

**DECISION AND FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT: REDUCING COYOTE DAMAGE TO LIVESTOCK AND
OTHER RESOURCES IN LOUISIANA**

PURPOSE AND NEED FOR ACTION

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program prepared an Environmental Assessment (EA) to analyze the potential impacts to the quality of the human environment from resolving damage and threats of damage associated with coyotes (*Canis latrans*) (USDA 2016). The EA and this Decision ensure WS complies with the National Environmental Policy Act (NEPA), with the Council on Environmental Quality guidelines (see 40 CFR 1500), and with the APHIS' NEPA implementing regulations (see 7 CFR 372). WS has previously developed an EA that analyzed the need for action to manage damage associated with coyotes in the State (USDA 2002). Since the new EA re-evaluated activities associated with coyotes to address a new need for action and the associated affected environment, the outcome of this Decision for the new EA will supersede the previous EA that addressed damage management activities associated with coyotes.

The need for action identified in Section 1.2 of the new EA arises from requests for assistance that WS receives. The EA evaluates the need for action to manage damage associated with coyotes, the potential issues associated with managing damage, and the environmental consequences of conducting different alternatives to meet the need for action while addressing the identified issues. WS defined the issues associated with meeting the need for action and identified preliminary alternatives through consultation with the Louisiana Department of Wildlife and Fisheries (LDWF). The EA analyzes four alternatives in detail to meet the need for action and to address the issues analyzed in detail. Section 1.7 of the EA identified several decisions to be made based on the scope of the EA.

AFFECTED ENVIRONMENT AND ISSUES

Coyote damage or threats of damage could occur statewide in Louisiana wherever coyotes occur. Coyotes are capable of utilizing a variety of habitats in the State. Coyotes occur throughout the year across the State where suitable habitat exists for foraging and shelter.

Issues are concerns regarding potential effects that might occur from a proposed activity. Federal agencies must consider such issues during the NEPA decision-making process. Section 2.2 of the EA describes the issues considered and evaluated in detail by WS as part of the decision-making process. In addition to those issues analyzed in detail, several issues were identified during the development of the EA but were not considered in detail. The rationale for the decision not to analyze those issues in detail is discussed in Section 2.3 of the EA. To identify additional issues and alternatives, WS made the EA available to the public for review and comment through notices published in local media and through direct notification of interested parties. WS made the EA available to the public for review and comment by a legal notice published in *The Advocate* newspaper from January 31, 2016 through February 2, 2016. WS also made the EA available to the public for review and comment on the APHIS website on January 20, 2016 and on the regulations.gov website beginning on January 19, 2016. WS also sent a notice of availability directly to agencies, organizations, and individuals with probable interest in managing coyote damage in the State. The public involvement process ended on March 11, 2016. During the public comment period, WS received six comments on the draft EA. Appendix A of this decision summarizes the comments received and provides response to the comments. Based on further review of the draft EA, WS incorporated minor editorial changes into the final EA. Those minor changes enhanced the understanding of the EA, but did not change the analysis provided in the EA.

ALTERNATIVES

The EA evaluated four alternatives in detail to respond to the need for action discussed in Chapter 1 and the issues identified in Chapter 2 of the EA. Section 3.1 of the EA provides a description of the alternatives evaluated in detail. A detailed discussion of the effects of the alternatives on the issues occurs in Chapter 4 of the EA. WS also considered additional alternatives, but the EA did not evaluate those alternatives in detail. Section 3.2 of the EA provides the reasons for not evaluating those alternatives in detail. WS would incorporate those standard operating procedures discussed in Section 3.3 and Section 3.4 of the EA into activities if the decision-maker selected Alternative 1 (use of lethal and non-lethal methods by WS) and when applicable, Alternative 2 (WS would use non-lethal-methods only) and Alternative 3 (WS provides technical assistance only), if selected. If the decision-maker selected Alternative 4 (no involvement by WS), the lack of assistance by WS would preclude the employment or recommendation of those standard operating procedures addressed in the EA.

ENVIRONMENTAL CONSEQUENCES

Section 4.1 of the EA analyzes the environmental consequences of each alternative as those alternatives relate to the issues by analyzing the environmental consequences of each alternative in comparison to determine the extent of actual or potential impacts on the issues. Section 4.1 of the EA provides information needed to make informed decisions when selecting the appropriate alternative to address the need for action. Alternative 1 served as the baseline for the analysis and the comparison of expected impacts among the alternatives.

The following resource values in Louisiana are not expected to be significantly impacted by any of the alternatives analyzed in the EA: soils, geology, minerals, water quality/quantity, flood plains, wetlands, critical habitats (areas listed in threatened or endangered species recovery plans), visual resources, air quality, prime and unique farmlands, aquatic resources, timber, and range. The activities proposed in the alternatives would have a negligible effect on atmospheric conditions including the global climate. Meaningful direct or indirect emissions of greenhouse gases would not occur because of any of the alternatives. Those alternatives would meet the requirements of applicable laws, regulations, and Executive Orders, including the Clean Air Act and Executive Order 13514. The discussion below is a summary of the environmental consequences of the alternatives for each of the issues analyzed in detail.

Issue 1 - Effects of Coyote Damage Management Activities on Target Coyote Populations

Under Alternative 1, WS would incorporate non-lethal and lethal methods described in Appendix B of the EA into an integrated methods approach in which WS' personnel could employ all or a combination of methods to resolve a request for assistance. Non-lethal methods can disperse, exclude, or otherwise make an area unattractive to coyotes that are causing damage; thereby, potentially reducing the presence of those animals at the site and potentially the immediate area around the site. Non-lethal methods generally have minimal impacts on overall populations of animals since those species are unharmed.

A common issue is whether damage management actions would adversely affect the populations of target animals when WS' employees employ lethal methods. Lethal methods can remove specific coyotes that personnel of WS have identified as causing damage or posing a threat to human safety. The number of coyotes removed from a population by WS using lethal methods would be dependent on the number of requests for assistance received. In addition, the number of coyotes removed would be dependent on the number of animals involved with the associated damage or threat, the efficacy of methods employed, and the number of individual coyotes the LDWF¹ authorizes WS to remove, when required. Based on those

¹The LDWF has regulatory authority to manage populations of coyotes in the State (see Section 1.5 of the EA).

quantitative and qualitative parameters addressed in the EA, the anticipated number of coyotes that WS' employees could lethally remove annually to address requests for assistance under the proposed action alternative (Alternative 1) would be of low magnitude when compared to population trend data, population estimates, and/or harvest data.

