply, the States or Tribes must prepare a science-based document that describes what data indicate that the ungulate herd is below management objectives, what data indicate the impact of wolf predation on the ungulate population, why wolf removal is a warranted solution to help restore the ungulate herd to State or Tribal management objectives, the level and duration of wolf removal being proposed, and how ungulate population response to wolf removal will be measured. The document also must identify possible remedies or conservation measures in addition to wolf removal. The State or Tribe also must provide the opportunity for peer review and public comment on its proposal

before submitting it to the Service. The Service would determine whether such actions are scientifically based and would not reduce the wolf population below recovery levels before authorizing lethal wolf removal.

Furthermore, States and Tribes must have a Service-approved plan for managing a recovered wolf population after delisting. This provision applies to wolves only within the Yellowstone or central Idaho NEP areas.

Protection of Stock Animals and Dogs

The 2005 special rule would not be revised to expand the opportunities for private citizens to lethally take wolves that are in the act of attacking stock animals and dogs on private and public land. The 2005 special regulation currently allows private landowners on their own land to lethally take wolves that are in the act of attacking livestock or dogs. Any livestock producer or public land permittee legally using public land may lethally take wolves that are in the act of attacking livestock. Such take must be reported within 24 hours and physical evidence of the attack or that would lead a reasonable person to believe an attack was imminent must be present. This provision applies only to States and Tribes with a Service-approved plan for managing a recovered wolf population after delisting.

3.1.2 Alternative B (Proposed Action and Preferred Alternative) - Modify the Definition of “Unacceptable Impact” in the 2005 Special Rule and Allow Lethal Take for Attacks on Stock Animals and Dogs

Definition of “Unacceptable Impact” on Wild Ungulate Populations

The definition of “Unacceptable impact” to wild ungulate populations would be modified as follows: “State or Tribally determined impact to a wild ungulate population or herd, with wolves as one of the major causes of the population or herd not meeting established State or Tribal population or herd management goals. The State or Tribal determination must be peer-reviewed and reviewed and commented on by the public prior to a final determination by the Service that an unacceptable impact has occurred and that wolf removal is not likely to impede wolf recovery.”

Because we anticipated that this change may result in more wolf control than is currently occurring, we also are proposing to establish measures to ensure that wolf control for ungulate management purposes would not undermine wolf recovery goals or the States’ ability to manage for 15 breeding pairs as obligated by their post-delisting wolf management plans. Specifically, before any lethal control of wolf populations can be authorized, we must determine that such actions would not reduce the wolf population in the specific State below 20 breeding pairs and 200 wolves. The additional safety margin of 5 breeding pairs above the 15 breeding pairs the States will manage for is the same size of the safety margin over the 10 breeding pairs necessary for delisting. This is intended to prevent unforeseen events causing wolf declines in combination with the additional removal from compromising State wolf management objectives.

The requirement for a Service-approved post-delisting management plan would remain the same as in the 2005 special rule and as described in Alternative A, as would the criteria and procedural requirements for Service approval of proposals for wolf removal also described in Alternative A.

Protection of Stock Animals and Dogs

We are proposing to add a provision to the 10(j) special rule to allow for lethal take of wolves in States with approved post-delisting wolf management plans when such take is in defense of stock animals or dogs on private or public land. Specifically, the proposed modification would read as follows: “Any legally present private citizen on private or public land may immediately take a wolf that is in the act of attacking the individuals’ legally present stock animal or dog, provided there is no evidence of intentional baiting, feeding, or deliberate attractants of wolves. The citizen must be able to provide evidence of stock animals or dogs recently (less than 24 hours) wounded, harassed, molested, or killed by wolves, and we or our designated agents must be able to confirm that the stock animals or dogs were wounded, harassed, molested, or killed by wolves. To preserve evidence that the take of a wolf was conducted according to this rule, the citizen must not disturb the carcass of the wolf and the area surrounding it. The take of any wolf without such evidence of a direct and immediate threat may be referred to the appropriate authorities for prosecution.” (72 FR 36942, July 6, 2007).

The proposed action adds a provision for allowing private citizens to lethally take wolves to defend stock animals, defined as “a horse, mule, donkey, or llama, used to transport people or their possessions,” on private land, as well as public land. This revision would allow all breeds of dogs to be protected through lethal take of wolves on both private and public lands.

All other provisions regarding protection of private property, including reporting conditions of all wolf take, would remain the same as in the 2005 special rule as described in Alternative A. This proposed provision would apply to only States or Tribes with Service-approved post-delisting wolf management plans and to wolves only within the Yellowstone or central Idaho NEP areas.

3.1.3 Alternative C - Modify the Definition of “Unacceptable Impact” in the 2005 Special Rule

In this alternative, we would modify the definition of “Unacceptable impact” described in Alternative B. We would not add the provision for protecting stock animals and dogs described in Alternative B.

3.1.4 Alternative D - Expand the Provision for Protecting Stock Animals and Dogs in the 2005 Special Rule

In this alternative we would add the provision for protecting stock animals and dogs described in Alternative B. We would not modify the definition of “Unacceptable impact” described in Alternative B.

3.2 Alternatives Considered But Not Analyzed

We considered the following alternatives but determined that developing or analyzing these further was not appropriate or necessary because they do not fulfill the purpose and need of the action.

3.2.1 Expand Lethal Control To States Or Tribes Without Service-Approved Wolf Management Programs

Under this alternative, we would have expanded the potential use of lethal control of wolves to address unacceptable impacts to ungulate herds or populations or herds to States or Tribes that did not have a Service-approved post-delisting wolf management plan.

