

## DECISION AND FINDING OF NO SIGNIFICANT IMPACT

### ENVIRONMENTAL ASSESSMENT: MANAGING DAMAGE CAUSED BY CANADA GEESE IN THE STATE OF MISSISSIPPI

#### 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 associated with alternative approaches to resolving damage and threats of damage caused by Canada geese (*Branta canadensis*) (USDA 2015). WS prepared the EA in cooperation with the Tennessee Valley Authority (TVA). 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 Canada geese in the State (USDA 2008). Since the new EA re-evaluated activities associated with Canada geese 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 geese.

The EA evaluates the need to manage damage to agricultural resources, natural resources, property, and threats to human safety associated with Canada geese, wherever a property owner requests such assistance. Therefore, the need for action identified in Section 1.2 of the new EA arises from requests for assistance that WS receives, including requests for assistance WS could receive from the TVA to manage damage associated with geese on properties the TVA owns or manages. The EA evaluates the need for action to manage damage associated with geese, 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 and the TVA defined the issues associated with meeting the need for action and identified preliminary alternatives through consultation with the United States Fish and Wildlife Service (USFWS) and the Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP). The EA analyzes three alternatives in detail to meet the need for action and to address the issues analyzed in detail.

A discussion of WS' authority and the authority of other agencies, as those authorities relate to conducting activities to alleviate Canada goose damage, occurs in Section 1.5 of the EA. In addition, several laws or statutes authorize, regulate, or otherwise would affect WS' activities. WS would comply with all applicable federal, state, and local laws and regulations in accordance with WS Directive 2.210. Section 1.7 of the EA identified several decisions to be made based on the scope of the EA.

#### AFFECTED ENVIRONMENT AND ISSUES

Canada geese occur throughout the year across the State of Mississippi (Mowbray et al. 2002) where suitable habitat exists for foraging, loafing, roosting, and breeding. Geese are capable of utilizing a variety of habitats in the State but generally use areas adjacent to or near bodies of water with relatively short vegetation. Nesting habitat could include wetlands, ponds, meadows, gravel bars along rivers, islands, agricultural fields, along irrigation ditches, reservoirs, sewage lagoons, city lakes, golf courses, subdivisions, highway medians, and on top of city buildings (Mowbray et al. 2002). Geese can also loaf, roost, and forage in similar habitat near water bodies preferring areas that are open with short vegetation, which allows geese to detect approaching predators (Mowbray et al. 2002). During the migration periods, geese often roost on or near bodies of water but can travel to other areas to forage, such as agricultural

fields. Since geese can occur throughout the State, requests for assistance to manage damage or threats of damage could occur in areas occupied by geese.

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 and the TVA 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 and the TVA 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 and the TVA made the EA available to the public for review and comment by a legal notice published in the *Clarion Ledger* newspaper from October 29, 2015 through November 1, 2015. WS also made the EA available to the public for review and comment on the APHIS website on October 22, 2015 and on the regulations.gov website beginning on October 19, 2015. WS also sent a notice of availability directly to agencies, organizations, and individuals with probable interest in managing Canada goose damage in the State. The public involvement process ended on December 11, 2015. During the public comment period, WS received two 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, minor editorial changes were incorporated 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 three alternatives in detail to respond to 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 and the TVA 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 the proposed action/no action alternative (Alternative 1) and when applicable, under the technical assistance alternative (Alternative 2), if selected. If the decision-maker selected the no involvement by WS alternative (Alternative 3), 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 that alternative relates to the issues identified to provide information needed to make informed decisions when selecting the appropriate alternative to address the need for action. Section 4.1 of the EA analyzes the environmental consequences of each alternative in comparison to determine the extent of actual or potential impacts on those major issues identified in the EA. The proposed action/no action alternative (Alternative 1) served as the baseline for the analysis and the comparison of expected impacts among the alternatives.

The following resource values in Mississippi 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 designated for threatened or endangered species), 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 as a result 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 Damage Management Activities on Canada Goose Populations**

Under the proposed action, WS would incorporate non-lethal and lethal methods described in Appendix B of the EA into an integrated 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 geese that are causing damage; thereby, potentially reducing the presence of geese at the site and potentially the immediate area around the site. Non-lethal methods generally have minimal impacts on overall populations of wildlife since those species are unharmed.

