Putting the Wild Back in Wilderness: An Argument for a More Natural Approach to Wildlife Management in Wilderness

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I. Introduction

Aldo Leopold, one of the intellectual forebears of the Wilderness Act, described predator control in his writings:

> One of the most insidious invasions of wilderness is via predator control. It works thus: wolves and lions are cleaned out of a wilderness area in the interests of big-game management. The big-game herds (usually deer or elk) then increase to the point of over browsing the range. Hunters must then be encouraged to harvest the surplus . . . .[1]

When the federal agencies authorize the practice described by Aldo Leopold, they are not fulfilling the purposes or mandates of the Wilderness Act.[2]

In 1964, Congress passed the Wilderness Act in order "to secure for the American people of present and future generations the benefits of an enduring resource of wilderness."[3] Through the Act, Congress declared that the agencies designated to administer wilderness were "responsible for preserving the wilderness character of the area[s]."[4] Neither this mandate nor the purposes of the Act are fulfilled when the agencies—either directly or indirectly through the states—authorize the harvesting of predators such as wolves and mountain lions in wilderness for the sole purpose of enhancing game hunting opportunities.[5]

The agencies should manage wildlife in wilderness differently than how they manage wildlife on other federal lands.[6] The Wilderness Act raises the agencies' management standards by requiring the agencies to administer wilderness areas so that they will be unimpaired for future use and enjoyment *as wilderness*.[7] Thus, the agencies must manage these lands in a manner that will allow future generations to enjoy the land in its *wilderness* state. In order to understand what conditions managers are required to maintain, one should look to the Wilderness Act's definition of wilderness. The Act defines wilderness as "an area where the earth and *its community of life* are untrammeled by man, where man himself is a visitor who does not remain."[8] As this language indicates, Congress did not intend wilderness and the wildlife within it to be unduly manipulated.[9] The agencies should refer to this language as a guide when making management decisions in wilderness.

The Act goes on to say that wilderness is "protected and managed" to "preserve its natural conditions" yet should be "affected primarily by the forces of nature, with the imprint of man substantially unnoticeable."[10] The most difficult question to answer is how wilderness can be "protected and managed," which indicates an active effort, and at the same

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1. Aldo Leopold, A Sand County Almanac and Sketches Here and There 130 (1949). Aldo Leopold co-founded the Wilderness Society in 1935. James Morton Turner, The Promise of Wilderness: American Environmental Politics Since 1964 23–24 (2012). The Wilderness Society is a nongovernmental organization that works to advance public lands protection. *Id.* at 23.
2. 16 U.S.C. §§ 1131–1136 (2012).
3. *Id.* § 1131(a).
4. *Id.* § 1133(b).
5. This Article only addresses the authorization of predator control for the purpose of inflating the number of game animals. Predator control to support existing grazing operations is supported by case law. *See* Forest Guardians v. Animal & Plant Health Inspection Serv., 309 F.3d 1141, 1142 (9th Cir. 2002) (citation omitted) (agreeing with the U.S. Forest Service that the Wilderness Act's allowance of pre-existing "private livestock grazing implicitly includes operations to support that grazing, such as lethal control of predators."). For a more detailed discussion of why *Forest Guardians* is not applicable to the issue addressed in this Article and potentially wrongly decided, see *infra* notes 100–109 and accompanying text.
6. *See* Alaska Wildlife Alliance v. Jensen, 108 F.3d 1065, 1069 (9th Cir. 1997) ("Greater protections apply to wilderness areas than to ordinary park lands.").
7. 16 U.S.C. § 1131(a).
8. *Id.* § 1131(c) (emphasis added).
9. *See* H.R. Rep. No. 88-1538, at 12 (1964); S. Rep. No. 88-109, at 7–8 (1963).
10. 16 U.S.C. § 1131(c).

time be "affected primarily by the forces of nature," which indicates a hands-off approach. This paradoxical language and these seemingly inconsistent goals have given wilderness managers the difficult job of implementing policies that are consistent with the Act.

In *Wilderness Society v. U.S. Fish & Wildlife Service*,[11] the U.S. Court of Appeals for the Ninth Circuit ("Ninth Circuit") discussed the paradox in the Act's definition of wilderness. As the Ninth Circuit noted, "it is not obvious how an agency must protect and manage an area 'so as to preserve its natural conditions.'"[12] When addressing whether a project that stocked Tustumena Lake in the Kenai Wilderness with salmon fry was an alleged violation of the Wilderness Act, the Ninth Circuit court stated

> On the one hand, to preserve the "natural conditions" of the Refuge could mean protecting against the introduction of artificial propagation programs, like the Project, that alter the natural ecological processes within the Refuge. On the other hand, to preserve the "natural conditions" of the Refuge could mean preserving the natural ecological processes as they *would* exist in their wild state, in the absence of artificial disturbance from outside the wilderness area.[13]

Although the Ninth Circuit noted the ambiguity in the definition, authorization of predator control to increase the number of game animals would not pass muster under either interpretation. Here, if agencies were to "protect against the artificial propagation," then they would prohibit the purposeful proliferation of game animals through the use of predator control.[14] Alternatively, the preservation of "natural ecological processes as they would exist in their wild state" would require the same result because predator control is an unnatural interference with the natural ecosystems in wilderness. Thus, despite the paradoxical language or arguable ambiguities, if agencies consult the language of the Act when deciding whether to implement a program designed to proliferate game animals by killing predators, the choice is clear.

Regardless of the inconsistency with the purpose and language of the Wilderness Act, the federal agencies continue to authorize or allow predator control programs in wilderness areas. For example, in January 2014, Defenders of Wildlife confronted this practice when it filed a lawsuit in the U.S. District Court for the District of Idaho challenging the U.S. Forest Service's "disregard of its legal duties to protect the wilderness character against degradation from a wolf extermination program undertaken by the Idaho Department of Fish and Game."[15] The plaintiffs alleged that, in December 2013, the Idaho Department of Fish and Game ("IDFG") dispatched a hired hunter into a remote area in the Frank Church-River of No Return Wilderness ("Frank Church Wilderness") to exterminate two packs of wolves that live entirely in this wilderness area in order to increase the local elk population for the benefit of commercial outfitters and recreational hunters.[16] Several months after the lawsuit was filed, IDFG suspended this particular extermination program.[17] Although IDFG has agreed not to take further wolf-control actions in the wilderness area until November 2015,[18] this program remains a prime example of what will happen when the federal agencies fail to protect wilderness character.

The U.S. Forest Service's inaction with respect to this program has been simply inconsistent with the Wilderness Act. As the plaintiffs argued, the U.S. Forest Service has a statutory duty to preserve wilderness character, wolves are a fundamental aspect of the wilderness character of the Frank Church Wilderness, and the U.S. Forest Service has abdicated its duty to protect the wilderness character by allowing the extermination of these gray wolves. For these same reasons, the federal agencies' authorization of predator control through permitting processes is also inconsistent with the mandates and purposes of the Wilderness Act.

Part II of this Article briefly describes the purposes and key language of the Wilderness Act and explains current predator control programs. Part III then argues that such programs are inconsistent with the purposes and language of the Wilderness Act. Part III also discusses how a court should treat the predator control programs as a commercial enterprise or a commercial service under the Act and discusses case law on predator control in wilderness. Part III explains the potential effects of the continuing policy to authorize predator control in wilderness and concludes by offering possible solutions to address this policy. Part IV briefly concludes.