This alternative was not analyzed further because post-delisting wolf management plans are needed, in part, to demonstrate that the State or Tribe has undertaken a formal process that commits them to a management strategy for sustaining wolf recovery. This commitment assures that any proposal to remove wolves would be in alignment with long-term wolf conservation and not based solely on a goal to benefit ungulate populations. State or Tribal adoption of a post-delisting wolf management plan that fulfills the Act's requirements for delisting would place management responsibilities with the State or Tribal wildlife management agency, which has the in-house professional expertise and experience to blend management of a recovered wolf population with the agency's other wildlife objectives, such as maximizing public harvest. In addition, adoption of the management plan would demonstrate that the wildlife agency has received the necessary local political and administrative support within the State or Tribe for implementing the plan and approved wolf control.

3.2.2 Expand Lethal Control To States Or Tribes Without An Additional Safety Margin

This alternative would have allowed lethal take of wolves as long as the wolf population in the State wishing to exercise lethal control does not drop below 15 breeding pairs.

The recovery goal is that the gray wolf population never drops below 10 breeding pairs and 100 wolves each in Wyoming, Idaho, and Montana for 3 consecutive years. To delist the northern Rocky Mountain population of the gray wolf, each State must manage their wolf populations for no less than 15 breeding pairs. These numbers would provide a safety margin to ensure that unforeseen or uncontrollable circumstances do not cause wolf populations to drop below recovery goals.

This alternative was not further analyzed because we believe that an additional safety margin is needed for increases in mortality from allowing additional lethal control of wolves causing unacceptable impacts to ungulate herds or populations. Without an additional safety margin, State or Tribal efforts to manage for the current safety margin of 15 breeding pairs to maintain recovered populations may be compromised.

3.2.3 Expand the Definition of an “Unacceptable Impact” to Include Wolf-Ungulate Conflicts at State Feed Grounds

This alternative would have modified the definition of “Unacceptable impact” to specifically include any wild ungulate-wolf conflicts occurring at or near a State-operated feed ground. The revision would have specified that lethal control could be used when wolves (a) caused wild ungulates to move from the feed grounds; (b) caused a mixing of livestock and wild ungulates; or (c) caused wild ungulates to pose extraordinary hazards on State public roadways.

The Service believes that States and Tribes are capable of determining what constitutes an unacceptable impact to wild ungulates and may identify all such impacts in their respective wolf management plans and proposals for wolf control. Specifically, the 1994 nonessential population special rule allows States and Tribes to determine criteria for unacceptable impacts (such as wolf-ungulate conflicts at or near feed grounds) and submit such criteria to the Service for approval for non-lethal control of wolves. In 2005, the special rule was expanded to allow lethal control of wolves impacting ungulate populations for States and Tribes with Service-approved post-delisting wolf management plans. States and Tribes still could include wolf-ungulate conflicts at feed grounds as part of their determination of unacceptable impacts to ungulate herds or populations. Although the definition of “Unacceptable impacts” in the 2005 rule did not provide the intended management flexibility, it still would have allowed States and Tribes to include wolf-ungulate conflicts at feed grounds as part of their determination of unacceptable impacts. The current proposed revision to the 2005 rule (Alternative B) to provide the management flexibility originally intended in the 2005 rule would not alter the ability for States and Tribes to address wolf-ungulate conflicts at feed grounds, as long as the proposal to remove wolves in such cases satisfies all the criteria and procedural requirements for Service approval. Therefore, this alternative is not necessary and was not considered further.

3.2.4 Prohibit Allowing Lethal Control of Wolves Causing Unacceptable Impacts on Wild Ungulates at State Feed Grounds

This alternative would have included a specific provision in the revised definition of “Unacceptable impact” that would have prevented States from lethally controlling wolves causing unacceptable impacts from to wild ungulates occurring at or near a State-operated feed ground, in which wolves (a) caused wild ungulates to move from the feed grounds; (b) caused a mixing of livestock and wild ungulates; or (c) caused wild ungulates to pose extraordinary hazards on State public roadways.

Because a State might need to address its concerns over conflicts at State feed grounds through the proposal process, this alternative is not consistent with the purpose of the proposed action to provide flexibility in management of wolves causing unacceptable impacts to ungulate herds or populations. Therefore, this alternative was not considered further.

3.3 Summary of Actions by Alternatives

Table 1. Summary Of Actions Proposed Under Each Alternative.

	Definition Of “Unacceptable Impact” To Ungulate Populations	Protection Of Stock Animals And Dogs
<u>Alternative A</u> No Action	No change from current 2005 special regulation	No change from current 2005 special regulation
<u>Alternative B</u> Proposed Action	Revise definition in 2005 special regulation	Add provision to protect stock animals and dogs on private and public lands
<u>Alternative C</u>	Same as Alternative B	Same as Alternative A
<u>Alternative D</u>	Same as Alternative A	Same as Alternative B

4.0 AFFECTED ENVIRONMENT

4.1 Greater Yellowstone Area

The affected environment occurs in the areas of the nonessential experimental populations of the gray wolf in the northern Rocky Mountains (Figure 1). These two areas (central Idaho and the GYAs) will be described individually. National Parks within the NEP areas are included in the descriptions of the affected environment. However, neither of the proposed provisions would apply in the National Parks.

4.1.1 Landscape

The Yellowstone Plateau is a geologically young region sitting astride the Continental Divide. Because of repeated eruptions of its 40-by-25-mile caldera, as well as countless smaller volcanic events and extended periods of glaciations, the landscape is characterized by steep, rapidly eroding mountain ranges, most of which trend north and south.