The lack of WS' direct involvement does not preclude the lethal removal of coyotes by those persons experiencing damage or seeking assistance from other entities. As discussed in Section 1.6 of the EA, coyotes are an "*outlaw quadruped*" in the State, which allows people to remove coyotes at any time and without limit using hunting methods. In addition, coyotes are a furbearer species that people can harvest in the State during the annual trapping season. Under the designation as an "*outlaw quadruped*", people can lethally remove coyotes throughout the year during legal daylight shooting hours when those persons hold a legal hunting license. The LDWF places no limit on the number of coyotes that people can remove. On private property, a landowner, or their lessee or agent, with written permission and the landowner's contact information in possession, may lethally remove coyotes at night using legal methods from the last day of February to the last day of August (LDWF 2015). During the length of the annual trapping season, there is no harvest limit for coyotes. In addition, the LDWF can issue permits to use trapping methods at any time of the year.

If the WS program employed only non-lethal methods under Alternative 2, provided technical assistance only under Alternative 3, or provided no assistance under Alternative 4, those people experiencing damage or threats could remove coyotes themselves under any of those alternatives. In addition, a property owner or manager could seek assistance from private businesses or private hunters/trappers to remove coyotes causing damage. Therefore, WS' involvement in the lethal removal of coyotes under Alternative 1 would not be additive to the number of coyotes that could be removed by other entities in the absence of WS' involvement. The number of coyotes lethally removed annually would likely be similar across the alternatives, since the removal of coyotes could occur even if WS employed only non-lethal methods under Alternative 2 or WS was not directly involved with providing direct operational assistance under Alternative 3 and Alternative 4. WS does not have the authority to regulate the number of coyotes lethally removed annually by other entities.

Issue 2 - Effects of Coyote Damage Management Activities on Non-target Wildlife Species Populations, Including Threatened and Endangered Species

WS' personnel have experience with managing animal damage and receive training in the employment of methods. WS' employees would use the WS Decision Model to select the most appropriate methods to address damage caused by coyotes and to exclude non-target species. To reduce the likelihood of capturing non-target animals, WS would employ selective methods, would employ the use of attractants that were as specific to target species as possible, and determine placement of methods to avoid exposure to non-targets. Section 3.3 and Section 3.4 in the EA discuss the standard operating procedures that WS' personnel would follow to prevent and reduce any potential adverse effects on non-target animals. Despite the best efforts to minimize non-target exposure to methods during program activities, the potential for WS' personnel to disperse, live-capture, or lethally remove non-target animals exists when applying both non-lethal and lethal methods to manage damage or reduce threats to safety.

The unintentional removal or capture of animals during damage management activities conducted under Alternative 1 would primarily be associated with the use of body-gripping traps and in some situations, with live-capture methods, such as foothold traps, cage traps, and cable restraints. The non-target animals lethally removed unintentionally by WS during previous activities are representative of non-target animals that WS' personnel could lethally remove under Alternative 1 (see Section 4.1 of the EA). WS could also lethally remove additional species of non-targets unintentionally under Alternative 1.

Although WS' employees could lethally remove non-target animals, removal of individuals from any species is not likely to increase substantially above the levels analyzed in the EA. WS would continue to monitor activities, including non-target animal removal, to ensure the annual removal of non-target animals would not result in adverse effects to a species' population. WS' personnel have not captured or adversely affected any threatened or endangered species during previous activities conducted in Louisiana.

The ability of the public to reduce damage and threats caused by coyotes would be variable under Alternative 3 and Alternative 4, since the skills and abilities of the person implementing damage management actions or the availability of other entities capable of providing assistance could determine the level of success in resolving damage or the threat of damage. Under Alternative 2, WS would provide direct operational assistance using only non-lethal methods. Similar to Alternative 3 and Alternative 4, the public could continue to use lethal methods or seek the assistance of other entities to employ lethal methods under Alternative 2. If people or other entities apply those methods available as intended, risks to non-target animals would be similar to Alternative 1. If people or other entities apply methods available incorrectly or apply those methods without knowledge of animal behavior, risks to non-target animals would be higher under any of the alternatives. If frustration from the lack of available assistance caused those people experiencing coyote damage to use methods that were not legally available for use, risks to non-targets would be higher. People have resorted to the use of illegal methods to resolve wildlife damage that have resulted in the lethal removal of non-target animals.

WS has determined that the proposed activities "*may affect*" several species listed as threatened or endangered within the State by the United States Fish and Wildlife Service (USFWS) but those effects would be solely beneficial, insignificant, or discountable. Therefore, those effects would warrant a "*not likely to adversely affect*" determination for those species (see Appendix C in the EA). Some of the methods that WS could employ to alleviate damage or reduce threats of damage could result in the unintentional "*take*" of Louisiana black bears (*Ursus americanus luteolus*). Therefore, a "*may affect, likely to adversely affect*" determination was warranted for the Louisiana black bear, which required initiation of a formal consultation with the USFWS. WS also determined the implementation of Alternative 1 would have "*no effect*" on several species currently listed as threatened or endangered in the State based on those methods currently available and based on current life history information for those species.

Pursuant to Section 7 of the ESA, WS consulted with the USFWS on those effects analysis and determinations. The USFWS concurred with those effects determination made by WS (D. Fruge, USFWS pers. comm. 2001, J. Weller, USFWS pers. comm. 2015). The USFWS issued a biological opinion that managing damage caused by coyotes using those methods available would not jeopardize the continued existence of the Louisiana black bear (D. Fruge, USFWS pers. comm. 2001, J. Weller, USFWS pers. comm. 2015). Additionally, the USFWS did not anticipate any destruction or adverse modification of Louisiana black bear critical habitat. To minimize the incidental take of black bears, WS would abide by the following reasonable and prudent measures under Alternative 1 as outlined in the biological opinion.

- WS' personnel shall take all necessary precautions to minimize the likelihood of incidental capture of Louisiana black bears (*e.g.*, avoid trap sites and techniques with a high potential to capture non-targets and training on the use of drugs for animal immobilization and restraint).
- WS' personnel shall monitor incidental take to ensure compliance with exempted take levels.

In addition, WS would abide by all terms and conditions outlined by the USFWS in the biological opinion that implement the reasonable and prudent measures. Those terms and conditions are:

- WS shall remain current in training on the use of drugs for animal immobilization and restraint.
- WS shall survey for Louisiana black bear signs prior to conducting activities targeting coyotes in areas adjacent to and within occupied bear habitat.
- WS will educate cooperators on the appropriate precautions for avoiding incidental trapping of bears.
- If a Louisiana black bear is captured, the cooperator will contact a WS employee trained in animal immobilization and restraint immediately. WS shall respond to any such calls as soon as practicable.
- Snares with “*break-away*” locks shall be used in areas occupied or frequented by Louisiana black bears (*i.e.*, those areas where bear signs are present)(see Appendix E of the EA).
- WS shall check all foothold traps and snares set in areas occupied or frequented by Louisiana black bears (*i.e.*, those areas where bear signs are present) at least once a day, as early as possible.
- To help ensure that the extent of incidental take is not exceeded, monitoring reports will be submitted annually (at the end of the fiscal year) to the Ecological Services office of the USFWS in Lafayette, Louisiana. Those reports shall contain, but not be limited to, the location of trapping activities, the type of trapping activities conducted, the number and species of non-target individuals trapped and/or killed, and the types of traps responsible for non-target captures.
- Immediately upon locating a dead, injured, or sick Louisiana black bear in or adjacent to a work area, as an apparent result of the proposed project, initial notification must be made to the Law Enforcement Office of the USFWS in Lafayette, Louisiana. WS must also notify the Ecological Services Field Office of the USFWS in Lafayette, Louisiana. WS should take care in handling and caring for injured individuals and in the preservation of specimens in the best possible state for later analysis of cause of death or injury.