II. The Wilderness Act and Predator Control

In order to provide context for analysis of the problems associated with predator control programs in wilderness, a brief introduction to the Wilderness Act and current predator control programs is necessary.

11. 316 F.3d 913 (9th Cir. 2003).
12. *Id.* at 923.
13. *Id.* at 923–24.
14. *Id.* at 924.
15. Complaint for Declaratory and Injunctive Relief at 1, Defenders of Wildlife v. U.S. Forest Serv., No. 4:13-cv-00007 (D. Idaho 2014).
16. *Id.; see also Idaho Wildlife Officials Hire Hunter to Kill Wolves in Wilderness*, Missoulian, http://missoulian.com/news/state-and-regional/idaho-wildlife-officials-hire-hunter-to-kill-wolves-in-wilderness/article_f13abff8-680f-11e3-9df0-0019bb2963f4.html#.VHoxzRAS8U.gmail (last visited Nov. 29, 2014) (reporting that Idaho wildlife officials hired a hunter to track down and kill wolves roaming in the federal wilderness to aid the recovery of elk populations). On January 17, the district court issued an order, denying the Defenders of Wildlife's motion for a temporary restraining order and a preliminary injunction; stating that the plaintiffs were unlikely to succeed on the merits because the plan did not amount to a final agency action and therefore it was not reviewable and because the extirpation of wolves did not irreparably harm the species as a whole. Defenders of Wildlife v. U.S. Forest Serv., No. 4:14-CV-0007 (D. Idaho 2014) (order denying preliminary injunction). Defenders of Wildlife appealed. Brief of Appellant, Defenders of Wildlife v. U.S. Forest Serv., No. 14-35043 (9th Cir. Jan. 21, 2014). After the IDFG suspended the program, the Ninth Circuit dismissed the appeal without prejudice as moot and vacated the district court's order denying injunctive relief to the plaintiffs. Defenders of Wildlife v. U.S. Forest Serv., No. 14-35043 (9th Cir. 2014).
17. Laura Zuckerman, *Idaho Suspends Plan to Kill Wolves in Wilderness*, Reuters, http://www.reuters.com/article/email/idUSKBN0FY26W20140729 (last visited Nov. 29, 2014).
18. *Id.*

A. The Wilderness Act

With the passage of the Wilderness Act, over nine million acres in fifty-four areas became wilderness.[19] The Act also established a system of continuing review and recommendation for new wilderness designations.[20] Under this system, the secretaries of the U.S. Department of Agriculture ("USDA") and U.S. Department of the Interior ("DOI") review the suitability of designated areas for preservation as wilderness and report their findings to the President.[21] The President then advises Congress as to his recommendations for wilderness designations.[22] Currently, approximately 109 million acres are protected as wilderness in the United States.[23]

The Act did not set up a single agency to manage the wilderness areas[24] but rather provided that wilderness would be managed by the agencies that managed the land prior to its inclusion in the National Wilderness Preservation System.[25] Thus, the Bureau of Land Management ("BLM") within DOI, the U.S. Fish & Wildlife Service ("FWS"), the Forest Service, and the National Park Service are responsible for the management of the wilderness areas in lands that were originally within their jurisdiction.[26]

The Act contains several key prohibitions. Specifically, the Act prohibits any commercial enterprise within wilderness; it also forbids temporary roads, motor vehicles, motorized equipment, mechanical transport, structures, or installations except as necessary to meet the minimum requirements for the administration of the area.[27] The Act also only allows "[c]commercial services" to be performed "to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas."[28] With these prohibitions, Congress made clear that these "lands should be set aside as wilderness at the expense of commercial and recreational uses."[29]

B. Current Predator Control Programs

While the federal agencies' official policies and manuals restrict predator control in wilderness to use only for the purposes of public safety or protection of livestock,[30] the agencies delegate wildlife management on federal lands to the states.[31] Many state wildlife management programs include recreational-based non-native fish stocking, game production, introduction of non-native terrestrial species, and predator control. Like most other state agencies, the Montana Fish, Wildlife, & Parks ("MFWP") administers its predator control program through a permitting system. State agencies often implement such programs for the express purpose of increasing opportunities to hunt big game. For example, MFWP states that its mountain lion management plan "seeks to maintain mountain lion and prey populations at levels compatible with outdoor recreational desires and to minimize human-lion conflicts and livestock depredation."[32]

As mentioned above, although this program has been halted until November 2015, the IDFG contracted with a professional hunter, in January 2014, to track and kill gray wolves in the Frank Church Wilderness.[33] It is important to briefly review the history of gray wolves in this region in order to understand the context of IDFG's decision. Around the turn of the nineteenth century, at least 350,000 gray wolves roamed the lower forty-eight states, with the largest concentration in the West.[34] By 1925, however, the species had been removed from the area by way of shooting, trapping, and poisoning.[35] In 1995, the federal government instituted a program to restore wolves to the Northern Rockies, including in the Frank Church Wilderness.[36] The wolves' return helped to restore the "critical ecological balance" in the area.[37]

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19. Peter A. Appel, *Wilderness and the Courts*, 29 Stan. Envtl. L.J. 62, 82–83 (2010).
20. *See* 16 U.S.C. § 1132(b) (2012) (describing the procedure for new wilderness designations).
21. *Id.* § 1132(b)–(c).
22. *Id.*
23. *See Summary Fact Sheet*, Wilderness.net, http://www.wilderness.net/NWPS/fastfacts (last visited Feb. 15, 2015).
24. *See* 16 U.S.C. § 1131(b) (2012) ("The inclusion of an area in the National Wilderness Preservation System notwithstanding, the area shall continue to be managed by the Department and agency having jurisdiction thereover immediately before its inclusion in the National Wilderness Preservation System unless otherwise provided by Act of Congress.").
25. *Id.*
26. *See Summary Fact Sheet, supra* note 23 (listing the number of acres of wilderness each federal agency manages).
27. *See* 16 U.S.C. § 1133(c) (2012) ("Except as specifically provided for in this chapter, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this chapter and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this chapter (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.").
28. *Id.* § 1133(d)(5).
29. Norton v. S. Utah Wilderness Alliance, 542 U.S. 55, 59 (2004).
30. *See, e.g.*, Forest Service, Forest Service Manual 2300—Recreation, Wilderness, and Related Resource Management § 2323.33c (2007) ("The Regional Forester may approve predator control programs on a case-by-case basis where control is necessary to protect federally listed threatened or endangered species, to protect public health and safety, or to prevent serious losses of domestic livestock.").
31. *See, e.g.*, 43 C.F.R. § 24.4(d) (2014) ("[T]he several States therefore possess primary authority and responsibility for management of fish and resident wildlife on Bureau of Land Management lands . . . ."). Since the agencies allow the states to take the primary role in wildlife management on public lands, however, these policies have little force. For an argument that delegation of wildlife management to the states violates the Wilderness Act, see Lindsay Sain Jones, *The Problem With the Bureau of Land Management's Delegation of Wildlife Management in Wilderness*, 47 Ga. L. Rev. 1281, 1285 (2013).
32. *Mountain Lion*, Mont. Fish, Wildlife & Parks, http://fwp.mt.gov/fishAndWildlife/management/mountainLion/ (last visited Apr. 28, 2014).
33. *Idaho Wildlife Officials Hire Hunter to Kill Wolves in Wilderness*, *supra* note 16.
34. G. Tyler Miller & Scott E. Spoolman, Living in the Environment 214 (2008).
35. Complaint for Declaratory and Injunctive Relief, Defenders of Wildlife v. U.S. Forest Serv., No. 14-35043 (D. Idaho Jan. 17, 2014).
36. *Id.* at 14.
37. *Id.*; William J. Ripple et al., *Status and Ecological Effects of the World's Largest Carnivores*, 343 Science 151, 154 (2014) (noting that wolf extirpations and recoveries have resulted in shifts in cascading effects on ecosystems including shifts in plant communities). Wolves benefit the health of the prey species by targeting the old, very young, injured, and diseased animals, leaving the healthiest animals to reproduce. *Compare* L. David Mech, The Wolf: The Ecology and Behavior of an Endangered Species 265 (1970) (suggesting that grey wolves improve the gene pool by chasing a herd of ungulates until a slower animal is left behind), *with* David W. Coltman et al., *Undesirable*

