

FINDING OF NO SIGNIFICANT IMPACT AND DECISION
FOR THE
ENVIRONMENTAL ASSESSEMENT

**PREDATOR DAMAGE AND CONFLICT MANAGEMENT
IN WYOMING**

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
WILDLIFE SERVICES

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I. INTRODUCTION

Native wildlife is a valuable natural resource, long enjoyed by the American public for aesthetic, recreational, emotional, psychological, and economic reasons. However, wildlife in overabundance or individual animals that have habituated to use resources supplied by humans can lead to human conflicts and damage. Wildlife can destroy crops and livestock, damage property and natural resources, and pose serious risks to public and pet health and safety. Members of the public may consider some species desirable, but only under socially acceptable circumstances. United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) responds to requests from individuals, organizations, and agencies experiencing damage caused by predators in Wyoming. WS's State Office in Wyoming (WS-Wyoming) conducts its activities at the request of, and in cooperation with, other federal, state, tribal, and local agencies, as well as private organizations and individuals (46 Stat. 1468, 7 U.S.C. 426-426B, as amended; 101 Stat. 1329-331, 7 U.S.C. 426c).

In 2015, WS-Wyoming decided to prepare an Environmental Assessment (EA) evaluating the impacts of alternatives to WS-Wyoming involvement in predator damage management (PDM) activities in the state. WS-Wyoming developed the new EA to provide additional information in a format more informative to the public. WS-Wyoming prepared the EA in cooperation with Wyoming Game and Fish Department (WGFD), Wyoming Office of Stand Lands and Investments, Wyoming Department of Agriculture (WDA), the Wyoming Animal Damage Management Board (ADMB), and the United States Forest Service (USFS). WS-Wyoming completed its consultations on the Pre-decisional Draft of the 2020 PDM in Wyoming EA with the United States Fish and Wildlife Service (USFWS) and the Bureau of Land Management (BLM) on February 2020 and July 2020, respectively. This Decision document provides notification of WS-Wyoming's choice of a management alternative and the agency's determination regarding the environmental impacts of the chosen alternative for the Final 2020 PDM EA.

II. PURPOSE AND NEED

The purpose of the proposed actions is to reduce conflicts involving predators that prey on or harass livestock and wildlife, damage other agricultural resources and property, impact wildlife species of management concern, or threaten health and safety in Wyoming. Section 1.17 of the EA provides details on the need for actions to resolve these conflicts. The predator¹ species in Wyoming that cause frequent damage to agricultural and natural resources, property, or threaten human health and safety include: coyote (*Canis latrans*), bobcat (*Lynx rufus*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), badger (*Taxidea taxus*), feral/free roaming cat (*Felis domesticus*), porcupine (*Erethizon dorsatum*), white-tailed jackrabbit (*Lepus townsendii*), and black-tailed jackrabbit (*Lepus californicus*). WS-Wyoming also provides, and the EA has analyzed, WS' limited operational PDM or technical assistance for the following species: Virginia opossum (*Didelphis virginiana*), black bear (*Ursus americanus*), mountain lion (*Puma concolor*), mink (*Neovison vison*), grizzly bear (*Ursus arctos*), feral/free roaming dog (*Canis familiaris*), western spotted skunk (*Spilogale putorius*), long-tailed weasel (*Mustela frenata*), and short-tailed weasel (*Mustela erminea*).

III. PUBLIC INVOLVEMENT

On July 30, 2020, WS-Wyoming solicited public comments on alternatives and issues addressed in the Pre-decisional Draft of the 2020 PDM in Wyoming EA. WS-Wyoming posted notices of the invitation for comment in the APHIS Stakeholder Registry, the WS NEPA web page, and the federal e-rulemaking portal (Regulations.gov). WS-Wyoming published a Legal Notice in The Wyoming Tribune Eagle from July 29-31, 2020. The comment period closed on September 1, 2020. WS-Wyoming received 47 submissions in response to the request for public comments, and responded to the substantive public comments in Chapter 5 of the EA.

IV. RELATED ANALYSIS

Prior to the completion of the Final 2020 EA on PDM in Wyoming and the Decision and Finding of No Significant Impact (FONSI) herein, WS-Wyoming PDM conducted its actions pursuant to (1) the 1997 Western Wyoming PDM EA and the 1997 FONSI and Decision for PDM in Western Wyoming, and (2) the 1998 Eastern Wyoming PDM EA and 1998 FONSI and Decision for PDM in Eastern Wyoming. This Decision and FONSI, and the Final 2020 EA on PDM in Wyoming, will replace the 1997 Western Wyoming PDM EA and FONSI/Decision and the 1998 Eastern Wyoming PDM EA and FONSI/Decision.

V. AFFECTED ENVIRONMENT

The EA analyzes the potential impacts of WS-Wyoming's PDM activities, conducted at the request of and in cooperation with WGF, WDA, tribes, and other management agencies on all public, private, and tribal lands in Wyoming under MOU and Cooperative Agreement. Although the range and habitat used by individual species varies, some predators discussed in the EA can occur in any location in the state where suitable habitat exists for foraging and shelter. Consequently, damage or threats of damage caused by the species addressed in the EA could occur statewide, wherever those species occur. WS-Wyoming conducts PDM only when requested by a landowner, affected resource owner or manager, land manager, or tribe. Additionally, PDM activities only occur on properties with an established

¹ Includes predatory animals, furbearing animals, and trophy game animals as defined by W.S. § 23-1-101, declared pests as defined by W.S. § 11-5-101 through W.S. § 11-5-119, and dogs which are managed by local jurisdictions.

documented agreement, Work Plan, or other comparable document with the cooperating entity. WS-Wyoming will coordinate actions on public lands with the appropriate management agency and will adhere to applicable land and resource management plans, regulations, and policies. Chapters 1, 2, and 3 of the EA provide a detailed discussion of the Affected Environment. Appendix A of the EA describes WS-Wyoming PDM methods implemented in Wyoming.