A common issue is whether damage management actions would adversely affect the populations of target species when WS' employees employ lethal methods. Lethal methods can remove specific geese identified as causing damage or posing a threat to human safety. Lethal methods that would be available to address Canada goose damage include live-capture followed by euthanasia, shooting with a firearm, and recommending that people harvest geese during the annual hunting season.

The number of geese removed from the population by WS using lethal methods under Alternative 1 would be dependent on the number of requests for assistance received, the number of geese involved with the associated damage or threat, the efficacy of methods employed, and the number of individual geese the USFWS and the MDWFP authorizes WS to remove, when required. Based on those quantitative and qualitative parameters addressed in the EA, the anticipated number of geese that WS' employees could lethally remove annually to address requests for assistance under the proposed action/no action alternative (Alternative 1) would be of low magnitude when compared to population trend data, population estimates, and/or annual harvest.

Impacts due to nest and egg removal and destruction should have little adverse effect on the resident goose population in Mississippi. WS would destroy nests (and eggs within the nest) in a localized area to inhibit nesting where the nests or the presence of nesting geese were causing damage or posing a threat of damage. Treatment of 95% of all Canada goose eggs each year would result in only a 25% reduction in the population over 10 years (Allan et al. 1995). The resident Canada goose management FEIS developed by the USFWS concluded that a nest and egg depredation order would have minimal impacts on goose populations with only localized reductions in the number of geese occurring (USFWS 2005).

WS' limited proposed take would not limit the ability of people to harvest Canada geese in the State based on the limited portion of the overall take that could occur by WS. The take of migratory Canada geese could only occur when authorized through the issuance of depredation permits by the USFWS. The permitting of the take by the USFWS pursuant to the MBTA would ensure take by WS and by other entities occurred within allowable take levels to achieve the desired population objectives for geese.

Those people experiencing damage or threats could remove geese themselves under any of the alternatives when the USFWS and the MDWFP authorizes the removal, when authorization is required. In order for the property owner or manager to use lethal methods, they must apply for their own depredation permit to take geese from the USFWS. Lethal removal of geese could continue during hunting seasons, under depredation/control orders (if implemented), or through the issuance of depredation permits by the USFWS. With the exception of alpha chloralose, all methods listed in Appendix B would be available under this alternative, although not all methods would be available for direct implementation by all persons because several chemical methods would only be available to those

persons with pesticide applicators licenses. Alpha chloralose would only be available for use by WS and therefore would be unavailable for use under Alternative 2 and Alternative 3.

WS would monitor activities conducted under the selected alternative (except the no involvement by WS alternative) to ensure the WS program could identify and address any potential impacts. WS would work closely with the USFWS and the MDWFP to ensure the activities conducted by WS would not adversely affect Canada goose populations, which ensures those agencies have the opportunity to consider WS' activities as part of management goals established by those agencies. Historically, WS' activities to manage damage caused by Canada geese have been a small component of the known annual mortality of geese. Section 4.1 of the EA discusses the cumulative effects of known mortality on the populations of geese.

## **Issue 2 - Effects on the Populations of Non-target Animals, Including T&E Species**

Personnel from WS 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 targeted geese and to exclude non-target species. To reduce the likelihood of dispersing, capturing, or removing non-target animals, WS would employ the most selective methods for the target species, 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-targets when employees provide assistance under Alternative 1 and, if applicable, under Alternative 2. 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 methods described in Appendix B of the EA have a high level of selectivity and WS' personnel can employ methods using SOPs to ensure minimal effects to non-target species. WS' take of non-target species during activities to reduce damage or threats to human safety associated with geese in Mississippi would be expected to be extremely low to non-existent. WS' personnel have not lethally removed non-targets during prior activities targeting geese in the State. WS would monitor the take of non-target species to ensure program activities or methodologies used in goose damage management do not adversely affect non-targets. Methods available to alleviate and prevent goose damage or threats when employed by trained, knowledgeable personnel are selective for target species. WS would annually report to the USFWS and/or the MDWFP any non-target take to ensure those agencies have the opportunity to consider any take by WS as part of management objectives.