Despite the historical destruction and restoration of the wolf population in the Frank Church Wilderness, the Forest Service authorized IDFG's wolf extermination program, including the use of the Forest Service's airstrip and cabin.[38] IDFG chose to hire a professional because the areas where the wolves roam are too difficult to reach for sport hunters.[39] The goal of the program was to make more elk available for the benefit of recreational hunters and commercial outfitters.[40] The Forest Service did not undertake any process to ensure that the program would not degrade the wilderness character of the Frank Church Wilderness.[41] Indeed, the Forest Service later claimed that it did not have the authority to restrict uses that conflict with its wilderness management plan.[42]

As this action by IDFG demonstrates, the problem lies not with the federal agencies' predator control programs, but with their unwillingness to enforce the current rules. As Part III argues, agency inaction and apathy toward state predator control fall far below the standards for wilderness management set forth by Congress in the Wilderness Act.

III. Problems With Predator Control in Wilderness

A. *Predator Control in Wilderness Is Inconsistent With the Purposes and Mandates of the Wilderness Act*

The Wilderness Act's statement of purpose requires wilderness areas to be administered "in such manner as will leave them unimpaired for future use and enjoyment as wilderness" and "to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness."[43] Later in the Act, Congress explicitly makes the federal agencies responsible for administering the lands, under its authority, that Congress designates as wilderness.[44]

In order to align the wildlife management policy with the purposes of the Act, the meaning of these words must be determined. First, one should look to the language of the Act for guidance to determine the meaning of "future use and enjoyment as wilderness" and "wilderness character."[45] The Act defines wilderness as "an area where the earth and its community of life are untrammeled by man."[46] The language, "earth and its community of life," indicates Congress's intent for the Act to preserve not only the land but also the creatures that dwell upon it. "Untrammeled" is one of the most misunderstood words of the Act, both in its meaning and its function in the law. Howard Zahniser, the drafter of the Wilderness Act, chose this word with the intention that the land, once designated, would remain undisturbed by man.[47] Authorizing predator control to inflate the number of game animals is inconsistent with this language because it does not leave the land and its community of life undisturbed by man. In fact, the very purpose of this practice is to disturb the wildlife so that the elk, deer, and other game animals proliferate to an unsustainable population and hunting is "required" to stabilize the population.

The Act further defines "wilderness" as

> an area of undeveloped Federal land retaining its *primeval* character and influence, without permanent improvements or human habitation, which is *protected and managed* so as to preserve its *natural conditions* and which (1) generally appears to have been *affected primarily by the forces of nature*, with the *imprint of man's work substantially unnoticeable*; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.[48]

At first glance, this definition is paradoxical. Wilderness is "protected and managed" to "preserve its natural conditions" yet should be "affected primarily by the forces of nature with the imprint of man substantially unnoticeable."[49] Paradoxical language and seemingly inconsistent goals have given wilderness managers the difficult job of implementing policies that are consistent with the Act.[50] Despite the Act leaving the agencies with conflicting duties, the definitions in the Act can and should inform the agencies when they promulgate regulations, enforce regulations, and make daily management decisions. For example, if the Forest Service were to refer to these definitions when deciding whether or not to institute predator control programs in wilderness, the choice should be simple. Prohibiting predator control would be a management choice that aids in the preservation of natural conditions and leaves the land to be primarily affected by the forces of the nature.

The agencies have undertaken efforts to simplify the management and monitoring of wilderness areas using the paradoxical language of the Act at various times. In 2005, for example, an interagency team undertook to define wilderness

Evolutionary Consequences of Trophy Hunting, 426 Nature 655, 657 (2003) (reporting that hunters selectively target "trophy" prey of high genetic quality before their reproductive peak, which leads to a decline in traits that determine "trophy" quality).

38. Complaint for Declaratory and Injunctive Relief at 16, Defenders of Wildlife v. U.S. Forest Serv., No. 4:13-cv-00007 (D. Idaho 2014).
39. *Idaho Wildlife Officials Hire Hunter to Kill Wolves in Wilderness*, *supra* note 16.
40. Complaint for Declaratory and Injunctive Relief at 16, Defenders of Wildlife v. U.S. Forest Serv., No. 4:13-cv-00007 (D. Idaho 2014).
41. *Id.*
42. Ken Cole, *U.S. Forest Service Sets New Precedent by Saying That It Doesn't Have Ability to Regulate Activities in Wilderness That Clearly Conflict With Management Plans and Policies,* The Wildlife News (Jan. 1, 2014), http://www.thewildlifenews.com/2014/01/01/us-forest-service-sets-new-precedent-by-saying-that-it-doesnt-have-ability-to-regulate-activities-in-wilderness-that-clearly-conflict-with-management-plans-and-policies/.
43. 16 U.S.C. § 1131(a) (2012).
44. *Id.* § 1133(b) (2012).
45. *Id.* § 1131(a).
46. *Id.* § 1131(c).
47. Kevin Proescholdt, Untrammeled Wilderness 115, 117 (2008), *available at* http://www.wildernesswatch.org/pdf/Proescholdt_UntrammeledWilderness.pdf.
48. 16 U.S.C. § 1131(c) (emphasis added).
49. *Id.*
50. *See* Dick Carter, *Maintaining Wildlife Naturalness in Wilderness*, 3 Int'l J. Wilderness 17, 18 (1997).

character in order to provide the agency with a tool to assess how wilderness character has changed over time. The team separated "wilderness character" into four tangible qualities: untrammeled, natural, undeveloped, and solitude or primitive and unconfined recreation. Using these four qualities, the team wrote a report detailing a monitoring strategy to assess broad scale agency performance in preserving wilderness character. Because the untrammeled and natural qualities of wilderness are the most relevant for assessing the authorization of predator control in wilderness, it is helpful to review the report's description of these qualities.

To assess the untrammeled quality of wilderness, the report suggests for agencies to monitor trends in actions that control or manipulate the earth and its community of life inside of wilderness. Further, it suggests that the agencies monitor the actions they authorize and do not authorize actions that manipulate the biophysical environment, including actions that manage animals. Under such a framework, the authorization of predator control for the purpose of enhancing hunting opportunities would indicate that the agencies are not preserving the untrammeled quality of wilderness.

The report defines the natural quality of wilderness as "ecological systems are substantially free from the effects of modern civilization." One of the measures of the natural quality of wilderness is the number of indigenous species that have been extirpated. Therefore, the extirpation of predatory animals, such as gray wolves, could indicate that the agencies are failing to preserve the natural quality of wilderness. The primary stewardship mandate of the Wilderness Act is ultimately to preserve wilderness character, yet agencies ignore this mandate when they authorize extirpation of predatory animals for the purpose of enhancing the population of prey animals for hunters.