The intent of reasonable and prudent measures, with their implementing terms and conditions, is to minimize incidental take that might otherwise result from the proposed action. The USFWS believes the proposed activities described in Alternative 1 would not incidentally take any more than two Louisiana black bears per year through harassment and one bear per year through death resulting from methods available to manage coyote damage. No previous take of Louisiana black bears has occurred during WS’ activities to manage coyote damage or threats of damage.

In a final rule published on March 11, 2016, the USFWS removed the Louisiana black bear from the Federal List of Endangered and Threatened Wildlife, with an effective date of April 11, 2016 (see 81 FR 13124-13171). Despite the delisting of the Louisiana black bear due to recovery, the WS program would continue to implement the reasonable and prudent measures imposed by the USFWS in the biological opinion, including the terms and conditions. If legal actions negate the delisting action by the USFWS, the WS program in Louisiana would continue to abide by those reasonable and prudent measures required in the biological opinion. Therefore, the WS program in Louisiana would continue to implement those reasonable and prudent measures whether the final rule delisting the Louisiana black bear remains in effect or whether legal actions negate the delisting.

Section 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered or threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. WS would continue to work with the USFWS and/or the LDWF as part of the consideration for the implementation of those conservation recommendations described in the biological opinion issued by the USFWS.

In addition, WS has reviewed those species considered threatened or endangered by the LDWF (see Appendix D of the EA) and determined the proposed action would have no effect on any of those species listed within the State. The LDWF continues to designate the Louisiana black bear as endangered in the State; therefore, WS would continue to implement the reasonable and prudent measures described in the biological opinion issued by the USFWS to minimize the incidental take of bears.

Issue 3 - Effects of Coyote Damage Management Activities on Human Health and Safety

The threats to human safety from methods would be similar across the alternatives since the same methods would be available. However, the expertise of WS' employees in using those methods available likely would reduce threats to human safety since WS' employees would be trained and knowledgeable in the use of those methods. Immobilizing drugs, euthanasia chemicals, and the use of aircraft would be the only methods that would have limited availability to all entities under the alternatives. Immobilizing drugs and euthanasia chemicals are methods that personnel would apply directly to target coyotes; therefore, the availability of those methods to WS would not increase risks to human safety since WS' personnel would receive training in the proper use, storage, and personal safety associated with those methods. Similarly, WS' pilots and crewmembers receive training and have experience to recognize the circumstances that lead to accidents, which would minimize threats to human safety.

If people used methods incorrectly or without regard for human safety, risks to human safety would increase under any of the alternatives that people employed those methods. Although risks do occur from the use of those methods available, when people use those methods in consideration of human safety, the use of those methods would not pose additional risks beyond those associated with the use of other methods. No adverse effects to human safety occurred from the use of methods by WS to alleviate coyote damage in the State from FY 2010 through FY 2015. Based on the use patterns of methods available to address damage caused by coyotes and the experience/training that WS' personnel receive, this alternative would comply with Executive Order 12898 and Executive Order 13045.

Issue 4 - Effects of Coyote Damage Management Activities on the Aesthetic Value of Coyotes

Coyotes may provide aesthetic enjoyment to some people in the State, such as through observations, photographing, and knowing they exist as part of the natural environment. Methods available to manage coyote damage under each of the alternatives could result in the dispersal, exclusion, or removal of individuals or small groups of coyotes to resolve damage and threats. Therefore, the use of methods often results in the removal of coyotes from the area where damage was occurring or the dispersal of coyotes from an area. Since methods available would be similar across the alternatives, the use of those methods would have similar potential impacts on the aesthetics of coyotes. However, even under Alternative 1, the dispersal and/or lethal removal of coyotes would not reach a magnitude that would prevent the ability to view coyotes outside of the area where damage was occurring. The effects on the aesthetic values of coyotes would therefore be similar across the alternatives and would be minimal.

Issue 5 - Humaneness and Animal Welfare Concerns of Methods

WS also identified method humaneness and animal welfare as an issue. Since many methods addressed in Appendix B of the EA would be available under all the alternatives, the issue of method humaneness and animal welfare would be similar for those methods across all the alternatives. WS' personnel would consider method humaneness and animal welfare when providing direct operational assistance or technical assistance under the relevant alternatives. Under the alternatives, other entities could use methods inhumanely if used inappropriately or without consideration of coyote behavior. However, the skill and knowledge of the person implementing methods to resolve damage would determine the efficacy and humaneness of methods.

As stated previously, immobilizing drugs, euthanasia chemicals, and the use of aircraft would be the only methods that would have limited availability to all entities under the alternatives. The ability of WS to provide direct operational assistance under Alternative 1 and Alternative 2 would ensure WS' personnel employ methods as humanely as possible. Under Alternative 3, if those people receiving technical assistance from the WS program employ those methods recommended inappropriately or without consideration of coyote behavior, those persons could employ those methods inhumanely. Despite WS' use or recommendation of only non-lethal methods under Alternative 2, WS' limited involvement under Alternative 3 (technical assistance only), and the lack of involvement by the WS program under Alternative 4, those methods perceived as inhumane by certain individuals and groups would still be available to the public to use to resolve damage and threats caused by coyotes. A lack of understanding of the behavior of coyotes or improperly identifying the damage caused by coyotes along with inadequate knowledge and skill in using methodologies to resolve the damage or threat could lead to incidents with a greater probability of other people perceiving the action as inhumane under Alternative 2, Alternative 3, and Alternative 4.

CUMULATIVE IMPACTS OF THE PROPOSED ACTION

No significant cumulative environmental impacts are expected from any of the four alternatives, including Alternative 1. Under Alternative 1, the lethal removal of coyotes by WS would not have significant impacts on the statewide coyote population when known sources of mortality are considered. No risk to public safety is expected when WS' personnel conduct activities under Alternative 1 and Alternative 2 since only trained and experienced personnel would conduct damage management activities. There is a slight increased risk to public safety when persons who reject assistance and recommendations and conduct their own activities under Alternative 3, and when no assistance is provided under Alternative 4. However, under all of the alternatives, those risks would not be to the point that the impacts would be significant. The analysis in the EA indicates that an integrated methods approach to managing damage and threats caused by coyotes would not result in significant cumulative adverse effects on the quality of the human environment.