The Gallatin and Absaroka Mountain Ranges dominate the north central portion of the GYA on the west and east sides of the Yellowstone River Valley, respectively. The Gallatin Range, a combination of volcanic and sedimentary formations, extends southward from near Bozeman, Montana, through Gallatin National Forest and into the northwestern portion of Yellowstone National Park, while the Absaroka Range, a result of numerous widespread volcanic episodes, extends southward along the eastern side of Yellowstone.

East of the Absaroka Range, and northeast of Yellowstone, the Beartooth Plateau in Custer National Forest, contains some of the west’s most spectacular scenery. West of Yellowstone National Park, the Madison Range parallels the Gallatin Range, while the Centennial Range, partly in Beaverhead National Forest, forms an east-west portion of the Idaho-Montana border.

Southeast of Yellowstone National Park, the Wind River Range extends from Shoshone National Forest into the Wind River Indian Reservation. Directly south of Yellowstone, the dramatic fault-block formation of the Teton Range forms the western side of Grand Teton National Park.

4.1.2 Watersheds

The Continental Divide crosses Yellowstone National Park diagonally, from a few miles south of West Yellowstone, Montana to the southeast corner of the park near the Thorofare region. North and east of the Divide, numerous streams flow from the park areas into the Missouri River drainage. Preeminent among these is the Yellowstone River, which heads just southeast of the park, then flows north and northwest through the park, then north into Montana and northeast to the North Dakota border, where it joins the Missouri River.

The Madison River, formed by the geothermal influenced currents of the Gibbon and Firehole Rivers, flows west from the park, then north to Three Forks, Montana, where it meets the Jefferson, coming in from the west, and the Gallatin, which rises in the Gallatin Mountain Range in northwestern Yellowstone National Park. The three form the Missouri River.

Streams flowing from the south and west parts of the park eventually join the Snake River, which begins just south of the park in Bridger-Teton National Forest, flows into the park, and trends generally south through Grand Teton National Park. The Snake River eventually flows west and north to join the Columbia.

4.1.3 Vegetation

Because of its great variations in elevation, soils, and climate, the region in and around the Yellowstone area is something of a botanical crossroads, with at least seven “distinct floras” present (Despain 1990, Glick et al. 1991), ranging from desert to alpine. About 1,700 species of plants have been identified in the region, but most of the landscape is dominated by only a few species.

Roughly 60% of the Federal lands in the GYA are covered by forest, and the majority of that area, especially in the elevations between 7,500 feet (ft) (2,300 meters (m) and 9,000 ft (2,700 m), is dominated by lodgepole pine. Most lower elevation forests are dominated by Douglas-fir, juniper, or aspen. Whitebark pine, Englemann spruce, and sub-alpine fir are the most common species at about 9,000 ft (2,700 m), and the upper timberline occurs around 9,500 ft (2,900 m). Below lower timberline between 6,000 ft (1,800m) and 7,000 ft (2,100 m), depending upon conditions, grasslands and shrub steppes once were the native vegetation communities in river valleys, floodplains, and terraces. Cultivation has changed many of the plants species’ distributions. A much smaller set of vegetation communities occur in riparian areas bordering both moving and still waters. These communities are of extreme importance in the ecological setting because they provide high productivity, high biomass, diversity of life forms, and essential cover and erosion protection. Because of its unusual geological character, Yellowstone supports some extremely rare plant communities, perhaps most notably those in and near the park’s thermal areas.

4.1.4 Wildlife

The GYA hosts the largest aggregation of ungulates and other large mammals in the lower 48 States, including more than 93,000 elk, 87,000 mule deer, 7,000 bighorn sheep, 6,000 moose, 3,000 bison, and smaller numbers of mountain goats and white-tailed deer (GYCC 1987). Large predators include more than 3,000 black bears, a minimum of 282 grizzly bears, and a smaller number of mountain lions (GYCC 1987). Coyotes are abundant, and fox are common in some areas. Wolverines, bobcats, and lynx are uncommon.

By the end of 2006, the northern Rocky Mountain wolf population was estimated to contain 1,300 wolves in 86 breeding pairs (nearly three times the minimum numeric recovery goal for breeding pairs and more than four times the minimum population goal), and for the 7th consecutive year it exceeded minimum recovery levels. Montana had an estimated 316 wolves in 21 breeding pairs, Idaho had 673 wolves in 40 breeding pairs, and Wyoming had 311 wolves in 25 breeding pairs. In 2006 the Yellowstone area had 390 wolves in 31 breeding pairs (USFWS et al. 2007a). Confirmed livestock losses from 1987-2006 total 415 cattle, 610 sheep, 16 other livestock (10 goats and 6 horses), and 33 dogs. In response 42 wolves were moved and 267 were killed (USFWS et al. 2007b).

Currently nearly all wild ungulate herds in those portions of Montana, Idaho, and Wyoming in the Yellowstone area are at record high levels and most are above State management goals. However, a few herds or species (moose) are below or at management objectives and co-exist with wolves.

4.1.5 Recreation

The GYA is used extensively for wildland recreation by both residents and nonresidents. Millions of people annually participate in camping, hiking, biking, riding, wildlife watching, hunting, fishing, trapping, and boating on public lands in the GYA. Both black bears and mountain lions are hunted and chased with hounds in Idaho. Montana and Wyoming allow mountain lions, but not bears, to be hunted with hounds.