B. Federal Case Law Does Not Support Predator Control in Wilderness for the Purpose of Increasing the Number of Game Animals

Federal courts have interpreted the scope of the Wilderness Act when addressing challenges to agency actions in wilderness. Based on these cases, predator control should either be treated as a commercial enterprise or a commercial service. This section first argues that the predator control programs should be treated as commercial enterprises, which are banned outright under the Act with no exception.[51] Alternatively, this section argues that the programs could be reviewed under the language of the Act's commercial services exception. The Act allows "commercial services [to] be performed within the wilderness areas" but only "to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas."[52] As a commercial service, predator control would only be permitted after a determination that the programs are necessary and proper for realizing wilderness purposes.

1. The Current Predator Control Programs Are Commercial Enterprises Under the Act

The Act provides "there shall be no commercial enterprise . . . within any wilderness area."[53] Wilderness managers should look at the purpose and effect of an activity to determine whether it is a prohibited commercial enterprise within wilderness.[54] In *Wilderness Society v. U.S. Fish & Wildlife Service*, the Ninth Circuit concluded that the primary purpose and effect of an enhancement project, such as depositing salmon fry into Tustumena Lake in the Kenai Wilderness, were to enhance commercial interests of fishermen.[55] The court also provided several useful points for determining whether an activity is a commercial enterprise: (1) the primary purpose of an activity is not contradicted by evidence that a project serves other secondary noncommercial purposes, (2) the non-profit status of the implementing entity is not dispositive, (3) the incidental benefits to recreation or sport is subordinate to the primary benefit conferred by the activity, and (4) a state's prior management activity and present regulatory activity are irrelevant to the determination.[56]

Applying this case law to the problem at hand, predator control permitting programs and the IDFG's employment of a professional hunter to kill wolves in the Frank Church Wilderness are commercial enterprises because their primary purposes and effects are to benefit commercial outfitters and hunting interests. Thus, these programs should be prohibited by the Wilderness Act. To be sure, predator control programs could be viewed another way, but when IDFG paid the professional hunter $30,000 to carry out its predator control plan, it created an enterprise that was arguably *more* commercial than the project struck down in *Wilderness Society* that was carried out by a non-profit organization. Although the Ninth Circuit stated the non-profit status of the organization was not dispositive,[57] it should be a factor for a court to use to evaluate the plan. Further supporting the argument that the programs should be considered a commercial enterprise is the fact that the hunting interests that these programs support are part of a multi-billion dollar industry.[58]

51. *See* Wilderness Soc'y v. U.S. Fish & Wildlife Serv., 353 F.3d 1051, 1067 (9th Cir. 2003) (citing 16 U.S.C. § 1133(c) (2012)) (alteration in original) ("The plain language of the Wilderness Act states that there shall be '*no* commercial enterprise' within designated wilderness.").
52. 16 U.S.C. § 1133(d)(5).
53. *Id.* § 1133(c).
54. *See Wilderness Soc'y*, 353 F.3d at 1064 ("[W]e conclude that as a general rule both the purpose and the effect of challenged activities must be carefully assessed in deciding whether a project is a 'commercial enterprise' within the wilderness that is prohibited by the Wilderness Act."). *See also* Sierra Club v. Lyng, 662 F. Supp. 40, 42–43 (D.D.C. 1987) (holding that the Secretary of Agriculture has not been given the broad discretion to take actions inside wilderness for the benefit of outside commercial or other private interests because by doing so the Secretary is not managing the wilderness but acting contrary to wilderness policy for the benefit of outsiders); Alaska Wildlife Alliance v. Jensen, 108 F.3d. 1065, 1069 (9th Cir. 1997) (affirming the lower court's holding that the Wilderness Act prohibits commercial fishing in the wilderness area).
55. *Wilderness Soc'y*, 353 F.3d at 1064–65.
56. *Id.* at 1065–66.
57. *Id.* at 1065.
58. *See* U.S. Fish & Wildlife Serv., 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation 22 (2014) (reporting that hunting expenditures totaled $33.7 billion in the United States in 2011).

2. Alternatively, the Predator Control Programs Are Commercial Services Under the Act

As discussed above, a court could treat a predator control program as a commercial enterprise, but it is more likely that a court would treat it, instead, as falling under the commercial services exception under the Act. The Act allows "commercial services [to] be performed within the wilderness" but only "to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas."[59] Therefore, in order for commercial services to be authorized in wilderness, the commercial service must be utilized only to the extent *necessary* and only for *wilderness* purposes.

The agencies utilize commercial services for numerous activities on the lands they manage. For example, BLM states, "BLM-authorized outfitters provide . . . recreational opportunities . . . [and] . . . commonly provide services in river running, hunting, and packing."[60] Thus, the agencies treat hunting as a commercial service, and a federal court likely would similarly analyze a predator control program under this framework. The following sections demonstrate why such programs are impermissible as commercial services.

a. Finding of Necessity and Extent of Necessity Is Required

The Act allows "[c]ommercial services [to] be performed within the wilderness" but only "to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas."[61] Therefore, even if a court found that the permitting furthered a purpose under the Act, predator control should only be authorized to the extent necessary to realize that purpose. The federal agencies must make a finding of necessity prior to authorizing commercial services in wilderness.[62] Once an agency makes a finding of necessity that does not end the inquiry.[63] The agency must then show that the agency granted no more permits than necessary to achieve the goals of the Wilderness Act.[64]

For example, after finding that conservation is a purpose under the Act, the Ninth Circuit went on to analyze whether FWS's actions were the minimum necessary to achieve the purpose of conservation.[65] The court concluded that the agency failed to make the required finding that the structures were necessary for conservation.[66] The court stated FWS had to "provide enough evidence and explanation" to show that it considered alternatives and nevertheless rationally concluded that new water structures were necessary.[67] Similarly, the Forest Service should face similar treatment for allowing IDFG to hire a hunter in the Frank Church Wilderness without making the finding that killings were *necessary* to achieve the recreational purpose.

The *High Sierra Hikers v. Blackwell* case is also helpful to review because the court specifically dealt with a challenge to a commercial service. In *High Sierra Hikers*, the Ninth Circuit concluded that the Forest Service failed to fulfill the substantive requirements of the Act because it did not determine that pack animals were necessary to provide the public with access to the wilderness area.[68] The Forest Service did not explain why the extent of such pack animal services was necessary.[69] The limitations on the Forest Service's discretion "flow[ ] directly out of" its obligation to protect and preserve wilderness areas.[70] The Forest Service was also required to consider relevant factors such as the type of activities, the extent that the permits are used, and the amount of use the land can tolerate in relation to one another when determining how much commercial activity is appropriate in a wilderness area.[71] According to courts, the agencies violate the Wilderness Act when they fail to make a finding that predator control is *necessary* to fulfill a purpose under the Act. If the agencies have determined that predator control is necessary, the agencies must also make a showing that they will issue permits only to the extent necessary to achieve the wilderness purpose.

b. Enhancing Recreational Opportunities at the Expense of Wilderness Character Is Not a Purpose of the Wilderness Act

For a commercial service to be proper under the Act, it must be authorized only for "wilderness purposes."[72] Acting under the incorrect assumption that *enhancing* recreational opportunities is a purpose or even a duty under the Act, federal agencies, either directly or indirectly though state agencies, issue permits for the extirpation of predatory animals (such as wolves and mountain lions) in order to increase opportunities to hunt game animals. Some have argued that this form of predator control should qualify under this exception because it enhances recreational experiences and recreation is a purpose under the Act. When the U.S. District Court for the Eastern District of California ("Eastern District of