DECISION AND RATIONALE

I have carefully reviewed the EA prepared to meet the need for action. I find Alternative 1 to be environmentally acceptable, addressing the issues and needs while balancing the environmental concerns of management agencies, landowners, advocacy groups, and the public. The analyses in the EA adequately address the identified issues, which reasonably confirm that no significant impact, individually or cumulatively, to animal populations or the quality of the human environment are likely to occur from Alternative 1, nor does the alternative constitute a major federal action. Therefore, the analysis in the EA does not warrant the completion of an Environmental Impact Statement.

Based on the analyses in the EA, the issues identified are best addressed by selecting Alternative 1 and applying the associated standard operating procedures discussed in Chapter 3 of the EA. Alternative 1 successfully addresses (1) managing damage using a combination of the most effective methods and does not adversely impact the environment, property, human health and safety, target species, and/or non-target species, including threatened or endangered species; (2) it offers the greatest chance of maximizing effectiveness and benefits to resource owners and managers; (3) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and (4) it offers a balanced approach to the issues of humaneness, animal welfare, and aesthetics when all facets of those issues are considered. Further analysis would be triggered if changes occur that broaden the scope of damage management activities in the State, that affect the natural or human environment, or from the

issuance of new environmental regulations. Therefore, it is my decision to implement Alternative 1 as described in the EA.


Finding of No Significant Impact

Based on the analyses provided in the EA, there are no indications that Alternative 1 would have a significant impact, individually or cumulatively, on the quality of the human environment. I agree with this conclusion and therefore, find that an Environmental Impact Statement should not be prepared. This determination is based on the following factors:

1. WS' activities to manage damage in the State would not be regional or national in scope.
2. Based on the analyses in the EA, the methods available under Alternative 1 would not adversely affect human safety based on their use patterns.
3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. WS' standard operating procedures and adherence to applicable laws and regulations would further ensure that WS' activities do not harm the environment.
4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to managing damage and the methods, this action is not highly controversial in terms of size, nature, or effect.
5. Based on the analysis documented in the EA and the accompanying administrative file, the effects of the proposed damage management program on the human environment would not be significant. The effects of the proposed activities are not highly uncertain and do not involve unique or unknown risks.
6. Alternative 1 would not establish a precedent for any future action with significant effects.
7. No significant cumulative effects were identified through the assessment. The EA analyzed cumulative effects and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within the State of Louisiana.
8. The proposed activities under Alternative 1 would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources.
9. During the development of the EA, WS consulted with the USFWS pursuant to Section 7 of the Endangered Species Act. The United States Fish and Wildlife Service concurred with WS' determinations for federally listed threatened or endangered species. To minimize the incidental take of Louisiana black bears, WS would abide by the reasonable and prudent measures, including the terms and conditions, outlined by the United States Fish and Wildlife Service in their biological opinion issued to WS.
10. The proposed activities under Alternative 1 would comply with all applicable federal, state, and local laws.

The rationale for this decision is based on several considerations. This decision takes into account public comments, social/political and economic concerns, public health and safety, and the best available

science. The foremost considerations are that: 1) WS would only conduct damage management at the request of landowners/managers, 2) management actions would be consistent with applicable laws, regulations, policies and orders, and 3) no adverse effects to the environment were identified in the analysis. As a part of this Decision, the WS program in Louisiana would continue to provide effective and practical technical assistance and direct management techniques that reduces damage and threats of damage.



John McConnell, Acting Director-Eastern Region
USDA/APHIS/WS
Raleigh, North Carolina

4/6/16

Date

LITERATURE CITED

- LDWF. 2015. Louisiana hunting regulations 2015-2016. Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana. 124 pp.
- USDA. 2002. Environmental Assessment – Reduction of coyote damage to livestock and other resources in Louisiana. USDA-APHIS-Wildlife Services, Port Allen, Louisiana.
- USDA. 2016. Reducing coyote damage to livestock and other resources in Louisiana. USDA-APHIS-Wildlife Services, Port Allen, Louisiana.

APPENDIX A

RESPONSES TO COMMENTS ON THE ENVIRONMENTAL ASSESSMENT: REDUCING COYOTE DAMAGE TO LIVESTOCK AND OTHER RESOURCES IN LOUISIANA

During the public involvement process for the draft EA, WS received six comments. WS has reviewed the comments to identify additional issues, alternatives, and/or concerns that the EA did not address. A summary of the comments received during the public involvement process along with responses to the comments occurs below.

I. COMMENTS ON THE NEED FOR ACTION

Comment – Unless a coyote has rabies, leave them alone.

Response: Some species of wildlife, including coyotes, have adapted to and have thrived in human altered habitats. Those species, in particular, are often responsible for the majority of conflicts between people and wildlife. Those conflicts often lead people to request assistance with reducing damage to resources and to reduce threats to human safety. The threshold triggering a request for assistance is often unique to the individual person requesting assistance and many factors can influence when people request assistance (*e.g.*, economic, social, aesthetics). Therefore, what constitutes damage is often unique to the individual person. What one individual person considers damage, another person may not consider as damage. However, the use of the term “*damage*” is consistently used to describe situations where the individual person has determined the losses associated with wildlife is actual damage requiring assistance (*i.e.*, has reached an individual threshold). Many people define the term “*damage*” as economic losses to resources or threats to human safety; however, “*damage*” could also occur from a loss in the aesthetic value of property and other situations where the behavior of wildlife was no longer tolerable to an individual person.

The need for action to manage damage and threats associated with coyotes in Louisiana arises from requests for assistance received by WS (see Section 1.2 of the EA). Coyotes can cause damage to or pose threats to a variety of resources. WS receives requests to reduce or prevent damage from occurring to agricultural resources, natural resources, property, and threats to human safety. WS would only provide assistance after receiving a request for assistance from the appropriate landowner or manager. Therefore, the entity requesting WS’ assistance would determine what activities they would allow and when WS’ assistance was required.

Comment – EA should consider all aspects of reducing coyote damage, not just livestock.

Response: Coyotes can cause damage to or pose threats to a variety of resources. WS receives requests to reduce or prevent damage from occurring to agricultural resources, natural resources, property, and threats to human safety. Section 1.2 of the EA discusses the need to manage damage occurring to agricultural resources, natural resources, and property. Section 1.2 of the EA also addresses the need for action associated with threats occurring to human safety. Therefore, the EA does consider other aspects of managing damage caused by coyotes and is not just limited to damage or threats of damage occurring to livestock.

Comment – Do not remove animals to protect cattle.