4.2 Central Idaho Region

4.2.1 Landscape

The northern Rocky Mountain physiographic province includes the mountain ranges of central Idaho. The central Idaho primary analysis area contains three major mountain ranges – the Salmon River Mountains (south of the Salmon River), the Clearwater Mountains which extend from the Salmon River north to the upper Clearwater River drainage, and the Bitterroot Mountains which form the eastern border of the central Idaho recovery area along the Idaho-Montana border. Most of central Idaho is characterized by rugged terrain and steep slopes. Elevations range from about 1,500 ft (460 m) along the Clearwater River in the northern portion of the central Idaho area to 12,662 ft (3,859 m) on Borah Peak in the Challis National Forest near the southeastern portion of the central Idaho area. The area varies from deeply incised canyons formed by rivers cutting through rock to rolling basin lands at higher elevations. Soils

throughout the area are characterized predominantly by the Idaho batholith, highly erosive and course-grained granite. The central Idaho area also includes numerous smaller mountain ranges in southwest Montana.

4.2.2 Watersheds

The southern half of the central Idaho area provides water to the Salmon and Snake Rivers. The northern half of the central Idaho area drains primarily into the Clearwater River. Both the Salmon and Clearwater Rivers empty into the Snake River along the western border of Idaho before the Snake empties into the Columbia River near Pasco, Washington.

4.2.3 Vegetation

Mountains in the central Idaho primary analysis area are covered by three major vegetation community types. The wide elevation range and accompanying climatic variations result in diverse flora. The grand fir-Douglas-fir, Engelmann spruce, sub-alpine fir habitat type is the most common and occurs throughout central Idaho (IDPR 1989). The western red cedar-western hemlock type is more frequent in the northern portions of the area and the ponderosa pine type exists intermittently throughout the central Idaho primary analysis area. Vegetation varies by terrain, soils, aspect, elevation, and other factors. Below 4,000 ft (1,200 m), open slopes with brome, bluebunch wheatgrass, and Idaho fescue are common. Near 4,000 ft (1,200 m), grass types begin to give way to open ponderosa pine types. Sub-alpine fir and several types of lodgepole pines begin to appear at 5,000 ft (1,500 m) to 6,000 ft (1,800 m). Near-alpine habitat is found in the highest elevation areas.

4.2.4 Wildlife

Central Idaho contains a wide variety of habitats and wildlife species. Approximately 400 species of mammals, birds, amphibians, and reptiles inhabit the Idaho experimental area. IDFG is responsible for managing wildlife populations within the State. Major big game species in the Idaho experimental area include post-harvest populations of approximately 76,300 elk, 129,700 mule deer, 29,900 white-tailed deer, 1,700 moose, 2,000 mountain goats, and 1,800 bighorn sheep (241,400 total ungulates). Black bears and mountain lions also are abundant throughout central Idaho. Coyotes, bobcats, lynx, fishers, martens, wolverines, and river otters are other predators present. Small numbers of grizzly bears and mountain caribou occur in the Idaho panhandle just north of the Idaho experimental population area (USFWS 1994).

Currently nearly all wild ungulate herds in those portions of southwestern Montana and Idaho in the central Idaho area are at record high levels and most are above State management goals. However, a few herds or species (moose) are below or at management objectives and co-exist with wolves.

4.2.5 Recreation

The central Idaho area is extensively used for wildland recreation by both residents and nonresidents. Thousands of people annually participate in camping, hiking, biking, riding, wildlife watching, hunting, fishing, trapping, and boating on public lands in the central Idaho area annually. Both black bears and mountain lions are hunted and chased with hounds in Idaho. Montana allows lions but not bears to be hunted or chased with hounds.

5.0 ENVIRONMENTAL CONSEQUENCES

This section provides an analysis of the potential direct and indirect environmental consequences that could result from the implementation of Alternative A (no action alternative), Alternative B (proposed action and preferred alternative), Alternative C, or Alternative D.

Direct impacts are defined as effects that are caused by the action and occur at the same time and/or place (40 CFR 1508.81a). Indirect impacts are effects caused by the action, but occur later in time and/or place. The potential direct and indirect impacts from the no-action Alternative A, the proposed-action Alternative B, Alternative C, and Alternative D are discussed below.

5.1 Alternative A (No Action): The 2005 Special Regulation Remains Unmodified

5.1.1 Impacts to Ungulate Herds or Populations

Under the no-action alternative, the 2005 special regulation would be unmodified, and the standard of proving that wolf predation is primarily causing impacts to ungulate herds or populations would remain intact per the 2005 definition of “Unacceptable impact.” Consequently, States and Tribes would not be able to lethally control wolves if they are one of the causes, but not the primary cause, of unacceptable impacts to ungulate herds or populations.

While it is widely agreed that predation, including that by wolves, influence prey populations, the impact of wolf predation on ungulate populations is difficult to generalize (Mech and Peterson 2005), partly because a host of other interconnected local factors can influence how it might affect ungulate populations (Garrott et al. 2005). Furthermore, it can be nearly impossible to separate and assess effects of wolf predation apart from the host of other factors affecting ungulate population dynamics without implementing a sophisticated experimental design (National Research Council 1997). One of the more detailed analyses of the subject of wolf control to benefit ungulate populations was completed by the National Academy of Sciences (1997) in response to the Alaska Governor’s request for a review of Alaska’s predator control and management program to increase prey populations for human harvest. The study’s major results from predator-prey models most relevant to wolves and bears and their prey were--1) the removal of predators from a plant-herbivore-predator interaction systems can either stabilize or destabilize herbivore population dynamics; 2) two alternative stable states may exist in predator prey systems: one lower level held below habitat carrying capacity by predation and the other higher level determined primarily by habitat carrying capacity; 3) if a regression analysis is used to determine what controls prey populations in a predator-prey system, the factor that explains

the greatest proportion of the variance in prey population growth rates depends largely on where 'noise' enters the system, and not on what actually controls the dynamics (e.g., the true factors regulating population growth are masked by natural variability within the ungulate population's vital rates, such as births, deaths, immigration, emigration); 4) correlative studies have limited value in inferring causation; 5) the interactions between prey and their plant resources need to be understood; and 6) the task of identifying which model describes a particular situation is technically challenging. While the Alaska study area has a much simpler and largely natural system compared to anything present in Montana, Idaho, or Wyoming, the National Academy of Sciences work does offer some insight into the complexity involved in estimating the impact of predation on ungulate population dynamics. In essence, predation always impacts prey populations, but its extent and specific effects are very difficult to quantify.