59. 16 U.S.C. § 1133(d)(5) (2012).
60. *Frequently Asked Questions*, Bureau Land Mgmt., http://www.blm.gov/wo/st/en/prog/blm_special_areas/NLCS/wilderness2/Wilderness_FAQ.html (last visited Dec. 30, 2013).
61. 16 U.S.C. § 1133(d)(5).
62. High Sierra Hikers Ass'n v. Blackwell, 390 F.3d 630, 646 (9th Cir. 2004).
63. *Id.* at 647 ("[U]nder the terms of the Wilderness Act, a finding of necessity is a necessary, but not sufficient, ground for permitting commercial activity in a wilderness area."). For a case in which a court interpreted "necessary" narrowly in a wilderness context, see *Sierra Club v. Lyng*, 662 F. Supp. 40, 43 (D.D.C. 1987) ("Where such actions are shown to contravene wilderness values guaranteed by the Wilderness Act, as they do here, then the Secretary must, when challenged, justify them by demonstrating they are necessary to effectively control the threatened outside harm that prompts the action being taken.").
64. *High Sierra Hikers Ass'n*, 390 F.3d at 647.
65. Wilderness Watch, Inc. v. U.S. Fish & Wildlife Serv., 629 F.3d 1034, 1036–39 (2010).
66. *Id.* at 1037.
67. *Id.* at 1040.
68. *High Sierra Hikers Ass'n*, 390 F.3d at 647.
69. *Id.*
70. *Id.*
71. *Id.*
72. 16 U.S.C. § 1133(d)(5) (2012) (emphasis added).

California") encountered this argument in *High Sierra Hikers Ass'n v. U.S. Forest Service*,[73] however, the court stated

> While fishing is an activity that is common among visitors to wilderness areas, neither fishing nor any other particular activity is endorsed by the Wilderness Act, nor is the enhancement of any particular recreational potential a necessary duty of wilderness area management. . . . The wilderness that the Act seeks to preserve is not defined by reference to any particular recreational opportunity or potential utility, but rather by reference to the land's status or condition as being "Federal land retaining its primeval character and influence, without permanent improvements or human habitation. . . . *Because it is not possible to infer from this language that establishment (much less enhancement) of opportunities for a particular form of human recreation is the purpose of the Wilderness Act*, it is not possible to conclude that enhancement of fisheries is an activity that is "necessary to meet minimum requirements for the administration of the area for the *purpose* of this chapter."[74]

Thus, the Eastern District of California indicated that *enhancement* (as opposed to simply the provision) of recreational opportunities is not a purpose under the Wilderness Act.[75] The Eastern District of California also noted that the repair, maintenance, and operation of the dams created permanent structures that "alter[ed] the hydrological scheme of the area and alter the natural distribution of species and habitats."[76] In other words, the dams degraded the wilderness character of the land.

Applying the Eastern District of California's reasoning in the context of predator control, hunting—like fishing—is a common pursuit among wilderness visitors that is not endorsed by the Act, nor is the enhancement of hunting opportunities a necessary duty of wilderness management. Additionally, predator control, like the maintenance of the dams in the case, destroys an aspect of wilderness character. Therefore, the predator control programs do not qualify under the commercial service exception because they do not serve a proper wilderness purpose.

c. *Conservation Is a Purpose of the Wilderness Act*

Federal courts have additionally held that conservation is a purpose under the Act.[77] In *Wilderness Watch v. U.S. Fish & Wildlife Service*, the Ninth Circuit dealt with a challenge to water structures built in a wilderness area for the purpose of restoring the big horn sheep population.[78] In 2006, the Kofa National Wildlife Refuge and Wilderness experienced an unexpected decline in the population of bighorn sheep.[79] In response, the FWS and the Arizona Game and Fish Department prepared an investigative report that examined a wide range of mortality factors that included the lack of water, predation, translocation, hunting, and human disturbance.[80] Although the report reached no overall conclusion regarding the cause of the decline in the bighorn sheep population, the FWS built two water structures designed to catch rainwater in the Wilderness area.[81]

An analysis of *Wilderness Watch* is helpful because, like commercial services, structures are prohibited in wilderness, "except as necessary to meet the minimum requirements for the administration of the area for the purposes of the [Act]."[82] The Ninth Circuit had to determine whether conservation is a purpose of the Wilderness Act.[83] The court noted that the Act gives conflicting policy directives of "maintaining the wilderness character of the land, providing opportunities for wilderness recreation, managing fire and insect risk, and even facilitating mineral extraction activities," and "simultaneously devoting the land to conservation and protecting and preserving the wilderness in its natural condition."[84] The Ninth Circuit concluded that the Wilderness Act was ambiguous as to whether conservation was a purpose under the Act. The court ultimately held that, in light of the purposes of the area and the explicit purpose of conservation in the Act, conservation was a purpose under the Act.

Some might argue, relying on this case, that predator control programs should be allowed because their purpose is to conserve the population of elk, bighorn sheep, and deer. The animals that the programs seek to "conserve," however, are those that are subject to depredation by human hunters. Additionally, since conservation is a purpose of the Wilderness Act, these programs run counter to conservation of the predatory animals as well. To be sure, certain individuals will contend that Congress did not intend to conserve animals such as wolves and mountain lions, but such an argument is inconsistent with legislative history that indicates that wilderness was preserved, in part, to preserve intact ecosystems.[85]

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73. 436 F. Supp. 2d 1117 (E.D. Cal. 2006).
74. *Id.* at 1134 (emphasis added).
75. In that case, the Forest Service decided that eleven dams were the minimum necessary for the administration of the wilderness, reasoning, in part, that four of the dams "improve natural reproduction capabilities within existing fisheries," thereby reducing the need for fish stocking. *Id.* at 1125. The Eastern District of California was addressing a violation of the Wilderness Act's ban on the permanent structures that states "except as necessary to meet minimum requirements for the administration of the area for the purpose of this chapter . . . there shall be no . . . structure or installation within any such area." *Id.* at 1131 (quoting 16 U.S.C. § 1133(d)(5)). Thus, the Eastern District of California's interpretation of purpose is useful because the court was interpreting language nearly identical to that found in the Act regarding commercial services.
76. *Id.* at 1135.
77. *See* Wilderness Watch v. U.S. Fish & Wildlife Serv., 629 F.3d 1024, 1036 (9th Cir. 2010) (deferring to the Forest Service's determination and holding that conservation of bighorn sheep was consistent with the purpose of the Wilderness Act).
78. *Id.* at 1026.
79. *Id.* at 1029.
80. *Id.*
81. *Id.* at 1030, 1032.
82. *Id.* at 1032 (citing 16 U.S.C. § 1133(c) (2012)).
83. *Id.*
84. *Id.* at 1033 (internal quotation marks omitted).
85. *See* 103 Cong. Rec. S1906 (daily ed. Feb. 11, 1957) (statement of Sen. Richard L. Neuberger) ("[W]ildlife, waterfowl, migratory fisheries, and similar resources require outdoor fastness and solitudes in which to survive, and . . . these must be safeguarded by some form of legislative shield.").