Response: Under certain alternatives, WS could employ methods available to resolve damage and reduce threats to human safety that target an individual coyote or a group of coyotes after applying the WS Decision Model (Slate et al. 1992) to identify possible techniques (see WS Directive 2.101, WS Directive

2.105, WS Directive 2.201, WS Directive 2.210). As discussed in the EA, WS would only provide assistance after receiving a request for assistance from the appropriate landowner or manager. Before initiating any direct operational activities, WS and the cooperating entity would sign a Memorandum of Understanding, work initiation document, or another comparable document that would list all the methods the property owner or manager would allow WS to use on property they own and/or manage. Therefore, the entity requesting WS' assistance would determine what activities and methods they would allow and when WS' assistance was required. After WS' employees implemented a damage management strategy, employees would continue to monitor and evaluate the strategy to assess effectiveness. If the strategy were effective, the need for further management would end. In terms of the WS Decision Model, most efforts to resolve wildlife damage consist of continuous feedback between receiving the request and monitoring the results of the damage management strategy.

As discussed in the EA, WS would give preference to non-lethal methods when practical and effective when providing assistance. However, WS' personnel would not necessarily employ non-lethal methods to resolve every request for assistance if deemed inappropriate by WS' personnel using the WS Decision Model, especially when the requesting entity had used non-lethal methods previously and found those methods to be inadequate to resolving the damage or threats of damage. Many non-lethal methods available to alleviate damage or threats associated with coyotes, such as livestock management practices (*e.g.*, night-penning, herding, carcass removal) and physical exclusion (*e.g.*, predator-proof fencing), are not practical for implementation by WS' personnel. Implementation of most non-lethal methods for livestock protection falls within the purview of the livestock producer (Knowlton et al. 1999). As discussed in the EA, livestock producers experiencing damage often employ non-lethal methods to reduce damage or threats prior to contacting the WS program. The continued use of many non-lethal methods can often lead to the habituation of coyotes to those methods, which can decrease the effectiveness of those methods. Therefore, those persons experiencing damage or threats of damage associated with coyotes may seek assistance with the use of available lethal methods.

Comment – Coyotes are not a threat to people

Response: Section 1.2 of the EA addresses the need to manage threats to human health and safety associated with coyotes. People that request assistance are often concerned about potential disease risks or a lack of apprehension of coyotes toward people. In those types of situations, people request assistance because of a perceived risk to human health or safety. As discussed in the EA, risks to human safety associated with zoonotic diseases and aggressive behavior by coyotes are low. However, the low risk does not lessen the concerns of cooperators requesting assistance to reduce threats. Increased public awareness of zoonotic events and aggressive attacks by coyotes has only heightened the concern of some people. Not adequately addressing the threats to the safety of people could lead to an increase in incidences of injury, illness, or loss of human life.

Comment – There is no need for action associated with deer

Response: Predation is one of many mortality factors that influence wildlife populations. Normally, predation by native predators would be part of the function of a healthy ecosystem. Many changes have occurred that have disrupted natural predator-prey relationships. Many of the changes that have occurred can be attributed to human influence, including habitat fragmentation, landscape alteration, and environmental contamination. In addition, human habitation alone can often alter the biological carrying capacity of a local environment. Those human-induced changes can negatively affect the viability of some native wildlife populations. As shown in the EA, coyote predation can influence white-tailed deer populations. However, as was also discussed in the EA, managing predation may or may not result in higher populations depending on many factors. For example, Ballard et al. (2001) found that managing predation benefitted big game mostly when herds were well below forage carrying capacity, when

predation was identified to be a limiting factor, when efforts sufficiently reduced the predator population, when efforts were timed correctly (prior to fawning and denning), and when management focused on a small scale (<259 mi²). The management of the deer population in Louisiana is the responsibility of the Louisiana Department of Wildlife and Fisheries and any activities associated with managing predation on deer would occur at the request of the Louisiana Department of Wildlife and Fisheries.

Comment – Use of information from other States to justify activities in Louisiana

Response: The information provided in the EA relating to areas outside of Louisiana represent examples of damages or threats of damages that have occurred in other areas that are likely to occur in Louisiana. Therefore, damages that occur in other states or nationally are not unique to those areas. Those examples provide a context for the reader of the types of requests WS could receive associated with coyotes in Louisiana. WS developed the EA to evaluate cumulatively the individual projects that WS could conduct to manage damage and threats caused by coyotes. The EA assists in determining if the proposed cumulative management of coyote damage could have a significant impact on the environment based on previous activities conducted by WS and based on the anticipation of conducting additional efforts to manage damage caused by coyotes. Because the goal of WS would be to conduct a coordinated program to alleviate coyote damage and to provide assistance when requested, it is conceivable that additional damage management efforts could occur, including activities to manage those damages and threats of damage that have occurred in other areas and are likely to occur in Louisiana. Thus, the EA anticipates WS receiving those additional types of assistance requests.

Comment – Wildlife damage is often bogus and fake. WS should take photos of any wildlife damages claimed by people requesting assistance. Several studies are available to help prove if it was or was a coyote causing damage. The program may make it easier for people to claim it was a coyote causing damage.

Response: When WS receives a request for direct operational assistance, WS would conduct site visits to assess the damage or threats, would identify the cause of the damage, and would apply the WS Decision Model to determine the appropriate methods to resolve or prevent damage. WS' employees would gather and analyze damage information to determine applicable factors, such as what species was responsible for the damage, the type of damage, the extent of damage, and the magnitude of damage. Other factors that WS' employees could gather and analyze would include the current economic loss or current threat (*e.g.*, threat to human safety), the potential for future losses or damage, the local history of damage, and what management methods, if any, were used to reduce past damage and the results of those actions. Therefore, WS' personnel would evaluate and verify damage before providing assistance.

Comment – Very little damage is occurring on an annual basis. WS uses 5-year figures to make the public think there is a major threat. Keep statistics on an annual basis.

Response: Table 1.1 in the EA shows the reported number of incidents involving coyotes and the monetary losses to resources in Louisiana that WS has received by year between FY 2010 and FY 2015. Therefore, Table 1.1 shows the damage reported to WS on an annual basis from FY 2010 through FY 2015. Table 1.1 only reflects coyote damage associated with requests for assistance received by WS and is not representative of all damage that occurs in the State during a given year. As shown in Table 1.1, WS' personnel have responded to 446 incidents involving coyotes in the State from FY 2010 through FY 2015 associated with coyotes, which is an average of 74 incidents per year. In addition, WS has conducted 452 technical assistance projects in Louisiana that addressed damage and threats associated with coyotes from FY 2010 through FY 2015 involving 961 participants, which is an average of 75 projects per year involving 160 people. The WS program is authorized to protect agriculture and other resources from damage caused by wildlife through the Act of March 2, 1931 (46 Stat. 1468; 7 USC 426-

426b) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 USC 426c). The WS program is the lead federal authority in managing damage to agricultural resources, natural resources, property, and threats to human safety associated with wildlife. Therefore, the goal of WS would be to conduct a coordinated program to alleviate coyote damage in accordance with plans, goals, and objectives developed to reduce damage and to provide assistance when requested, within the constraints of available funding and workforce.