VI. MAJOR ISSUES

The EA analyzed a range of wildlife damage management alternatives regarding the issues relevant to the scope of the analysis, including:

- Impacts to the target predator populations in Wyoming
- Impacts to nontarget species populations, including State and Federal Endangered Species Act (ESA) listed species
- Impacts to ecosystem functions, including trophic cascades and biodiversity
- Impacts to public and pet health and safety
- Impacts on the use of public lands
- Impacts to stakeholders, including aspects of humaneness and animal welfare

Section 2.2 of the EA discusses the ability of each of the alternatives to meet the WS-Wyoming's wildlife damage management objectives.

I. ALTERNATIVES IN DETAIL

WS-Wyoming developed and analyzed the following four alternatives in Chapter 3 of the EA. WS-Wyoming considered ten additional issues in the EA but did not analyze them in detail. We discuss these in Sections 2.3 of the EA. WS-Wyoming responded to additional issues raised during the comment period in the Responses to Comments in Chapter 5 of the EA, and we incorporated them into our analysis in Chapter 3, as appropriate.

Alternative 1 – Continue the Current Federal Integrated Predator Damage Management Program (No Action/Proposed Action)

Alternative 1 is the “No Action” Alternative, as defined by the CEQ for ongoing programs. Under this alternative, WS-Wyoming PDM uses the full range of legally available methods in accordance with applicable federal, state, and local laws. WS-Wyoming uses the Decision Model (WS Directive 2.201), as described in Section 2.6.2., to select the appropriate PDM method. In determining the most appropriate predator management strategy, WS-Wyoming personnel will give preference to nonlethal methods where practical and effective (WS Directive 2.101). Only after personnel have considered and deemed nonlethal methods ineffective or inappropriate will WS-Wyoming implement lethal methods to reduce damage. In some instances, an integrated approach including both nonlethal and lethal methods may be most effective. The State of Wyoming does not limit the lethal take by private individuals of state classified predatory animals in Wyoming (coyote, jackrabbit, porcupine, raccoon, red fox, skunk or stray cat [W.S. § 23-1-101]).

Under this alternative, WS-Wyoming would also continue to provide information and training on the use of nonlethal methods including, but not limited to, herding and other livestock management and

cultural practices, livestock guarding animals, exclusion, and frightening devices (Appendix A of the EA provides details on these methods).

This alternative would continue WS-Wyoming PDM actions to protect livestock and other domestic animals and human safety, as currently provided for under applicable agreements. To carry out this purpose, WS-Wyoming might use a variety of methods including ground shooting, aerial PDM, denning, trap devices, snares, trained decoy and tracking dogs, and M-44 devices. WS-Wyoming would develop Work Plans with federal and state land management agencies and review the Plans annually to address specific activities and restrictions required to safely conduct PDM on public lands.

Under Alternative 1, WS-Wyoming conducts preventive PDM for coyotes in situations where damage or conflict has historically occurred and it is reasonable to expect future damage at the same location. In most cases, field staff cannot predict predator damage. However, coyote depredation on lambs and calves is predictable during lambing or calving season, and preventive lethal PDM during winter or early spring can prevent damage later in the year.

As explained in Section 1.16.4 of the EA, the analysis compares all other alternatives to the baseline data established in Alternative 1.

Sections 3.1.1, 3.2.1, 3.3.1, 3.4.1, 3.5.1, 3.6.1, and 3.7.1 of the EA include a detailed discussion of Alternative 1.

Alternative 2 – Lethal PDM Methods Used by WS-Wyoming Only for Corrective Actions

This alternative is similar to Alternative 1 (Proposed Action/no Action), in that WS-Wyoming would provide technical assistance, including both nonlethal and lethal recommendations, advice, and information for others to implement. Under this alternative, WS-Wyoming would recommend lethal and nonlethal methods, including all methods discussed in Section 2.6 and Appendix A of the EA. WS-Wyoming would also provide direct operational assistance to implement nonlethal and lethal corrective PDM activities.

This alternative differs from Alternative 1 in that WS-Wyoming field personnel would not directly provide any lethal operational assistance for preventive actions, even if formally requested as an agent of WGFD. WS-Wyoming might recommend preventive lethal PDM, but individuals experiencing damage would be dependent on contracting assistance from commercial companies, pilots with state aerial depredation permits, or WGFD or their agents for their lethal PDM responses, or they would need to conduct the actions themselves, as allowed by state law. The entity working with the requester would be responsible for compliance with the ESA and all other federal, state, and local laws and regulations.

Sections 3.1.2, 3.2.2, 3.3.2, 3.4.2, 3.5.2, 3.6.2, and 3.7.2 of the EA include a detailed discussion of Alternative 2.

Alternative 3 – WS-Wyoming Provides Technical Assistance Only

Under Alternative 3, WS-Wyoming would provide both nonlethal and lethal technical assistance, similar to Alternatives 1 and 2. However, WS-Wyoming would provide no lethal or non-lethal operational assistance. State or local governmental agencies, other federal agencies, or private entities would conduct all operational PDM in Wyoming. This would limit the use of certain methods, such as M-44s, because Wyoming state regulations allow only WS-Wyoming to use M-44 devices on federal lands.

However, WDA certified applicators could use M-44 devices on private and state lands with written approval from the lessee of record. Federal regulations would also limit aerial PDM on federal lands, because private individuals may experience difficulty obtaining the required written authorization from the appropriate agency prior to aerial hunting. Existing Memorandums of Understanding (MOUs) and other land management plans allow WS-Wyoming to rapidly respond to damage claims, which increases the likelihood of targeting the animal responsible for the damage and decreases livestock losses.