d. Restoring Wilderness Character Is a Purpose Under the Act

Under the Act, "except as necessary to meet the minimum requirements for the administration of the area for the purpose of [the Act] . . . there shall be no motorized equipment . . . or . . . mechanical transport . . . ."[86] In *Wolf Recovery Foundation v. U.S. Forest Service*,[87] the U.S. District Court for the District of Idaho ("Idaho District Court") heard a challenge to use of helicopters for the purpose of monitoring gray wolves in the Frank Church Wilderness. To constitute "administration of the area," the activity had to further the wilderness character of the area.[88] The Idaho District Court stated that it would be a "rare case where machinery as intrusive as a helicopter could pass the test of being necessary to meet minimum requirements for the administration of the area."[89] Yet, the Idaho District Court ultimately decided that the project was "sufficiently limited and focused on restoring the wilderness character" to fall within the requirements of the Act.[90] In that case, the purpose of the project was to improve the understanding of the wilderness character prior to man's intervention and the "predator/prey relationship that existed in the past."[91]

The *Wolf Recovery Foundation* case informs this analysis in two ways. First, the case demonstrates that restoration of wilderness character is a purpose of the Wilderness Act. What this means is that courts will look more favorably on activities, including authorization of commercial services, that restore the conditions "of the wilderness prior to man's intervention"[92] and less favorably on activities that impair this condition. Therefore, a commercial service should be authorized to the extent necessary to restore wilderness character. In contrast, when the purpose of such authorizations is to enhance recreational opportunities at the expense of wilderness character, the agencies violate the Wilderness Act by authorizing these commercial services. Second, the long-term viability of predators and the balance between predator and prey are vital aspects of wilderness character.[93] When the agencies authorize predator control in order to increase the number of game animals, they are destroying an aspect of wilderness character recognized by Congress rather than restoring it.[94] Thus, the agencies are not fulfilling their duties under the Act when they authorize predator control for the purpose of enhancing hunting opportunities.

The potential exists for an agency to improperly make a determination that enhancing hunting opportunities is a purpose under the Act and, therefore, a predator control program is needed to maintain prey populations at levels compatible with outdoor recreational desires.[95] Courts have already said, however, that *enhancing* recreational opportunities at the expense of wilderness character is not a purpose under the Act.[96]

Alternatively, the agency might find that predator control is necessary to achieve conservation, a valid purpose under the Act.[97] As discussed, this conclusion requires a tortured logic—how could such program be truly necessary to conserve prey animals if hunting of prey animals is subsequently allowed? Then, assuming that a court would accept enhancing hunting opportunities as a valid purpose under the Act, the agency still would have to make a finding of necessity and permit the program only to the extent necessary. When the Forest Service allowed IDFG to hire a hunter to kill two packs of wolves in the Frank Church Wilderness, no such determinations were made. Therefore, this authorization was ultimately inconsistent with the Wilderness Act. Additionally, the Wilderness Act sought to provide opportunities for a primitive wilderness experience. It can hardly be argued that the purposeful proliferation in game population by way of predator control leads to a primitive wilderness experience.[98] Thus, this practice is inconsistent with "the overall purpose and structure" of the Act.[99]

3. Predator Control Case Law

Forest Guardians v. Animal & Plant Health Inspection Services[100] is the only case dealing directly with predator control in wilderness. In that case, the Forest Service delegated authority to the Animal & Plant Health Inspection Services ("APHIS") to perform predator control in the Santa Teresa wilderness area in Arizona to "prevent serious losses of domes-

86. 16 U.S.C. § 1133(c).
87. 692 F. Supp. 2d 1264, 1265–66 (D. Idaho 2010).
88. *Id.* at 1268.
89. *Id.* (internal quotation omitted).
90. *Id.*
91. *Id.* (citation omitted).
92. *Id.*
93. *See id.*
94. *See* 103 Cong. Rec. S1906 (daily ed. Feb. 11, 1957).
95. *See, e.g.*, Idaho Fish & Game, *Draft Elk Plan Summary*, YouTube (Aug. 20, 2013), http://www.youtube.com/watch?v=3hbbrzJVHRg&feature=youtu.be (stating that in the new Draft Elk Plan, Idaho Fish and Game is "making sure that hunters are an important part of the plan and making sure that [they] manage elk to benefit them.").
96. *E.g.*, High Sierra Hikers Ass'n v. U.S. Forest Serv., 436 F. Supp. 2d 1117, 1134 (E.D. Cal. 2006).
97. Wilderness Watch v. U.S. Fish & Wildlife Serv., 629 F.3d 1024, 1036 (9th Cir. 2010).
98. *Wilderness Watch v. Mainella*, 374 F.3d 1085 (11th Cir. 2004), presents another example of a court reviewing an agency's decision that did not lead to a primitive wilderness experience. The U.S. Court of Appeals for the Eleventh Circuit ("Eleventh Circuit") held that the Park Service's decision to use a fifteen-passenger van filled with tourists to administer the area "simply could not be construed necessary to meet the minimum requirements for the administering the area for the purpose of the Wilderness Act." *Id.* at 1092 (citation and internal quotation marks omitted). The Park Service argued that these vans did not affect the wilderness any more than their vehicles without any passengers and, therefore, the use of motor vehicles remains the same as the minimum amount necessary. *Id.* at 1092–93. The court disagreed saying not only did the Park Service's interpretations run afoul of the plain language because this practice literally increased the use of motor vehicles, but also these actions violated the overall purpose and structure of the statute. *Id.* at 1093. The Act seeks to preserve the areas in their natural conditions for their use and enjoyment as wilderness. *Id.* (citing 16 U.S.C. § 1131(a) (2012)). According to the Eleventh Circuit, "the statute seeks to provide the opportunity for a primitive wilderness experience as much as to protect the wilderness lands themselves from physical harm." *Id.* Thus, "Congress has unambiguously prohibited the Park Service from offering motorized transportation to park visitors through the wilderness area." *Id.* at 1094.
99. *Id.* at 1093.
100. 309 F.3d 1141 (9th Cir. 2002).

tic livestock."[101] The Forest Service defined "serious loss" as "a determination made by APHIS or State Game and Fish after investigations, historical evidence and patterns of loss show the habitual nature of kills."[102] Under this authority, APHIS killed six mountain lions at the request of a rancher who grazed cattle within the Santa Teresa Wilderness.[103] Forest Guardians sought to enjoin this practice as a violation of the Wilderness Act.[104]

There are two principal reasons why this case is not applicable to the issue addressed in this Article. First, because the Ninth Circuit narrowly addresses the issue of predator control implemented to protect grazing operations in the wilderness area, *Forest Guardians* is not applicable to predator control programs for the purpose of proliferating game animals. The Ninth Circuit held that "private livestock grazing implicitly includes operations to support that grazing, such as lethal control of predators."[105] The continuation of grazing rights was one of the compromises made in order to pass the Wilderness Act. Preexisting grazing rights were specifically protected by the Act.[106] Although recreation is a purpose under the Act, Congress did not extend hunters any similar protection of preexisting rights to a bountiful supply of game animals.

Second, *Forest Guardians* was arguably wrongly decided. In the case, six mountain lions were killed at the request of a rancher who grazed cattle in the Santa Teresa wilderness area.[107] When the Ninth Circuit determined that the right to graze implicitly included the right kill the mountain lions to protect the herd, it relied on the fact that the Wilderness Act did not explicitly forbid predator control.[108] The court failed to discuss the impact of the agency's decision on the wilderness character or natural conditions of the land. The court also disregarded the fact that the predator control right did not pre-exist the Wilderness Act and, therefore, could not have been "preserved" by the Act.