II. COMMENTS ON THE SCOPE OF THE EA

Comment – WS should update the EA periodically

Response: As discussed in Section 1.3 of the EA, WS would conduct reviews of activities conducted under the selected alternative to ensure those activities occurred within the parameters evaluated in this EA. The EA would remain valid until WS determines that new needs for action, changed conditions, new information, new issues, or new alternatives having different environmental impacts requires additional analysis. At that time, WS would supplement this analysis or conduct a separate evaluation pursuant to the NEPA. The monitoring of activities by WS would ensure the EA remained appropriate to the scope of damage management activities conducted by WS in Louisiana under the selected alternative.

III. COMMENTS ON PUBLIC INVOLVEMENT

Comment – WS should make all public comments available for viewing.

Response: All comments received by WS on the EA during the public comment are available for viewing by visiting the website at <http://www.regulations.gov/#!docketDetail;D=APHIS-2016-0006>.

IV. COMMENTS RELATING TO AN ISSUE

Comment – Since coyotes eat rats, removing coyotes will increase rats. Removing coyotes affects biodiversity.

Response: The potential effects of removing coyotes on biodiversity was an issue that WS identified during the development of the EA but was not an issue that WS analyzed in detail within the EA for the reasons provided in Section 2.3 of the EA. Any removal of coyotes by WS under the alternatives would be of low magnitude when compared to the actual statewide population of coyotes. In addition, WS' activities would occur on a small percentage of the land area within the State. WS' personnel only target those coyotes identified as causing damage or pose a threat of damage. Short-term eradication or long-term population suppression of coyote populations are not approaches that WS would consider or conduct.

Comment – There are too many cattle.

Response: The WS program does not have the authority to regulate the number of cattle that people own. The number of cattle that people own is outside the scope of the EA.

Comment – Activities should not occur at the expense of taxpayers. Agriculture producers should pay to protect their livestock. Agriculture producers just shift their costs onto the general taxpayers.

Response: The concern that WS should not provide assistance at the expense of the taxpayer was an issue that WS identified during the development of the EA but was not an issue that WS analyzed in

detail within the EA for the reasons provided in Section 2.3 of the EA. Managing damage caused by wildlife is an appropriate sphere of activity for government programs, since managing wildlife is a government responsibility.

Comment - The killing of coyotes amounts to a government subsidy of business costs for agriculture producers.

Response: As discussed in Section 1.5 of the EA, the WS program is authorized to protect agriculture and other resources from damage caused by wildlife through the Act of March 2, 1931 (46 Stat. 1468; 7 USC 426-426b) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 USC 426c). In addition, the United States Congress continues to appropriate money to WS for the management of wildlife damage to agricultural resources. Changing the agricultural practices that people conduct is not within the authority of the WS program; therefore, is outside the scope of the EA.

Comment - Stop killing predators just because ranchers do not want to spend money for non-lethal methods.

Response: According to National Agricultural Statistics Service (NASS) surveys, many livestock producers already use non-lethal methods to reduce predation (NASS 2000, NASS 2001, NASS 2005, NASS 2011). The NASS (2011) reported that Louisiana cattle producers used exclusion fencing, guard animals, frequent checks, culling, carcass removal, herding, fright tactics, and other non-lethal methods to reduce predation. Therefore, an entity requesting assistance may have already attempted to alleviate damage using non-lethal methods and the WS program would not necessarily employ those same non-lethal methods for that request, since the prior use of those methods were ineffective at reducing damage or threats to an acceptable level to the requester. As stated throughout the EA, the WS program would give preference to non-lethal methods where practical and effective under the alternatives in accordance with WS Directive 2.101. However, few non-lethal methods available to alleviate damage or threats associated with coyotes, such as livestock management practices (*e.g.*, night-penning, herding, carcass removal) and physical exclusion (*e.g.*, predator-proof fencing), are practical for implementation by WS' personnel. The resource owner is responsible for the implementation of most non-lethal methods (Knowlton et al. 1999). As shown by reports from the NASS (2005, 2011), in many cases, livestock producers are already employing non-lethal methods to alleviate or prevent predation.

Comment – WS should look at all of the non-lethal method that cattle producers have used and see if those methods have worked or had no effect at all on the current coyote population.

Response: Many livestock producers use non-lethal methods to reduce predation (NASS 2000, NASS 2001, NASS 2005, NASS 2011). The NASS (2011) reported that Louisiana cattle producers used exclusion fencing, guard animals, frequent checks, culling, carcass removal, herding, fright tactics, and other non-lethal methods to reduce predation. Mitchell et al. (2004) indicated that non-lethal methods to alleviate predation could be effective. However, Mitchell et al. (2004) and others, such as Knowlton et al. (1999), indicate that, although certain non-lethal methods have shown promise, further research is needed to determine their effectiveness and practicality. Non-lethal methods would be an important part of the mix of current strategies used to meet the need for action; however, in some cases, the use of only non-lethal methods would not keep damage or threats of damage at a level that would be acceptable to some people. Andelt (1992) reported that about a third of sheep producers using guard dogs indicated that the use of dogs did not reduce their reliance on other predator control techniques or on predator control agencies. Furthermore, livestock losses could increase as coyotes become accustomed to non-lethal practices (Pfleifer and Goos 1982). Green et al. (1994) found that guard dogs decrease in effectiveness over time, possibly due to an increase in coyotes and/or increase in predatory activities. Shivik (2006) provided a comparison of non-lethal tools for managing predation associated with carnivores, including

the duration of effectiveness of those non-lethal tools. For example, Shivik (2006) noted that electronic guards would only be effective for 40 to 50 days when used to deter coyotes. When evaluating the effectiveness of fladry to exclude coyotes from livestock pastures in Michigan, Davidson-Nelson and Gehring (2010) found “...no long-term exclusion of coyotes from fladry-protected livestock pastures.” However, design modification may improve the effectiveness of fladry (Young et al. 2015).

When receiving a request for assistance, WS would make a determination as to whether the assistance request was within the authority of WS. If an assistance request were within the authority of WS, WS’ employees would gather and analyze damage information to determine applicable factors, such as what species was responsible for the damage, the type of damage, the extent of damage, and the magnitude of damage. Other factors that WS’ employees could gather and analyze would include the current economic loss or current threat (e.g., threat to human safety), the potential for future losses or damage, the local history of damage, and what management methods, if any, were used to reduce past damage and the results of those actions. Therefore, WS’ personnel would consider the methods used by the requester when formulating a management strategy.