Under this alternative, WS-Wyoming would continue to provide technical assistance, which first involves collecting information about the species involved, the nature and extent of the damage, and previous methods that the cooperator had used to alleviate the problem. After collecting this information, WS-Wyoming provides the cooperator with information on appropriate nonlethal and lethal PDM to alleviate the damage themselves. Types of technical assistance projects may include a visit to the affected property, written communication, telephone conversations, presentations to groups, (e.g., homeowner associations or civic leagues), or the loan of supplies, equipment, or materials for nonlethal methods that are of limited availability for use by private entities. When providing technical assistance, WS-Wyoming may describe several PDM management strategies for short- and long-term solutions, as well as provide training on PDM techniques. People receiving technical assistance from WS-Wyoming could implement those recommended methods, could use other lethal or nonlethal methods not recommended by WS-Wyoming, could seek assistance from other entities, or take no further action. WS-Wyoming would provide advice about permits, if needed.

For nonlethal methods, this Alternative would not be substantially different from Alternative 1, because cooperators implement most nonlethal methods. The major difference under Alternative 3 is that WS-Wyoming would not conduct operational lethal PDM. Many cooperators rely on these services from WS-Wyoming because they lack the technical expertise to implement lethal methods on their own, or they find cooperation with WS-Wyoming more cost-effective.

Sections 3.1.3, 3.2.3, 3.3.3, 3.4.3, 3.5.3, 3.6.3, and 3.7.3 of the EA include a detailed discussion of Alternative 3.

Alternative 4 – No WS-Wyoming PDM Program

Under this Alternative, WS-Wyoming would not be involved in any PDM efforts in Wyoming. Other legally authorized entities, such as WGFD, USFWS, property owners, commercial PDM companies, PMDs, and private individuals would implement PDM as required. Entities experiencing damage caused by predators could continue to resolve damage by employing all methods legally available.

PDM would still occur in Wyoming despite the lack of involvement by WS-Wyoming. Similar to Alternative 3, federal statutes and regulations would limit the use of M-44s and aerial PDM on federal lands. Requesters would need to seek PDM information on existing and new methods (including methods developed and tested by the APHIS-WS National Wildlife Research Center [NWRC]) from other sources, such as WGFD, University of Wyoming Extension Services offices, or pest management companies. Currently, WGFD provides technical assistance and issues depredation permits for such activities as appropriate and within available resources. WGFD also provides operational assistance, but primarily only in situations involving wolves, black bears, grizzly bears, and mountain lions. WS-Wyoming would redirect requests for PDM information to these entities.

Sections 3.1.4, 3.2.4, 3.3.4, 3.4.4, 3.5.4, 3.6.4, and 3.7.4 of the EA include a detailed discussion of Alternative 4.

II. MONITORING

WS-Wyoming will continue to coordinate with the appropriate land and natural resource management agencies (WGFD, WDA, counties, tribes, USFS, BLM, USFWS, FAA, and/or NASAO). Under Alternative 1, WS-Wyoming provides data to WGFD and USFWS on the take of target and nontarget animals to help ensure the cumulative impact on wildlife populations, including WS actions, do not adversely impact the viability of state and USFWS managed wildlife populations. WS-Wyoming will monitor its activities annually to determine whether the analyses and determinations in the EA adequately address current and anticipated future activities, and whether there is new information that warrants supplementing or replacing the EA.

III. NEW INFORMATION

New information has become available since WS-Wyoming made the EA available to the public. We reviewed the new information and incorporated it into the final EA, as appropriate. This new information is consistent with conclusions and material presented in the EA, and it did not change the analysis.

- On October 9, 2020, USFWS withdrew its proposal to list the wolverine (*Gulo gulo*) under the federal ESA stating that factors affecting populations are not as significant as believed and that the American Northwest population remains stable. WGFD statute currently defines wolverines as a protected animal in Wyoming (WS § 23-1-101). WS-Wyoming protective measures for wolverines, which would have been consistent with the USFWS proposal, will remain in place. Therefore, this new information does not change the analysis in the Draft EA. Section 2.11.2.3 describes WS-Wyoming wolverine protective measures.
- On December 2, 2020, USFWS proposed to list whitebark pine (*Pinus albicaulis*) as a threatened species under the federal ESA. The primary threat to whitebark pine is the disease white pine blister rust, which is not human spread or influenced by human activity. USFWS determined designation of critical habitat not to be necessary at this time. Whitebark pine is a high-elevation species with minimal range overlap with cattle grazing or WS-Wyoming activities. WS-Wyoming personnel currently follow protocols that include not collecting plants while afield and, when using ATV's, using established roads and trails as much as possible. Therefore, USFWS' proposal to list whitebark pine as a threatened species will not significantly impact the continuation of WS-Wyoming actions or alter the conclusions of environmental impact in the EA. Sections 2.11.2.3 and 3.2.1.1 describe WS-Wyoming whitebark pine protective measures.

IV. USE OF THE BEST AVAILABLE SCIENCE

In order to conduct efficient and effective PDM and be aware of new information, WS-Wyoming used the best available data and information from wildlife agencies having jurisdiction by law (WGFD and USFWS; 40 CFR §1508.15), as well as the scientific literature, especially peer-reviewed scientific literature, to inform its decision-making. The EA uses the best available information from those sources to provide estimates of wildlife population size and status, assess risks to human safety, discuss PDM strategies and tools, and discuss ecological impacts.