In *Forest Guardians*, the Ninth Circuit addressed the conflict between preserving the natural conditions (the presence of the mountain lions) and an arguably implied right to support grazing operations with predator control. When there is a conflict between maintaining the primitive character of the area and any other use, the general policy of maintaining the primitive character of the area must be supreme under the language and requirements of the Wilderness Act.[109] The decision to find an implied right to protect grazing operations by predator control, despite the degradation to the primitive character of the area, is inconsistent with the guiding principles of the Act. Given the fact that *Forest Guardians* dealt only with predator control to support existing grazing rights and that the case was arguably wrongly decided, *Forest Guardians* is simply not applicable to the analysis of the issue addressed in this Article.

C. Inflating Prey Populations Through Predator Control in Wilderness Leads to Undesirable Outcomes

1. Effects on Ecosystems and Biodiversity

The Wilderness Act was passed, at least in part, to protect wildlife through preservation of intact ecosystems.[110] Wilderness serves to preserve the natural behavior and processes that regulate wildlife populations.[111] Wilderness also serves as the only remaining habitat for some species.[112] Wilderness-dependent species are those "vulnerable to human influence, whose continued existence is dependent on and reflective of . . . wild, [extensive,] undisturbed habitat . . . ."[113] Wilderness provides an environment with few humans where these animals that are "vulnerable to direct contact with humans can find refuge."[114] Although the Endangered Species Act[115] offers some protection to these animals, it is insufficient by itself because (1) the Endangered Species Act focuses on species rather than ecosystems and only protects such species once they have become threatened or endangered[116] and (2) Congress removed the Endangered Species Act's protection from gray wolves in Idaho and Montana in 2011.[117]

In January 2014, *Science Magazine* published an article regarding the effects of carnivores on ecosystems.[118] According to the article, empirical studies have shown that large carnivores have substantial effects on the "structure and function of diverse ecosystems."[119] When carnivores are extirpated, there are significant cascading effects including changes to bird, mammal, and invertebrate processes; plant

101. *Id.* at 1142 (internal quotation marks omitted).
102. *Id.* (internal quotation marks omitted).
103. *Id.*
104. *Id.*
105. *Id.* at 1142.
106. 16 U.S.C § 1133 (2012) ("[T]he grazing of livestock, where established prior to September 3, 1964, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture.").
107. *Forest Guardians*, 309 F.3d at 1142.
108. *Id.*
109. *See* High Sierra Hikers Ass'n v. U.S. Forest Serv., 436 F. Supp. 2d 1117, 1131 (E.D. Cal. 2006); Minn. Pub. Interest Research Group v. Butz, 401 F. Supp. 1276, 1331 (D. Minn. 1975), *rev'd on other grounds*, 541 F.2d 1292 (8th Cir. 1975); *see also* 36 C.F.R. § 293.2(c) (2014) ("In resolving conflicts in resource use, wilderness values will be dominant to the extent not limited by the Wilderness Act, subsequent establishing legislation, or the regulations in this part.").
110. *See, e.g.*, 103 Cong. Rec. S1906 (daily ed. Feb. 11, 1957) (statement of Sen. Richard L. Neuberger) ("The bill recognizes that wildlife, waterfowl, migratory fisheries, and similar resources require outdoor fastnesses and solitudes in which to survive, and that these must be safeguarded by some form of legislative shield.").
111. *See* David Mattson, *Wilderness-Dependent Wildlife: The Large and the Carnivorous*, 3 Int'l J. Wilderness 34, 34 (1997).
112. John C. Hendee & Clay Schoenfeld, *Wildlife in Wilderness*, *in* Wilderness Forest Serv., Miscellaneous Publication Management 215, 216 (1978).
113. *Id.*
114. Mattson, *supra* note 111, at 34.
115. Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (2012).
116. *See* Michael A. DiSabatino, *Validity, Construction, and Application of Endangered Species Act of 1973*, 32 A.L.R. Fed. 332 § 2(a), 337–41 (1977) ("The [Endangered Species] Act includes within its protection species of fish, wildlife, and plants that are 'endangered species' or 'threatened species' . . . [and] makes it illegal . . . to import or export endangered species . . . [or] to sell or offer for sale any endangered species in interstate or foreign commerce, to possess, sell, deliver, carry, transport, or ship any species taken in violation of the Act . . . .").
117. *See* Department of Defense and Full-Year Continuing Appropriations Act, 2011, Pub. L. No. 112-10, § 1713, 125 Stat. 38, 150 (2011) (directing the Secretary of the Interior to reissue the 2009 final rule delisting the wolf in Montana and Idaho while shielding the reissued rule from judicial review).
118. *See* Ripple et al., *supra* note 37.
119. *Id.* at 152.

abundance and richness; altered disease dynamics; carbon sequestration; modified stream morphology; and even crop damage.[120] Because extirpation of top predators has destructive effects on the entire ecosystem, authorization of predator control programs is inconsistent with Congress's intent to preserve intact ecosystems by preserving lands as wilderness.

Related to the effects on ecosystems, predators also play a crucial role in maintaining species biodiversity. Species biodiversity signifies the range of species present within a given ecosystem.[121] Predation is a fundamental biological process, permitting "the evolution and accumulation of species and serves to regulate the growth of plant and animal populations."[122] Specifically, when top predators control populations of large herbivores, the resources available to smaller animals increase allowing for improved species biodiversity.[123] Left uncontrolled, large herbivores will deplete a landscape of its life sustaining resources.[124] Without predators to regulate the number of prey species, species biodiversity is diminished as the prey population simplifies the food web.[125]

2. Impacts on Prey Species Gene Pool

Carnivores also play a vital and natural role in improving the gene pool of the prey species over time by culling the genetically weaker members of the herd.[126] The gray wolf, in particular, exerts this positive force over its prey's gene pool, as it often chases after a herd of ungulates until a slower animal is left behind.[127] This hunting method more effectively reduces the possibility of genetically weaker animals reproducing than other hunting strategies do.[128]

Because wilderness is "an area where the earth and its community of life are untrammeled by man,"[129] it has great potential for providing a habitat for top predators such as gray wolves to continue their natural interactions with other species that increase biodiversity and improve the gene pool of their herbivore prey. Predator control programs in wilderness ultimately undermine this innate scheme thereby decreasing biodiversity and damaging the gene pool.

D. Possible Solutions

There are at least five ways that current predator control programs could be addressed: (1) the state agencies that manage wildlife could amend their policies to prohibit predator control in wilderness on their own; (2) the federal agencies could enforce their current policies that severely restrict predator control by use of better controls on the state agencies; (3) Congress could pass a law prohibiting predator control in wilderness; (4) citizens could sue the agencies, alleging that they violate the Wilderness Act by allowing predator control in wilderness; or (5) the federal agencies could assume the responsibility of wildlife management in wilderness and enforce their own policies that restrict predator control.

The simplest solution is for the states to amend their own policies to prohibit predator control in wilderness within their borders. Such a change would not upset the status quo regarding authority over wildlife on federal land and, therefore, would face the least political resistance. On the other hand, many states (especially those discussed in this Article) are not likely to prohibit predator control because such action would be unpopular with the residents of their states.[130] Moreover, these states would be unwilling to forgo the revenue derived from the hunting industries, as it is an important source of income.[131] If any states opted to make such policy changes, then wilderness managers would be left to follow inconsistent policies for wilderness areas that lie within multiple states. Additionally, any protections offered to predators from state policy changes would be subject to change again at the whim of the state agencies.