Currently, a few ungulate herds in the northern Rocky Mountains may be substantially impacted when wolves are one of the major causes of impacts, as described above in section 2.0 Need for Action. Wolf predation on adult elk females in the Lolo zone of Idaho is one of a variety of factors affecting the ability to meet State management objectives for Game Management Units 10, 12, and 17 (IDFG 2006). In northwestern Wyoming, four of the seven elk herds where wolves are present are exhibiting declining calf/cow ratios that Wyoming believes will affect their ability to maintain State management objectives for those herds (Wyoming Governor and Wyoming Game and Fish Commission 2005). Because lethal control would not be available to States and Tribes as a remedy under the no-action alternative, these impacts may continue and elk numbers and calf/cow ratios of these herds may not be able to meet management objectives unless one or more of the other factors affecting these herds diminish. Furthermore, similar situations in other herds may arise in the future where wolf predation in combination with other factors would impede the ability to meet State management objectives. On the whole, the no-action alternative is unlikely to negatively affect most ungulate populations in the NEP areas of the gray wolf because wolves, in combination with other factors, are affecting only a small number of elk herds.

5.1.2 Impacts to Wolves

Because the special rules governing lethal take of wolves would remain the same, no new impacts to wolf populations are likely to occur. Under the current 10(j) special rule, States or Tribes must demonstrate that wolf predation is the primary cause of unacceptable impacts to ungulate herds or populations to be able to lethally control wolves in conflict with ungulates. No State or Tribe has been able to demonstrate this because current information does not indicate that wolf predation alone is likely to be the primary cause of a reduction of any ungulate population in Montana, Idaho, or Wyoming (Bangs et al. 2004). Therefore, no wolves are likely to be lethally controlled to protect ungulate populations or herds in these states under the 2005 special rule.

If more private citizens do not have the ability to lethally control wolves attacking their stock animals or dogs, some illegal take might occur. However, there has been no documentation of wolf depredations on stock animals that were accompanied by their owners in the past 12 years, although a few instances of stock animals being spooked by wolves have been reported. Ninety-one dogs have been confirmed to be killed by wolves from 1987 to 2007 (USFWS et al.

2007, Table 5). No pet dogs have been confirmed to be killed by wolves while they were accompanied by their owners, and no wolves have been killed solely to protect dogs. However, 35 hunting hounds have been killed by wolves, primarily on public land. In a few of those instances, the hounds' owners were close enough that they might have been able to better protect their dogs by shooting at the wolves involved. Therefore, we expect that illegal take of wolves involved in conflicts with pet dogs or hunting hounds would be rare. Such low levels of illegal take are not likely to meaningfully affect the stability of wolf populations or their recovery.

5.1.3 Socioeconomic Impacts

To date most ungulate herds and species appear to be at or over State and Tribal management objectives. However, in those few cases where some ungulate herds may be affected by the presence of wolves, hunting success may be compromised resulting in potential loss of clients for guide and outfitting businesses. Under the no-action alternative, States would be unable to remove wolves causing impacts to ungulate herds or populations in such cases, and some economic impact may occur to local sectors of the hunting industry and State revenues from a decline in hunting license fees. This also may result in some diminishment of the quality of hunting and recreational experiences.

Individuals who lose stock animals or dogs to wolf predation would incur the costs of replacing and training animals, as well as potential emotional distress. However, as described above, levels of take of stock animals and dogs by wolves is very low and the dog or stock losses that the owner might have prevented by shooting an attacking wolf are even rarer.

5.1.4 Ecological Impacts

There are no foreseen substantial ecological impacts from the no-action alternative. As stated previously most elk herds are at or above State and Tribal management objectives, and wolf predation or presence alone does not appear to be substantially impacting most herds at this time. However, wolves may be among the causes of a few herd declines, and such declines may continue under the no-action alternative. Declines in or maintenance of low ungulate populations for extended periods of time can lead to lower densities in wolf and other predator and scavenger populations due to decreased prey availability. However, such impacts are unlikely to occur at a meaningful level because so few herds or populations are declining due to wolf impacts.

Ungulate browsing pressure on aspen and riparian plant communities can result in reduced habitat quality, which in turn can negatively affect dependent species and reduce species diversity and result in other cascading biotic and abiotic effects (Ripple and Beschta 2004). Suppression of natural fires and a shift to a warmer, dryer climate also are thought to have contributed to a decline in aspen and riparian vegetation (willow, cottonwood) communities in the northern Yellowstone range (Smith et al. 2003). Some studies suggest that presence of wolves can reverse some of these effects, although consensus does not exist (Ripple and Beschta 2004; Smith et al. 2003). Both direct predation that results in decline in ungulate numbers and changes in ungulate behavior (shift to less risky foraging areas) due to the presence of wolves are thought to relieve browsing pressure on aspens and riparian vegetation (Ripple and Beschta

2004). However, others (Smith et al. 2003) believe that other factors occurring in conjunction with wolf reintroduction cannot be factored out in the observed improvement of woody browse in some areas. Furthermore, those areas in the northern Yellowstone range where willow and aspen appear to be increasing since wolves were introduced are considered very rare (approximately 1% is riparian habitat). Continued monitoring and research are needed to address the complexity of any cascading trophic effects that may be occurring (Smith et al. 2003).