Comment – Coyotes can have both positive and negative effects

Response: As stated in the EA, wildlife can have either positive or negative values depending on the perspectives and circumstances of individual people. In general, people regard wildlife as providing economic, recreational, and aesthetic benefits. Knowing that wildlife exists in the natural environment provides a positive benefit to some people. However, activities associated with wildlife may result in economic losses to agricultural resources, natural resources, property, and threaten human safety. Therefore, an awareness of the varying perspectives and values are required to balance the needs of people and the needs of wildlife. When addressing damage or threats of damage caused by wildlife, wildlife damage management professionals must consider not only the needs of those people directly affected by wildlife damage but a range of environmental, sociocultural, and economic considerations as well.

V. COMMENTS RELATING TO AN ALTERNATIVE

Comment – Do not hurt coyotes. Leave wildlife alone.

Response: WS developed several alternatives to meet the need for action and address the identified issues associated with managing damage caused by coyotes in the State. Section 3.1 of the EA contains a discussion of the alternatives that WS analyzed in detail to meet the need for action discussed in Chapter 1 and to address the identified issues discussed in Chapter 2. Section 3.2 of the EA also discusses alternatives considered but not analyzed in detail, with rationale. WS developed the alternatives based on the need for action and issues using the WS Decision Model. Two of the alternatives that WS considered in detail in the EA included a technical assistance only alternative (Alternative 3) and a no involvement by WS alternative (Alternative 4). Therefore, WS considered this alternative in detail within the EA.

Comment – Leave coyotes alone unless they have rabies. Do not give healthy coyotes rabies so WS can harm them.

Response: The most common disease concern expressed by individuals requesting assistance is the threat of rabies transmission to people, pets, and livestock. Rabies is an acute fatal viral disease of mammals, most often transmitted through the bite of a rabid animal that poses an indirect and direct threat to people. Indirect threats to people occur from exposure to pets or livestock that a rabid animal has infected. Direct threats can occur from handling infected animals or from aggressive animal behavior caused by rabies. In addition to zoonotic diseases, coyotes can cause damage to agricultural resources,

natural resources, property, and pose threat to the safety of people. Section 1.2 of the EA addresses the need for action, which extends beyond the need to address the threats associated with rabies. WS would not infect coyotes with rabies.

Comment - Agriculture producers should use dogs, llamas, or put up fences to protect livestock.

Response: Many livestock producers use non-lethal methods to reduce predation (NASS 2000, NASS 2001, NASS 2005, NASS 2011). The NASS (2011) reported that Louisiana cattle producers used exclusion fencing, guard animals, frequent checks, culling, carcass removal, herding, fright tactics, and other non-lethal methods to reduce predation. The primary non-lethal method employed by livestock producers in the United States is guard animals with a reported 36.9% of producers that use at least one non-lethal methods using guard animals. Cattle producers spent nearly \$188.5 million dollars in the United States on non-lethal methods to reduce cattle and calf losses from predation by animals in 2010 (NASS 2011). The use of exclusion fencing was reported as being employed by 38.5% of cattle producers in Louisiana that used at least one non-lethal method along with 31.0% reporting the use of guard animals in 2010 (NASS 2011).

Comment – WS should use guard animals.

Response: The WS program often recommends the use of guard animals, but does not have an operational guard animal program. Implementation of most non-lethal methods for livestock protection falls within the purview of the livestock producer (Knowlton et al. 1999). Many non-lethal methods (*e.g.*, fencing and guard animals) require a large investment in time to implement and have a high initial cost (Mitchell et al. 2004), such as raising, caring for, and acclimating guard animals. Therefore, guard animals are impractical for implementation by WS' personnel.

Comment – WS should not use restraining cables or any other device that can harm any animal.

Response: Cable Restraints are typically made of wire or cable, and can be set to capture an animal by the neck, body, or foot. People can use cable restraints as either lethal or live-capture devices depending on how or where they are set. Cable restraints set to capture an animal by the neck are usually lethal but users can attach stops to the cable to increase the probability of a live capture. Snares positioned to capture the animal around the body can be a useful live-capture device, but people use them more often as a lethal control technique. Snares can incorporate a breakaway feature to release non-target wildlife and livestock where the target animal is smaller than potential non-targets (Phillips et al. 1990, Phillips 1996). Snares can be effectively used wherever a target animal moves through a restricted travel lane (*e.g.*, under fences or trails through vegetation). When an animal moves forward into the loop formed by the cable, the noose tightens and the animal is held. Snares must be set in locations where the likelihood of capturing non-target animals is minimized. The foot or leg snare can be set as a spring-powered non-lethal device, activated when an animal places its foot on the trigger or pan.

The Association of Fish and Wildlife Agencies (AFWA), along with federal and private partners working cooperatively, embarked on a goal to develop voluntary Best Management Practices (BMP) for trapping and snaring furbearers in the United States (Batcheller et al. 2000). The BMPs “...are carefully researched recommendations designed to address animal welfare and increase trappers’ efficiency and selectivity” (Association of Fish and Wildlife Agencies 2014). Cable restraints are methods that meet BMP criteria for coyotes in the eastern United States (Association of Fish and Wildlife Agencies 2014). WS Directive 2.450 states, “WS recognizes the value and use of the trapping [BMP] guidelines...” and “WS intends to utilize these guidelines as a basis for policy formulation...”. Therefore, WS could continue to consider the use of cable restraints to manage damage or threats of damage associated with coyotes in Louisiana.

Comment – No legitimate need for killing coyotes

Response: As stated previously, those persons experiencing damage often employ non-lethal methods to reduce damage or threats prior to contacting the WS program. For example, many livestock producers already use non-lethal methods to reduce predation (NASS 2000, NASS 2001, NASS 2005, NASS 2011), including livestock producers in Louisiana (NASS 2005, NASS 2011). Mitchell et al. (2004) indicated that non-lethal methods to alleviate predation could be effective. However, Mitchell et al. (2004) and others, such as Knowlton et al. (1999), indicate that, although certain non-lethal methods have shown promise, further research is needed to determine their effectiveness and practicality. Non-lethal methods would be an important part of the mix of strategies used to meet the need for action; however, in some cases, the use of only non-lethal methods would not keep damage or threats of damage at a level that would be acceptable to some people. Andelt (1992) reported that about a third of sheep producers using guard dogs indicated that the use of dogs did not reduce their reliance on other predator control techniques or on predator control agencies. Furthermore, livestock losses could increase as coyotes become accustomed to non-lethal practices (Pfieffer and Goos 1982). Green et al. (1994) found that guard dogs decrease in effectiveness over time, possibly due to an increase in coyotes and/or increase in predatory activities. Shivik (2006) provided a comparison of non-lethal tools for managing predation associated with carnivores, including the duration of effectiveness of those non-lethal tools. For example, Shivik (2006) noted that electronic guards would only be effective for 40 to 50 days when used to deter coyotes. When evaluating the effectiveness of fladry to exclude coyotes from livestock pastures in Michigan, Davidson-Nelson and Gehring (2010) found “...*no long-term exclusion of coyotes from fladry-protected livestock pastures.*” However, design modification may improve the effectiveness of fladry (Young et al. 2015).