Alternatively, the federal agencies could begin enforcing their current policies that severely restrict predator control in wilderness by requiring the states to follow detailed procedures before undertaking predator control. Under this solution, the states' own internal political pressures are less of a concern because the federal agencies have the ability to set national policies to protect wilderness character for the benefit of the entire American citizenry. Unfortunately, enforcement would be difficult considering that agency regulations specify (and it is generally assumed) that the states have primary authority over wildlife within their borders.[132]

As mentioned above, Congress could settle the issue by prohibiting or severely limiting predator control in wilderness. In order to continue the goals of the Wilderness Act, any subsequent act should restrict predator control in wilderness to situations in which it is necessary for human safety. While an act would certainly settle the matter, it is not likely considering that predator control in wilderness is not at the forefront of federal lawmakers' policy concerns.

As the Defenders of Wildlife have done in Idaho, a citizen could sue to enjoin predator control in wilderness as a violation of the Wilderness Act.[133] One problem with this solution is that courts tend to move slowly. The irreversible damage to the ecosystem and to wilderness character could already

120. *Id.*
121. *See* Mech, *supra* note 37, at 266; Holly Doremus, *Patching the Ark: Improving Legal Protection of Biological Diversity*, 18 Ecology L.Q. 265, 265 (1991).
122. George C. Coggins & Parthenia B. Evans, *Predator's Rights and American Wildlife Law*, 24 Ariz. L. Rev. 821, 822 n.5 (1982).
123. Michael E. Soule & John Terbough, *Conserving Nature at Regional and Continental Scales: A Scientific Program for North America*, 49 Bioscience 809, 810–12 (1999).
124. *Id.* at 810.
125. *Id.*
126. Mech, *supra* note 37, at 69.
127. *Id.*
128. *Id.* at 266–67.
129. 16 U.S.C. § 1131(c) (2012).
130. This point demonstrates the overall problem with entrusting the states with authority over wildlife on federal lands because the states' loyalties lie with their own citizens rather than citizens of the entire country.
131. *See* U.S. Fish & Wildlife Serv., *supra* note 58, at 105, 109 (reporting hunting and fishing revenue by state in 2011, such as the information that hunters and anglers spent about $1.01 billion in Montana and $1.15 billion in Idaho on hunting and fishing in 2011). Forty-two states closed out $103 billion in budget shortfalls in 2012. *See* Adam Levitin, *Bankrupt Politics and the Politics of Bankruptcy*, 97 Cornell L. Rev. 1399, 1400 (2012).
132. *See, e.g.*, 43 C.F.R. § 24.4(d) (2014) ("[T]he several States therefore possess primary authority and responsibility for management of fish and resident wildlife on Bureau of Land Management lands . . . .").
133. *See supra* notes 15–17 and accompanying text.

been done before the case is even heard. Second, courts are generally deferential to the agencies regarding management decisions and are, therefore, unlikely to interfere. Moreover, even if a court were to enjoin an agency from continuing a predator control program, it would be at best a piecemeal solution, leaving predators and wilderness character vulnerable in other wilderness areas.

Because it comports best with the language of the Wilderness Act and circumvents many of the concerns mentioned above, the ideal solution is for federal agencies to accept their primary authority over wildlife management in wilderness and to strictly enforce their own policies that limit the use of predator control to instances when it is *necessary* to protect federally listed threatened or endangered species, to protect public health and safety, or to prevent serious losses of domestic livestock.[134] While states may resist the change, the U.S. Supreme Court has made clear that, via the Property Clause of the Constitution, Congress has power "without limitations" to regulate lands owned by the federal government,[135] and Congress has exercised this authority by passing the Wilderness Act. As compared to the other potential solutions, this outcome is most consistent with the language in the Act that requires the federal agencies to manage wilderness[136] and the section that allows commercial services only "to the extent *necessary* for activities which are proper for realizing the recreational or other wilderness purposes of the areas."[137]

IV. Conclusion

IDFG's employment of a professional hunter to kill wolves living in a designated wilderness area demonstrates that the current system fails to preserve wilderness character. The federal agencies do not enforce their own policies that prohibit predator control except when it is necessary to protect threatened or endangered species, to protect public health and safety, or to prevent serious losses of domestic livestock. When questioned about the hunter, the Forest Service claimed that it did not have the authority to enforce its own predator control policy.[138] By making such a claim, the Forest Service is abdicating its duty to preserve the wilderness character and is failing to fulfill the purposes of the Wilderness Act. At the heart of the Act was a fervent will to leave some places on this earth wild and untouched by civilization. Through the Wilderness Act, Congress declared a national policy "to secure for the American people of present and future generations the benefits of an enduring resource of wilderness."[139] The Act defines wilderness, in part, as providing "outstanding opportunities" for "primitive and unconfined type of recreation."[140] Yet, the purposeful proliferation in game population by way of predator control in no way leads to the *primitive* wilderness experience intended with the passage of the Act. Thus, this practice is inconsistent with purposes and language of the Act as well as federal case law interpreting the Act.

This Article suggests for federal agencies to look to the language of the Act, as suggested in an interagency report,[141] and at least perform a minimum requirements analysis before authorizing predator control in wilderness. These steps will help to ensure that wilderness stays wild as "an area where the earth and *its community of life* are untrammeled by man."[142]

> We reached the old wolf in time to watch a fierce green fire dying in her eyes. I realized then, and have known ever since, that there was something new to me in those eyes—something known only to her and to the mountain. I was young then, and full of trigger-itch; I thought that because fewer wolves meant more deer, that no wolves would mean hunters' paradise. But after seeing the green fire die, I sensed that neither the wolf nor the mountain agreed with such a view.[143]

134. *See supra* note 31 and accompanying text. This possibility is also supported by legislative history. *See, e.g.,* 103 Cong. Rec. S1906 (daily ed. Feb. 11, 1957) (statement of Sen. Richard L. Neuberger) ("This bill in no way reflects on the wonderful career services which now are in charge of wilderness areas and similar outdoor realms, but it actually seeks to safeguard these splendid men and women from undue political pressure, no matter what the source."). Such a statement indicates that the Act was also passed to allow the agencies to preserve the wilderness without pressure from political groups. This ability is lost when the agencies delegate major responsibilities to the states.

135. *See* Kleppe v. New Mexico, 426 U.S. 529, 539 (1976) ("And while the furthest reaches of the power granted by the Property Clause have not yet been definitively resolved, we have repeatedly observed that '[t]he power over the public land thus entrusted to Congress is without limitations.'"). For a very thorough discussion of Congress's power over federal lands, see generally Peter A. Appel, *The Power of Congress "Without Limitation": The Property Clause and Federal Regulation of Private Property*, 86 Minn. L. Rev. 1 (2001).

136. *See* 16 U.S.C. § 1131(b) (2012) ("The inclusion of an area in the National Wilderness Preservation System notwithstanding, the area shall continue to be managed by the Department and agency having jurisdiction thereover immediately before its inclusion in the National Wilderness Preservation System unless otherwise provided by Act of Congress.").

137. *Id.* § 1133(d)(5) (2012) (emphasis added).

138. For a description of such an action, see *supra* note 16 and accompanying text.

139. 16 U.S.C. § 1131(a).

140. *Id.* § 1131(c).

141. *See* Peter Landres et al., Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System i (2008) (Executive Summary).

142. 16 U.S.C. § 1131(c) (emphasis added).

143. Leopold, *supra* note 1, at 130.