Currently, information is not available on the condition of woody browse in those areas where elk are not meeting State management objectives and wolves are one of the major causes. Under the no-action alternative in which States and Tribes would not have the ability to lethally remove wolves when they are one of the major causes of unacceptable impacts to ungulate herds or populations, any effects to elk numbers and foraging patterns due to the presence of wolves and subsequent effects to woody browse would continue.

5.2 Alternative B (Proposed Action) - Modifying The Definition Of “Unacceptable Impact” And Adding A Provision For Lethal Take In Defense Of Stock Animals And Dogs

5.2.1 Impacts to Ungulate Herds or Populations

Under this alternative, lethal control of wolves would be available to States and Tribes when wolves are one of the major causes of unacceptable impacts to ungulate herds or populations. As described in sections 5.1.1 Impacts to Ungulate Herds or Populations (under Alternative A) and 2.0 Need for Action, wolves may be one of the major causes of impacts to a small number of elk herds in the Lolo zone of Idaho and in portions of northwestern Wyoming. As discussed in section 5.1.1 Impacts to Ungulate Herds or Populations, it is accepted that wolves influence prey populations, but characterizing the level of effects from just wolves is difficult to tease apart from numerous other factors that play important roles in ungulate population dynamics. States proposing to control wolves impacting ungulate herds would be expected to also address these other factors because the requirement in the 2005 special rule for identifying possible remedies and conservation measures other than wolf removal in their proposals to control wolves would remain in effect under this alternative. Therefore, wolf control in combination with other such remedies implemented under this alternative is expected to stop or slow declines in elk numbers or calf/cow ratios in those affected herds or those few herds that may experience such effects in the future. On the whole, this alternative is unlikely to affect most ungulate populations in the NEP areas of the gray wolf because control measures would be focused on only a small number of elk herds.

5.2.2 Impacts to Wolves

Definition of “Unacceptable Impact” on Wild Ungulate Herds or Populations

Under this alternative, the revised definition of “Unacceptable impact” to ungulate herds or populations removes the unobtainable threshold for demonstrating that wolf predation is the primary cause of such impacts. If a situation arises where a State or Tribe is able to demonstrate that wolves are one of the major causes of such impacts and the Service has determined that all

substantive and procedural requirements have been met, then some wolves may be lethally taken. Wolf populations can quickly respond (within 2 years) from even significant temporary mortality events and any such take of wolves under this proposal would have little impact on the overall wolf population and is highly unlikely to affect wolf recovery.

Wolf biology allows for rapid recovery from severe disruptions. After severe declines, wolf populations can more than double in just 2 years if mortality is reduced; and increases of nearly 100% per year have been documented in low-density suitable habitat (Fuller et al. 2003, pp. 181–183; USFWS et al. 2007, Table 4). The literature suggests that wolf populations can maintain themselves despite a sustained human-caused mortality rate of 30-50% per year (Keith 1983, p. 66; Fuller et al. 2003, pp. 182–184).

Our data indicate that the human-caused mortality rate in the adult-sized segment of the northern Rocky Mountain wolf population was nearly 26% per year from 1994 to 2004 (Smith 2005), and that the wolf population still continued to expand at about 26% annually (USFWS et al. 2007, p. Table 4). This data indicates that the current annual mortality rate of about 26% in the adult portion of the wolf population could be increased without causing the wolf population to decline. Collectively, these factors mean that wolf populations are quite resilient to human-caused mortality if it can be regulated and if core refugia are nearby to provide a constant source of dispersers to replenish breeding vacancies in packs.

The wolf population now occupies most of the suitable wolf habitat in the northern Rocky Mountains (72 FR 6106–6139, February 8, 2007; Oakleaf et al. 2006, p. 559). The population is unlikely to significantly expand its overall distribution beyond the outer boundaries of the current population because little unoccupied suitable habitat is available. Given current population density and distribution and the limited amount of unoccupied suitable habitat remaining in the northern Rocky Mountains, we believe the overall numbers of wolf breeding pairs and numbers of wolves cannot continue to sustain a growth rate of 26% per year. However, the population will continue to produce a large number of ‘surplus’ wolves which will either fill in social vacancies within the core population, die, or disperse out of the core population. Therefore, the core population would have an abundant supply of wolves ready to fill in any vacancies caused by agency control. Thus, we do not believe any increased take as a result of this alternative would have an impact on the recovered status of the northern Rocky Mountain wolf population in Montana, Idaho, or Wyoming, as long as it remains managed under a science-based plan.

Furthermore, this alternative also establishes safety measures to ensure that wolf recovery is not compromised. The requirement that lethal control would not reduce the wolf population in the state below 20 breeding pairs and 200 wolves would provide an additional safety margin to ensure that States and Tribes will be able to meet wolf population goals in their management plans. This assures that the wolf population is large enough to easily rebound from such removal, that a large safety margin is in place against unseen mortality events that might occur after such removal, and that a substantial margin of safety is provided to ensure that recovery objectives would not be compromised. This limit is a necessary and advisable precaution while wolves remain listed to ensure the conservation of the species given the additional take that might be authorized pursuant to this.

Protection of Stock Animals and Dogs

Since 1995, only 43 wolves (about 8% of the 538 wolves legally removed in agency authorized control actions) have been legally killed by private citizens in defense of their private property or by shoot-on-sight permits as authorized by either the 1994 or 2005 experimental population special rules. There has been no documentation of wolf depredations on stock animals that were accompanied by their owners in the past 12 years; however, a few instances of stock animals being spooked by wolves have been reported. While this alternative would provide additional opportunity for private citizens to lethally take wolves to protect their private property, we expect the number of instances where such control is necessary to be few. Therefore, any impacts to wolf populations from this alternative are not likely to be biologically meaningful.