V. CLARIFICATIONS TO THE DRAFT EA

WS-Wyoming made some clarifications to the draft EA in response to public comments and review of available information. These clarifications are consistent with the analyses, conclusions, and material presented in the draft EA. The clarifications more fully describe potential effects of WS-Wyoming PDM under the alternatives. Key changes include:

- Editors updated language to more clearly describe WS-Wyoming methods regarding Best Management Practices (BMPs) for trapping in Appendix A, Section 1.2.3.
- Editors provided additional documents detailing APHIS-WS M-44 device placement requirements, how WS-Wyoming provides notice of M-44 use, and other M-44 safety protocols in Section 2.11.2.6.

VI. REVIEW OF ALTERNATIVES

This section summarizes the EA's detailed analysis of the issues within each alternative. Table 1 provides a summary of impacts on issues for easy comparison.

After reviewing the EA and carefully evaluating all alternatives, WS-Wyoming has determined that Alternative 1 offers the greatest opportunity to meet WS-Wyoming's mission, purpose and need within the current program funding constraints. Under Alternative 1, access to the full range of legally available PDM methods, in combination with use of the WS Decision Model (WS Directive 2.201), enables development of effective damage-specific PDM strategies that accommodate resource owner/manager objectives, and minimize the risk of adverse impacts on the human environment. Further, the ability to continue PDM for the protection of natural resources under Alternative 1 best enables WS-Wyoming to effectively respond to the full range of needs for action in the state. Activities to protect natural resources, and their impacts, will stay within the parameters addressed by the EA. Coordination with the WS NWRC under Alternative 1 will improve understanding of the efficacy and issues associated with PDM projects for the protection of agricultural and natural resources.

Ability to address damage

Alternatives 2, 3, and 4 include restrictions on available PDM methods for private PDM providers and individuals that would likely result in less effective resolution of PDM issues. Private companies and individuals must obtain WDA certification and written approval to use M-44 devices in Wyoming. Private companies and individuals also have a limited ability to conduct aerial PDM on federal lands where livestock may graze. These restrictions may reduce take of coyotes for livestock protection under Alternatives 2, 3, and 4. Consequently, livestock losses under Alternatives 2, 3, and 4 would likely be higher and may result in livestock producers being unable to adequately protect their livestock from predation.

The EA anticipates WS-Wyoming corrective-only PDM actions under Alternative 2 to be less effective than Alternative 1 because WS-Wyoming would be unable to conduct preventive PDM in areas that have a history of predators depredating livestock (Wagner and Conover 1999). Reduced WS-Wyoming implementation of preventive lethal PDM of coyotes would reduce potential benefits to land and resource managers under Alternative 2, because loss of livestock would have to occur before WS-Wyoming could conduct PDM. WS-Wyoming anticipates that private use of preventive lethal PDM

options to reduce coyote damage would make up for some decreases or loss of WS-Wyoming program activities, but the private PDM operators would not be as effective as WS-Wyoming due to their lack of expertise, training opportunities, law restrictions, and method restrictions. In addition, under Alternative 2, there may be some increases in damage to livestock and property where there are delays in implementing nonlethal methods (e.g., installing exclusion fencing) and where managers or WS-Wyoming personnel attempt nonlethal methods, but prove unsuccessful.

Section 3.1 of the EA includes a detailed discussion of WS-Wyoming's ability to address damage due to target species under Alternatives 1, 2, 3, and 4.

Effects on animal populations and ecosystem function

The EA indicated that WS-Wyoming's use of lethal methods would not have significant impacts on target or nontarget species populations under any of the alternatives analyzed. Moreover, the EA predicates the analysis of impacts on target and nontarget species on conservative estimates of population size which would overstate the actual impact. WS-Wyoming's lethal take of target species would be highest under Alternative 1, followed by Alternative 2. Alternative 2 poses a nominal risk of unintentional take by livestock producers implementing nonlethal methods, and that risk would be greater under Alternatives 3 and 4, due to livestock producers and private PDM providers who may have less skill and access to new technology (e.g., fladry) to avoid take of nontarget wildlife. Alternative 2 might result in higher levels of displacement of target species associated with increased use of nonlethal methods, such as frightening devices. Under Alternatives 3 and 4, WS-Wyoming would not intentionally lethally take any species.

The EA indicates that under all alternatives, lethal take (intentional and unintentional) by WS-Wyoming would not be of sufficient magnitude, duration, or scope to trigger substantial adverse impacts on biodiversity or ecosystem stability that could result in trophic cascades. WS-Wyoming does not strive to eliminate predator populations from any area on a long-term basis. WS-Wyoming would not extirpate predators or prey, nor would personnel introduce a species into an ecosystem. As discussed in detail in Section 3.1.1 of the EA, impacts are generally temporary and in relatively small or isolated geographic areas compared to overall predator population distributions. WS-Wyoming actions are not of sufficient magnitude to result in ecosystem-level shifts or trophic cascades. Cumulative take by WS-Wyoming and non-WS entities would likely decline under Alternatives 2, 3, and 4 simply because WS-Wyoming would take animals for corrective purposes under Alternative 2 and no longer take any animals under Alternatives 3 and 4. There are some circumstances, discussed in Chapter 3, where non-WS entities would not effectively meet needs under Alternatives 2, 3, or 4.

Alternatives 1 and 2 are better suited for ensuring cumulative impacts on wildlife populations do not result in adverse consequences for native wildlife populations because, under those alternatives, WS-Wyoming would make available amount of take of target and nontarget species to the public and applicable state, federal, and tribal agencies (e.g., Program Data Reports; https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/sa_reports/sa_pdrs). Agencies with responsibility for maintaining sustainable wildlife populations can use this information to help monitor cumulative impacts on the environment. WGFD does not require private individuals to report take of state classified predatory animals (coyote, jackrabbit, porcupine, raccoon, red fox, skunk or stray cat [W.S. § 23-1-101]) to a regulatory agency. In addition, Wyoming has no limit on the lethal take by

private individuals of state classified predatory animals. Consequently, under Alternatives 3 and 4, agencies, tribes, and the public would have reduced information on any PDM conducted.