Many non-lethal methods available to alleviate damage or threats associated with coyotes, such as livestock management practices (e.g., night-penning, herding, carcass removal) and physical exclusion (e.g., predator-proof fencing), are not practical for implementation by WS’ personnel. Implementation of most non-lethal methods for livestock protection falls within the purview of the livestock producer (Knowlton et al. 1999). The continued use of many non-lethal methods can often lead to the habituation of coyotes to those methods, which can decrease the effectiveness of those methods. Therefore, those persons experiencing damage or threats of damage associated with coyotes may seek assistance with the use of available lethal methods.

Comment – Commenter opposes any involvement by WS. Support for no involvement by WS.

Response: The WS program appreciates the comment. WS developed alternatives to meet the need for action, which the EA describes in Chapter 1, and to address the identified issues associated with managing damage caused by coyotes, which were described in Chapter 2 of the EA. The EA analyzed a no involvement by the WS program alternative (Alternative 4; see Section 3.1 of the EA). Under Alternative 4, the WS program would not be involved with any aspect of managing coyote damage in the State. Section 4.1 of the EA analyzes the environmental consequences of each of the alternatives in comparison to determine the extent of actual or potential impacts on the issues, including the no involvement by WS alternative. Based on the analyses of the alternatives that were developed to address those issues analyzed in detail within the EA, including individual and cumulative impacts of those alternatives, the WS program will issue a decision for the final EA.

Comment – There should be no hunting and/or trapping.

The LDWF has regulatory authority to manage populations of coyotes in the State, including the establishment of hunting and/or trapping seasons in the State (see Section 1.5 of the EA). The

management of wildlife populations, including the coyote population in the State, is outside the authority of the WS program. The establishment of hunting and/or trapping seasons is outside the scope of the EA.

Comment – WS only uses lethal methods and wants to kill all wildlife. Agriculture producers only want to kill wildlife and do not want any wild animal to exist.

Response: The WS Decision Model would be the implementing mechanism for a damage management program under applicable alternatives that could be adapted to an individual damage situation. When WS receives a request for direct operational assistance, WS would conduct site visits to assess the damage or threats, would identify the cause of the damage, and would apply the Decision Model described by Slate et al. (1992) and WS Directive 2.201 to determine the appropriate methods to resolve or prevent damage. Discussion of the Decision Model and WS' use of the Model occurs in Section 3.1 of the EA. In addition, WS would give preference to non-lethal methods when practical and effective (see WS Directive 2.101). Appendix B in the EA discusses many non-lethal methods that WS' personnel could recommend or employ to resolve damage under the applicable alternatives. The WS program does not attempt to eradicate any species of native wildlife in the State. WS operates in accordance with federal and state laws and regulations enacted to ensure species viability.

VI. COMMENTS ON FUNDING

Comment – Funding for the WS program should be cut. APHIS should be shut down.

Response: Damage management activities are an appropriate sphere of activity for government programs, since managing wildlife is a government responsibility. Eliminating the WS program would be similar to the alternative analyzed in detail in the EA where there would be no involvement by the WS program with any aspect of managing coyote damage in Louisiana (Alternative 4). Therefore, adding an analysis of an additional alternative whereby WS or another entity pursued the termination of the funding for WS would not add to the existing analyses in the EA. Under Alternative 4, the WS program would not be involved with any aspect of managing coyote damage; however, other entities could conduct damage management activities in the absence of the WS program.

VII. LITERATURE CITED

- Andelt, W. F. 1992. Effectiveness of livestock guarding dogs for reducing predation on domestic sheep. *Wildlife Society Bulletin* 20:55-62.
- Association of Fish and Wildlife Agencies. 2014. *Best Management Practices: Trapping coyotes in the Eastern United States*. Association of Fish and Wildlife Agencies. 18 pp.
- Ballard, W. B., D. Lutz, T. W. Keegan, L. H. Carpenter, and J. C. deVos, Jr. 2001. Deer-predator relationships: a review of recent North American studies with emphasis on mule and black-tailed deer. *Wildlife Society Bulletin* 29:99-115.
- Batcheller, G. R., T. A. Decker, D. A. Hamilton, and J. F. Organ. 2000. A vision for the future of furbearer management in the United States. *Wildlife Society Bulletin* 28:833-840.
- Davidson-Nelson, S. J., and T. M. Gehring. 2010. Testing fladry as a nonlethal management tool for wolves and coyotes in Michigan. *Human-wildlife Interactions* 4:87-94.

- Green, J. S., F. R. Henderson, and M. D. Collinge. 1994. Coyotes. Pp C51-C76 in S. E. Hygnstrom, R. M. Timm, and G. E. Larson, eds. Prevention and control of wildlife damage. University of Nebraska-Lincoln, Lincoln, Nebraska.
- Knowlton, F. F., E. M. Gese, and M. M. Jaeger. 1999. Coyote depredation control: An interface between biology and management. *J. Range Manage.* 52:398-412.
- Mitchell, B. R., M. M. Jaeger, and R. H. Barrett. 2004. Coyote depredation management: Current methods and research needs. *Wildlife Society Bulletin* 32:1209-1218.
- NASS. 2000. Sheep and goat predator loss. USDA, National Agricultural Statistics Service, Washington, D.C. 10 pp.
- NASS. 2001. Cattle predator loss. USDA, National Agricultural Statistics Service, Washington, D.C. 13 pp.
- NASS. 2005. Sheep and goat death loss. USDA, National Agricultural Statistics Service, Washington, D.C. 21 pp.
- NASS. 2011. Cattle death loss. Released May 12, 2011. USDA, National Agricultural Statistics Service, Washington, D.C. 17 pp.
- Pfeifer, W. K., and M. W. Goos. 1982. Guard dogs and gas exploders as coyote depredation control tools in North Dakota. *Proc. Vertebr. Pest Conf.* 10:55-61.
- Phillips, R. L. 1996. Evaluation of 3 types of snares for capturing coyotes. *Wildlife Society Bulletin* 24: 107-110.
- Phillips, R. L., F. S. Blom, and R. E. Johnson. 1990. An evaluation of breakaway snares for use in coyote control. Pages 255-259 in L. R. Davis and R. E. Marsh, eds., *Proceedings of the 14th Vertebrate Pest Conference*, University of California-Davis, Davis California.
- Shivik, J. A. 2006. Tools for the edge: What's new for conserving carnivores. *BioScience* 56:253-259.
- Slate, D.A., R. Owens, G. Connolly, and G. Simmons. 1992. Decision making for wildlife damage management. *Transcripts of the North American Wildlife and Natural Resources* 57:51-62.
- Young, J. K., E. Miller, and A. Essex. 2015. Evaluating fladry designs to improve utility as a nonlethal management tool to reduce livestock predation. *Wildlife Society Bulletin* 39:429-433.