Ninety-one dogs have been confirmed to be killed by wolves from 1987 to 2007 (USFWS et al. 2007, Table 5). No pet dogs have been confirmed to be killed by wolves while they were accompanied by their owners, and no wolves have been killed solely to protect dogs. However, 35 hunting hounds have been killed by wolves, primarily on public land. In only a few of those instances, were the hounds' owners close enough that they might have been able to better protect their dogs by shooting at the wolves involved. We expect that the take of wolves involved in conflicts with pets or hunting hounds would be rare. This proposed modification would allow for private citizens to protect their dogs from wolf attack while not meaningfully increasing the rate of wolf removal.

5.2.3 Socioeconomic Impacts

In those cases where lethal control of wolves impacting ungulates allow State game and fish agencies to meet their ungulate population objectives, hunters and associated businesses, including guides and the hunting retail industry, may benefit from increased hunting opportunities. Increased hunting opportunities provide revenue for wildlife management and habitat restoration, protection and enhancement.

Allowing lethal take of wolves in the act of attacking stock animals or dogs would have a beneficial economic impact on individuals by allowing citizens to protect private property. This alternative has the potential to prevent the need for these citizens to replace and train such stock animals and dogs. An additional benefit may be a lower level of illegal take of wolves due to higher local public tolerance of wolves resulting from reduced conflicts between wolves and humans.

We do not expect recreational and tourist industries currently benefiting from increased tourism associated with wolf watching to be adversely affected because the additional lethal control is not likely to have noticeable effects on the presence of wolves.

Moreover, since there are so few small businesses impacted by this regulation, the combined economic effects are minimal and this modification is expected to have no significant economic impacts. This regulation will not cause a major increase in costs or prices for consumers,

individual industries, Federal, State, or local government agencies, or geographic regions and will impose no additional regulatory restraints in addition to those already in operation (50 CFR 17).

5.2.4 Ecological Impacts

There are no foreseen substantial ecological impacts from the proposed action under this alternative. As stated previously most elk herds are at or above State and Tribal management objectives, and wolf predation or presence does not appear to be substantially impacting most herds. However, wolves appear to be among the causes of a few herd declines in the Lolo zone of Idaho and in portions of northwestern Wyoming. Declines in or maintenance of low ungulate populations for extended periods of time can lead to lower densities in wolf and other predator and scavenger populations due to decreased prey availability. Removal of wolves under this alternative could diminish such effects. However, such impacts are unlikely to occur at a meaningful level because so few herds or populations are declining due to wolf impacts.

As discussed in section 5.1.2 Ecological Impacts (under Alternative A), cause and effect and the nature of cascading ecological effects from presence or absence of wolves is subject to debate. Currently, information is not available on the condition of woody browse in those areas where elk are not meeting State management objectives and wolves are one of the major causes. Theoretically, removal of wolves causing elk declines and subsequent increase in elk numbers could result in increased browsing pressure. However, further monitoring and research is needed to determine if such effects would occur and to what degree.

Ecological impacts of expanded wolf control in relation to take in defense of stock animals and dogs are unlikely. Since 1987 only 91 dogs and 7 horses have been confirmed to have been killed by wolves. Reducing the risk of depredation on such animals is not likely to result in an expansion of their numbers or their use on public or private lands that would have any ecosystem effects. The number of wolves likely to be taken in defense of stock animals and dogs is expected to be far too low to have any potential impact on wolf populations or their ecological effects. Therefore, no ecological effects are likely to occur from the proposed action.

5.3 Alternative C - Only Modifying the Definition of “Unacceptable Impact”

This alternative includes the modification of the definition of “Unacceptable impact” to ungulates as described in Alternative B. It does not include the addition of a provision for take of wolves in defense of stock animals and dogs.

5.3.1 Impacts to Ungulate Herds or Populations

The impacts to ungulate herds or populations under this alternative would be the same as those associated with the revision of “Unacceptable impact” described in Alternative B (proposed action).

The impacts associated with not including the provision for take of wolves in defense of stock animals and dogs would be the same as described in Alternative A (no action).

5.3.2 Impacts to Wolves

The impacts to wolf populations associated with revising “Unacceptable impact” under this alternative would be the same as those described in Alternative B (proposed action).

The impacts associated with not including the provision for take of wolves in defense of stock animals and dogs would be the same as described in Alternative A (no action).

5.3.3 Socioeconomic Impacts

The socioeconomic impacts associated with revising the definition of “Unacceptable impact” in this alternative would be the same as those described in Alternative B (proposed action).

The impacts associated with not including the provision for take of wolves in defense of stock animals and dogs would be the same as described in Alternative A (no action).

5.3.4 Ecological Impacts

The ecological impacts associated with revising the definition of “Unacceptable impact” in this alternative would be the same as those described in Alternative B (proposed action).

The impacts associated with not including the provision for take of wolves in defense of stock animals and dogs would be the same as described in Alternative A (no action).

5.4 ALTERNATIVE D - Only Adding Provision for Take of Wolves to Protect Animals Stock and Dogs

This alternative includes the addition of a provision for take of wolves in defense of stock animals and dogs as described in Alternative B. It does not include the modification of the definition of “Unacceptable impacts.”

5.4.1 Impacts to Ungulate Herds or Populations

The impacts to ungulate herds or populations under this alternative would be the same as those associated with the revision of “Unacceptable impact” described in Alternative A.