Risks and potential impacts to nontarget species from WS-Wyoming's actions are low for all the alternatives. Risks associated with PDM conducted by non-WS entities would vary depending on the skill level and equipment available to individuals conducting PDM. However, under Alternatives 2, 3, and 4, non-WS entities conducting lethal PDM activities in lieu of WS-Wyoming do not have the same obligations under NEPA. Non-WS entities also do not have the same experience or system of coordinating with affected public land management agencies. Lack of coordination increases potential risks of adverse impacts on recreation and Special Management Areas. As a result, overall risks to target and nontarget species, public resources, and public safety would likely exceed that of Alternative 1.

Sections 3.1, 3.2, and 3.3 of the EA include a detailed discussion of the impacts of WS-Wyoming PDM on target and nontarget populations and ecosystem function under Alternatives 1, 2, 3, and 4.

Impacts on game species and ESA listed species

Alternative 1 offers the greatest potential beneficial impacts on opportunities for hunting game species and opportunities to view and enjoy ESA listed species, with some benefits also occurring under Alternative 2. Under Alternatives 3 and 4, WS-Wyoming's reduced activities would limit benefits to support ESA listed species because regulatory agencies would be required to contract with non-WS entities that may have fewer resources and personnel. Because agencies may conduct fewer projects which would be smaller in scope, the success of ESA listed species recovery may be slower.

Sections 1.17.5 and 3.2 of the EA include a detailed discussion on the impacts of WS-Wyoming PDM on game and ESA listed species under Alternatives 1, 2, 3, and 4.

Tribal input and consultation

Alternative 1 offers the best opportunities for tribal input and consultation regarding impacts of PDM on traditional uses of natural resources, cultural practices, and sensitive sites. Tribes would have diminished opportunities for involvement under Alternatives 2, 3, and 4 because non-WS entities do not have the same obligations to work with federally recognized tribes.

Sections 1.15.4.4, 1.16.5.3, 1.16.5.4 of the EA include a detailed discussion of how WS-Wyoming works with tribes in Wyoming.

Ethical perspectives and perceptions of humaneness

WS-Wyoming carries out its mission in compliance with accepted American Veterinary Medical Association (AVMA) standards of humaneness and euthanasia. Ethical perspectives and perceptions of humaneness vary depending upon individual values and experiences. Some individuals oppose the use of lethal methods under all circumstances, and these individuals are likely to only consider Alternatives 3 and 4 acceptable. For others, acceptance of lethal methods may be conditional. For example, individuals primarily concerned about the well-being of individual predators are likely to prefer Alternatives 2, 3, and 4, in part because they perceive the value of the individual animal to be equal to or greater than the resource they may be damaging, and they prefer not to see federal tax monies used for lethal PDM. These individuals may have greater tolerance for the use of lethal methods for the protection of human health and safety and ESA listed species but disapprove of the use of lethal methods to protect livestock.

In contrast, individuals concerned about livestock protections, protection of ESA listed species, and enhancement of game populations may have the opposite perspective. They may share support for use of PDM to protect human health and safety and ESA listed species but may be more likely to additionally support PDM for the protection of livestock. These individuals may particularly prefer Alternative 1.

Moreover, for some individuals, overall perceptions of humaneness may not differ substantially among alternatives, only the knowledge of which entities have taken lethal actions. As such, these individuals may consider alternatives which result in PDM by non-WS entities and reduced reporting of PDM actions less ethical than continuation of the Proposed Action (Alternative 1), which includes WS-Wyoming's stringent reporting and accountability requirements.

Sections 2.2.6 and 3.6 of the EA include a detailed discussion of the humanness and ethics regarding WS-Wyoming PDM actions under Alternatives 1, 2, 3, and 4.

Human health and safety

WS-Wyoming determined that all the alternatives posed low risks to human health and safety, and we expect those risks to remain low in the foreseeable future. APHIS-WS has published, or is in the process of publishing, several peer reviewed methods risk assessments to assess human, animal, and environmental safety regarding traps, firearms, and other mechanisms used for PDM in Wyoming (https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/programs/nepa/ct-ws-risk_assessments). Risks may be slightly higher for alternatives that have increased PDM by non-WS entities depending on the level of training and equipment available to the entities conducting PDM. Alternatives that result in increased use of aircraft by non-WS entities conducting aerial PDM are likely to have slightly greater safety risks than WS-Wyoming aerial PDM because of less stringent training and safety equipment (e.g., Automatic Flight Following, ground crew requirements, periodic reporting of flight status) requirement of non-WS pilots. Non-WS entities would not have access to the WS Aviation Training and Operations Center, nor would regulations hold non-WS entities to WS's standards for aircraft use and maintenance, which exceed the Federal Aviation Administration requirements for safe use of aircraft. The APHIS-WS accident rate is below the norms of general aviation even though WS low level aerial operations are inherently more dangerous. No aerial accidents have involved the general public.

Section 3.4 of the EA includes a detailed discussion of human and pet health and safety under Alternatives 1, 2, 3, and 4.

Sociocultural resources

Implementation of PDM on any scale has the potential for creating short-term, localized, seasonal disturbance of sociocultural resources, such as public recreation areas, sites with tribal and cultural uses, and humaneness and ethical considerations. However, under Alternative 1, WS-Wyoming anticipates minimized impacts by using the WS Decision Model, MOUs, and Work Plans to determine the best method for resolving or preventing conflicts with predators and people. Alternatives 2, 3, and 4 may result in greater disturbance of sociocultural resources over a longer period because restrictions on methods and entities conducting the PDM may be less effective at resolving PDM issues in a timely manner. One example of this is that some situations may require continuously implemented nonlethal methods for longer periods of time than lethal methods (e.g., livestock guarding dogs that may chase wildlife or intimidate recreationists; light/siren frightening devices disturbing campers). Under

Alternative 1, WS-Wyoming will continue to work with land management agencies and tribes to identify times and areas where adverse impacts are most likely to occur. WS-Wyoming would select methods and modify procedures to minimize risk of adverse impacts to sociocultural resources. Alternative 1 includes WS-Wyoming's use of preventive lethal PDM, typically aerial PDM, which occurs primarily in the winter months before the calving and lambing season. This alternative may have fewer risks of contact between summer PDM activities and recreational use of public lands because the amount of corrective PDM is likely to be lower in areas where personnel conducted preventive PDM (Wagner and Conover 1999). Moreover, WS-Wyoming usually conducts aerial PDM at the time of year and locations when few recreationists are using public lands. WGFD regulations highly restrict the use of traps and snares in residential recreation areas, state game refuges, state wildlife areas, or public skiing areas; thus, WS-Wyoming expects limited impact of these methods on recreationists.

As discussed above, reductions in WS-Wyoming use of lethal methods may result in increases in uses of the same or similar methods by non-WS entities. These entities are not under the same obligations to consult with land management agencies and tribes, and their actions may increase the risks to recreational and cultural uses of sites relative to similar actions by WS-Wyoming. Without such consultations, the general public, land managers, or tribes will have limited to no ability to influence PDM activities conducted by non-WS entities.

Section 3.6 of the EA includes a detailed discussion of sociocultural issues under Alternatives 1, 2, 3, and 4.

VII. ACCOMPLISHMENT OF GOALS

The goal of WS-Wyoming PDM is to meet the APHIS-WS mission of professionally supporting the coexistence of humans and wildlife. WS-Wyoming developed goals and objectives for implementing PDM to protect various resources and evaluate impacts on the human environment, and we cited these goals and objectives throughout this EA (EA Section 1.11.2). WS-Wyoming considered and evaluated the ability of the WS-Wyoming program to implement PDM and achieve stated goals and objectives on the interaction of the issues upon each alternative. Only Alternative 1, the Proposed Action, met all goals and objectives (Table 2).

Alternative 2 accomplishes most goals for implementing PDM, but it does not meet the goal and objective of preventing livestock losses from predation. Because WS-Wyoming would only use lethal action in a corrective manner, this alternative would require livestock producers to incur losses before WS-Wyoming provided some effective forms of assistance. Further, the corrective response by WS-Wyoming would overwhelm existing personnel because most losses occur during a compressed time period: the lambing and calving season, which occurs a few spring months each year.

Alternative 3 could marginally meet goals and objectives associated with implementing PDM. The success of Alternative 3 would depend on the ability of state and local government agencies and the private sector to implement effective PDM. It would also depend on the impact of WS-Wyoming technical assistance and its research division. Challenges include the need for the private sector to recover costs and make a profit, which makes implementation of a cost effective and efficient program that minimizes livestock losses unlikely under Alternatives 3 and 4. Private companies and individuals also face additional restrictions for implementing PDM on federal and state lands.

Alternative 4 would be unable to meet nearly all goals and objectives. This Alternative would be similar to the analysis for Alternative 3, but the lack of technical assistance provided by WS-Wyoming and its research center would exacerbate the inability to meet goal and objectives.

VIII. DECISION

I have carefully reviewed the EA prepared for PDM and the input resulting from the public involvement process. I believe the need for actions and issues identified in the EA would be best addressed through implementation of Alternative 1, the Proposed Action. I have selected Alternative 1 because: (1) it offers the greatest chance at maximizing effectiveness and benefits to the broadest range of affected resources within current funding constraints; (2) it offers a balanced approach to the issues of humaneness, ethics, and recreational values; (3) it will continue to minimize risk of wildlife conflicts with the public through consultation and coordination with land management agencies and tribes; (4) it will minimize risks to nontarget species; (5) it will result in low to moderate magnitude of effects on predator populations, with moderate effects being short-term, localized, and intentional, under the direction of the state wildlife agency to achieve specific goals beneficial to wildlife; and (6) it will not result in impacts on target predator populations of significant magnitude, scope, or duration to result in substantial indirect impacts due to trophic cascades. Alternative 1 also enables WS-Wyoming to maximize opportunities for tribal consultation and participation on PDM decision-making and facilitates efforts to reduce risk of adverse impacts on sites of cultural importance to tribes, tribal uses of natural resources, and cultural practices of tribal members.

IX. FINDING OF NO SIGNIFICANT IMPACT

The analysis in the EA indicates that Alternative 1, the Proposed Action, does not constitute a major federal action significantly affecting, individually or cumulatively, the quality of the human environment. I agree with this conclusion and therefore determine that an Environmental Impact Statement (EIS) will not be prepared. This determination is based on consideration of the following factors:

- A. The proposed activities will occur in limited areas of Wyoming, when requested, and are not national or regional in scope (EA Section 1.15.4).
- B. The proposed activities will not significantly affect human health and safety. PDM methods are target specific and are not likely to adversely affect human health and safety (EA Section 3.4). In some cases, WS-Wyoming may conduct PDM to reduce risks to human health and safety caused by predators (EA Section 1.17.4). WS-Wyoming is not aware of any non-WS employees harmed in Wyoming by its lethal PDM methods since WS-Wyoming wrote the 1997 and 1998 PDM EAs.
- C. The proposed activities will not have an impact on unique characteristics of the geographic area, such as historic or cultural resources (EA Section 1.16.5.3), park lands (Section 2.11.2.7), prime farmlands (EA Section 2.4), wetlands and other sensitive aquatic resources (EA Section 2.4), or ecologically critical areas (EA Section 3.2.1.1). The nature of the methods proposed for removing predators do not significantly affect the physical environment (EA Chapter 3). WS-Wyoming consults with public land management agencies during development of Work Plans to identify sensitive areas and times WS-Wyoming personnel should avoid PDM actions or use modified PDM methods to minimize risks of significant beneficial or negative impacts on these types of areas or to the general public (EA Section 1.11.4). WS-Wyoming will conduct PDM in WAs or

WSAs in accordance with applicable MOUs, the land-managing agency's approval and regulations, and any necessary Minimum Requirements Analyses (EA Section 1.14.3).