The impacts associated with not including the provision for take of wolves in defense of stock animals and dogs would be the same as described in Alternative B.

5.4.2 Impacts to Wolves

The impacts to wolf populations under this alternative would be the same as those associated with the revision of “Unacceptable impact” described in Alternative A.

The impacts associated with not including the provision for take of wolves in defense of stock animals and dogs would be the same as described in Alternative B.

5.4.3 Socioeconomic Impacts

The socioeconomic impacts under this alternative would be the same as those associated with the revision of “Unacceptable impact” described in Alternative A.

The impacts associated with not including the provision for take of wolves in defense of stock animals and dogs would be the same as described in Alternative B.

5.4.4 Ecological Impacts

The ecological impacts under this alternative would be the same as those associated with the revision of “Unacceptable impact” described in Alternative A.

The impacts associated with not including the provision for take of wolves in defense of stock animals and dogs would be the same as described in Alternative B.

5.5 Summary of Environmental Consequences by the Alternatives

Table 2. Comparison of Potential Environmental Impacts of the Alternative Actions.

	Impact to Ungulates	Impact to Wolves	Impact to Socioeconomic Levels	Impact to Ecological Community
Alternative A No Action	<u>Some Potential Negative Impact:</u> a few isolated herds that may be declining due to wolves may continue to decline	<u>No to Little Potential Negative Impact:</u> slight chance for increase in illegal take	<u>Some Potential Negative Impact:</u> potential localized decrease in hunting success, outfitting clients, and State revenues from license fees; small risk of cost to private citizen for replacing stock animals/dogs	<u>Unknown or No Impact:</u> ungulate declines too few and isolated to cause ecological effects; more research need to determine cascading ecological effects
Alternative B Proposed Action	<u>Some Potential Positive Impact:</u> a few isolated herds may stop declining or increase	<u>Little Potential Negative Impact:</u> potential increased take of wolves, but resilience and safeguards would prevent any meaningful impacts to populations and recovered status	<u>Some Potential Positive Impact:</u> hunting industry and State game agencies may benefit from potentially higher ungulate herd numbers; decreases small risk of cost to private citizen for replacing stock animals/dogs	<u>Unknown or No Impact</u>

	Impact to Ungulates	Impact to Wolves	Impact to Socioeconomic Levels	Impact to Ecological Community
Alternative C Only modifying the definition of “Unacceptable impact”	<u>Some Potential Positive Impact:</u> a few isolated herds may stop declining or increase	<u>Little Potential Negative Impact:</u> potential increased take of wolves, but resilience and safeguards would prevent meaningful impacts to populations and recovered status; slight chance for increase in illegal take	<u>Some Potential Positive Impact:</u> hunting industry and State game agencies may benefit from potentially higher ungulate herd numbers <u>Some Potential Negative Impact:</u> small risk of cost to private citizen for replacing stock animals/dogs	<u>Unknown or No Impact:</u> ungulate declines too few and isolated and wolf take levels too low to cause ecological effects; more research need to determine cascading ecological effects
Alternative D Only adding provision to protect stock animals and dogs	<u>Some Potential Negative Impact:</u> a few isolated herds that may be declining due to wolves may continue to decline	<u>Little Potential Negative Impact:</u> potential increased take of wolves, but too small to have meaningful impacts to populations and recovered status	<u>Some Potential Positive Impact:</u> potential localized decrease in hunting success, outfitting clients, and State revenues from license fees; decreases small risk of cost to private citizen for replacing stock animals/dogs	<u>No Impact</u>

5.6 Cumulative Effects

Cumulative effects are those effects from other projects or activities that are not part of this proposed action and may have an additive effect when combined with the effects expected from the proposed action.

Any removal of wolves that are a major factor in preventing the States from meeting their ungulate management goals will be in addition to agency control of wolves that deplete on livestock, illegal killing, and other human-caused and natural forms of mortality. In total these other mortality factors remove about 26% of the adult-sized wolves in the NEP areas annually. However, it is highly unlikely that the addition of the level of wolf mortality expected as a result of the proposed revisions would be significant enough to decrease wolf populations below current levels. The current safeguards in the special regulations and those proposed as part of the revisions would prevent the reduction of wolf populations enough to compromise wolf recovery. Furthermore, under the proposed action, levels of ongoing illegal take may slightly decrease due to higher local public tolerance of wolves resulting from reduced conflicts between wolves and stock animals and dogs.

6.0 COMPLIANCE, CONSULTATION, AND COORDINATION WITH OTHERS

6.1 Environmental Justice

Environmental justice is achieved when everyone, regardless of race, culture or income, enjoys the same degree of protection from environmental and health hazards and equal access to a healthy environment. None of the alternatives would have an impact upon women, minority groups, or civil rights of any citizen of the United States (Executive Order 12898).

6.2 Public Review and Comment

The Service is making this draft EA available for public review and comment for 30 days, from September 11, 2007, through October 11, 2007. The proposed action to revise the 2005 10(j) rule that this draft EA references was published on July 6, 2006 (72 FR 36942) and was open for public review and comment until August 6, 2007. The public comment period on the proposed revised rule will be reopened to allow for another 30 days of public review and comment coinciding with the public review and comment of the draft EA. A Notice of Availability announcing details on these two public comment periods for the draft EA and proposed revisions to the rule was published on September 11, 2007 (72 FR 51770).

After the public comment period for the draft EA, the Service will compile and review all received comments and determine if the proposed action would result in a significant impact to the human environment. If the Service determines that no significant impacts are likely, it will issue a Finding of No Significant Impact and the final EA. If the Service determines that significant impacts are likely, it will prepare an EIS.

7.0 LIST OF PREPARERS

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