- D. The effects on the quality of the human environment of the proposed activities are not highly controversial. Although some people oppose aspects of PDM, the methods and impacts of PDM are not controversial among experts in the field of managing wildlife conflicts (EA Section 2.3.6).
- E. The possible effects of the proposed activities on the quality of the human environment are not highly uncertain and do not involve unique or unknown risks (EA Section 2.3.6). Although exact population estimates are not available for some target species, the EA uses the best information available. The EA uses conservative population estimates and evaluates the upper limit of take to provide bounds on the impacts which might occur. Consultation and coordination with state and federal agencies with management responsibility for preserving sustainable populations of target and nontarget species and ecosystems and project monitoring helps to ensure that program activities do not have significant adverse impacts (EA Sections 1.13 and 1.14).
- F. The proposed activities do not establish a precedent for actions with future significant effects or represent a decision in principle about a future consideration. Management decisions made by WS-Wyoming based on the analysis in the EA do not set a precedent for other WS state programs. Management decisions made for each WS state program are made independently, based on: state-specific information on wildlife populations and ecosystems; state-specific land use patterns; state, local, and tribal regulations and policies; state-specific wildlife management plans and objectives; and, other state-specific and local factors, including the types of PDM services requested and authorized by state, county, and local management entities.
- G. The EA did not identify any significant cumulative effects. WS-Wyoming will coordinate all PDM activities, including removal, with the applicable regulatory agency (e.g., USFWS, WGFD, WDA, BLM, USFS) to help ensure cumulative impacts of WS-Wyoming actions do not have significant adverse impacts on native wildlife populations and ecosystems. During the timeframe analysis of this EA, WS-Wyoming had one nontarget golden eagle take (EA Section 3.2.1.2). Analysis of direct, indirect, and cumulative impacts on target and nontarget species indicates that the impacts of WS-Wyoming predator take are not of significant duration, scope, or magnitude to result in sustained reductions in predator populations and associated potential for disruptions to trophic cascades. Coyote harvest, while numerically large, has had no adverse effect on sustainable populations (EA Section 3.1.1.1). WS-Wyoming continues coordination with USFWS and WGFD to avoid take of ESA listed species and has completed Section 7 consultation for listed species in Wyoming (EA Section 1.14.4).
- H. The proposed activities do not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor will it cause loss or destruction of significant scientific, cultural, or historical resources. In general, PDM does not have the potential to affect historic resources. WS-Wyoming will request further consultation if conducting PDM actions that may affect historic resources. WS-Wyoming contacted federally recognized tribes in Wyoming during preparation of this EA (EA Section 1.16.5.3).

Table 1. Analysis of key issues within each alternative of the environmental assessment titled “Predator Damage and Conflict Management in Wyoming, December 2020”.

Issues	Alternative 1 <i>Continue Predator Management Program</i>	Alternative 2 <i>Lethal Predator Management for Corrective Action Only</i>	Alternative 3 <i>Provide Technical Assistance Only</i>	Alternative 4 <i>No Predator Damage Management by WS</i>
Effective at reducing predation losses	Immediate response by WS	Response by WS after damage occurs	No operational PDM by WS; Requester must contract with non-WS entity for operational assistance	No PDM by WS; Requester must contract with non-WS entity
Protect natural resources	Immediate response by WS	Response by WS after damage occurs	No operational PDM by WS; Requester must contract with non-WS entity	No PDM by WS; Requester must contract with non-WS entity
Protect public from predator attacks	Immediate response by WS	Immediate response by WS	No operational PDM by WS; State must certify damage then contract with non-WS entity	No PDM by WS; State must certify damage then contract with non-WS entity
Participate in research	High participation by WS	High participation by WS	No operational participation by WS	No participation by WS
Use of M-44’s on private or state lands	Full use of PDM methods by WS	Full use of PDM methods by WS only after damage	No operational assistance by WS; Requester must contract with certified non-WS entity	No assistance by WS; Requester must contract with certified non-WS entity
Use of M-44’s on federal lands	Full use of PDM methods by WS	Full use of PDM methods by WS only after damage	No use by WS or non-WS entities	No use by WS or non-WS entities
Use of aerial PDM on private and state lands	Full use of PDM methods by WS	Full use of PDM methods by WS only after damage	No operational assistance by WS; Requester must contract with certified non-WS entity	No assistance by WS; Requester must contract with certified non-WS entity
Use of aerial PDM on federal lands	Full use of PDM methods by WS	Full use of PDM methods by WS only after damage	No use by WS or non-WS entities	No use by WS or non-WS entities
Take of nontarget wildlife	Low risk by WS; No jeopardy to Canada lynx, grizzly bears, and black-footed ferrets; moderate risk by non-WS entities	Low risk by WS; No jeopardy to Canada lynx, grizzly bears, and black-footed ferrets; moderate risk by non-WS entities	No risk by WS; Moderate risk by non-WS entities as private PDM increases	No risk by WS; Moderate risk by non-WS entities as private PDM increases

Issues	Alternative 1 <i>Continue Predator Management Program</i>	Alternative 2 <i>Lethal Predator Management for Corrective Action Only</i>	Alternative 3 <i>Provide Technical Assistance Only</i>	Alternative 4 <i>No Predator Damage Management by WS</i>
Use of PDM to protect livestock on private, state, and federal lands	Full use of PDM methods by WS	Full use of PDM methods by WS only after damage	No operational PDM by WS; Private individual and company PDM increases	No PDM by WS; Private individual and company PDM increases
Use of PDM to protect ESA listed species	Full use of PDM methods by WS	Full use of PDM methods by WS only after damage	No operational PDM by WS; Requester must contract with non-WS entity	No PDM by WS; Requester must contract with non-WS entity
Take of coyote	WS take averaged 7.31% annually in Wyoming during the timeframe of this EA; Cumulative take including non-WS entities averaged 8.83% annually	Small decrease in WS take due to no preventative PDM; Small increase in take by non-WS entities compared to Alt. 1	No take by WS; Increase in take by non-WS entities compared to Alt.1 and 2	No take by WS; Increase in take by non-WS entities compared to Alt.1 and 2
Reporting take of predators	All take reported by WS; Some reported by private individuals	All take reported by WS; Some reported by private individuals	No WS take; Most reported by state and contracted entities; Some reported by private individuals	No WS take; Most reported by state and contracted entities; Some reported by private individuals
Impacts to biodiversity and ecosystem stability	No significant impacts by WS	No significant impacts by WS	No significant impacts by WS; None to slightly detectable impacts generally by non-WS entities	No impacts by WS; Low impacts by non-WS entities
Humaneness and animal welfare aspects of PDM methods	Management methods are employed as humanely consistent with AVMA standards, but some individuals may perceive any use of lethal methods as inhumane	No use of preventative lethal PDM; Some individuals may prefer this alternative, but others may perceive any use of lethal methods as inhumane	No operational PDM by WS; Some individuals may prefer this alternative, but others may perceive continued technical assistance of lethal PDM methods to be employed by private entities as inhumane	No PDM by WS; Some individuals may prefer this alternative
Impacts to stake holders, including aesthetics of wildlife	Impacts would be variable and mixed because of differing philosophical, aesthetic, and personal values	Temporary increase in potential adverse impacts to individuals with animals at risk from predators until WS response after damage	Increase in potential adverse impacts to individuals with animals at risk from predators or human and pet health and safety until requester	Increase in potential adverse impacts to individuals with animals at risk from predators or human and pet health and safety until requester

Issues	Alternative 1 <i>Continue Predator Management Program</i>	Alternative 2 <i>Lethal Predator Management for Corrective Action Only</i>	Alternative 3 <i>Provide Technical Assistance Only</i>	Alternative 4 <i>No Predator Damage Management by WS</i>
			contracts with non-WS entity	contracts with non-WS entity
Consult with land managers and tribes before implementing PDM	WS would consult	WS would consult	No operational PDM by WS; non-WS entities unlikely to consult	No PDM by WS; non-WS entities unlikely to consult
Risk to recreation on public land	Low to no risk; Limited PDM allowed in residential recreation areas, state game refuges, state wildlife areas, or public skiing areas	Low to no risk; Limited PDM allowed in residential recreation areas, state game refuges, state wildlife areas, or public skiing areas	Low to no risk; No operational assistance by WS; No PDM in residential recreation areas, state game refuges, state wildlife areas, or public skiing areas	Low to no risk; No PDM by WS; No PDM in residential recreation areas, state game refuges, state wildlife areas, or public skiing areas
Impacts to Wilderness Areas	No significant impact; Coordination and Minimum Requirement Analysis (MRA) by federal agencies as appropriate	No significant impact; Coordination and Minimum Requirement Analysis (MRA) by federal agencies as appropriate	No impact; No operational PDM by WS	No impact; No PDM by WS

Table 2. Analysis of the ability of four alternatives to meet the goals and objectives of WS-Wyoming regarding predator damage management in Wyoming.

Objectives	Alternative 1 <i>Continue Predator Management Program</i>	Alternative 2 <i>Lethal Predator Management for Corrective Action Only</i>	Alternative 3 <i>Provide Technical Assistance Only</i>	Alternative 4 <i>No Predator Damage Management by WS</i>
Provide for WS personnel safety	Yes	Yes	Yes	Not applicable
Respond to all reported losses or threats	Yes	Yes	Some	No
Respond to requests for assistance in a timely manner	Yes	Most, but not all	Some	No
Resolve predator damage problems	Yes	Most, but not all	Some	No
Address predator risks to human and pet health and safety	Yes	Yes	Some	No
Address predator damage and threats to agriculture	Yes	Most, but not all	Some	No

Objectives	Alternative 1 <i>Continue Predator Management Program</i>	Alternative 2 <i>Lethal Predator Management for Corrective Action Only</i>	Alternative 3 <i>Provide Technical Assistance Only</i>	Alternative 4 <i>No Predator Damage Management by WS</i>
Address predator damage and threats to natural resources	Yes	Most, but not all	Some	No
Reduce risk of wildlife strike hazards to aircraft	Yes	Yes	Some	No
Prevent predator damage when feasible	Yes	No	No	No
Minimize nontarget take	Yes	Yes	Most, but not all	No

It is my decision to implement the proposed actions (Alternative 1). Copies of the final Environmental Assessment are available upon request from the Wyoming Wildlife Service State Office, P.O. Box 67, Casper, WY 82602; (307) 261-5336, or on the WS website at: https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/programs/nepa/environmental-assessments/sa_ws_environmental_assessments_state/ct_wyoming.

Keith P. Wehner,
 Director, Western Region
 USDA, APHIS, Wildlife Services
 Fort Collins, Colorado

Date