The ability of people to reduce damage and threats caused by geese would be variable under Alternative 2 and Alternative 3, 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. If people or other entities apply those methods available as intended, risks to non-targets associated with those methods 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 all available assistance under Alternative 2 and Alternative 3 caused those people experiencing goose damage to use methods that were not legally available for use, risks to non-target animals would be higher under those alternatives. People have resorted to the use of illegal methods to resolve wildlife damage that have resulted in the lethal removal of non-target animals.

Based on a review of those threatened or endangered species listed in the State during the development of the EA, WS determined that activities conducted pursuant to the proposed action alternative (Alternative 1) “*may affect*” those species but those effects would be solely beneficial, insignificant, or discountable, which would warrant a “*not likely to adversely affect*” determination. Pursuant to Section 7 of the Endangered Species Act, WS consulted with the USFWS on the effects analysis and determinations. The USFWS concurred with the effects determination made by WS (K. Lunceford, USFWS pers. comm. 2015). The WS’ program in Mississippi would also consider those recommendations made by the USFWS during the consultation process when conducting activities to alleviate the damage that Canada geese cause in the State (see Section 4.1 of the EA).

### **Issue 3 – Effects of Damage Management Methods on Human Health and Safety**

The threats to human safety associated with the methods available would be similar across the alternatives since the same methods would be available across the alternatives. The only method that may not be available under all the alternatives is the sedative alpha chloralose. Currently, alpha chloralose is not available to entities other than WS. Based on the evaluation in the EA, the availability of alpha chloralose for use by WS’ personnel under Alternative 1 would not increase risks to human safety compared to the other alternatives.

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. If methods were used incorrectly or without regard for human safety, risks to human safety would increase under any of the alternatives that those methods could be employed. 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 WS’ use of methods to alleviate goose damage in the State from FY 2010 through FY 2014.

### **Issue 4 - Effects on the Aesthetic Values of Canada Geese**

Canada geese 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 that WS’ personnel could employ under each of the alternatives could result in the dispersal, exclusion, or removal of individuals or groups of geese to resolve damage and threats. Therefore, the use of methods often results in the removal of geese from the area where damage was occurring or the dispersal of geese from an area. Since most methods available would be similar across the alternatives, the use of those methods would have similar potential impacts on the aesthetics of geese. However, even under the proposed action alternative, the dispersal and/or lethal removal of geese under the alternatives would not reach a magnitude that would prevent the ability to view geese outside of the area where damage was occurring. The effects on the aesthetic values of geese would therefore be similar across the alternatives and would be minimal.

### **Issue 5 – Humaneness and Animal Welfare Concerns of Methods**

The issue of humaneness was also analyzed in relationship to methods available under each of the alternatives. Since many methods addressed in Appendix B of the EA would be available under all the alternatives, the issue of method humaneness would be similar for those methods across all the alternatives. With the exception of the sedative alpha chloralose, all lethal methods listed in Appendix B of the EA would be available under all alternatives. Personnel from WS have experience with managing animal damage and receive training in the employment of methods. The ability of WS to provide direct

operational assistance under Alternative 1 would ensure WS' personnel employed methods as humanely as possible.

Under the other alternatives, other entities could use methods inhumanely if used inappropriately or without consideration of goose behavior. The skill and knowledge of the person implementing methods to resolve damage would determine the efficacy and humaneness of methods. A lack of understanding of the behavior of geese and other animals or improperly identifying the damage caused by geese 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 and Alternative 3. Despite the lack of involvement by WS under Alternative 3 and WS' limited involvement under Alternative 2, those methods perceived as inhumane by certain individuals and groups would still be available for use by the public to resolve damage and threats caused by geese, except the sedative alpha chloralose. Alpha chloralose is available to WS' personnel as a live-capture method that allows geese to be live-captured and relocated or live-captured and euthanized. However, in the absence of alpha chloralose being available under Alternative 2 and Alternative 3, entities could use other non-lethal methods to live-capture geese for relocation or to live-capture and euthanize geese.

### **CUMULATIVE IMPACTS OF THE PROPOSED ACTION**

No significant cumulative environmental impacts are expected from any of the three alternatives. Under Alternative 1, the lethal removal of geese by WS would not have significant impacts on the statewide population of geese when known sources of mortality are considered. No risk to public safety is expected when activities are provided under Alternative 1 and Alternative 2 since only trained and experienced personnel would conduct and/or recommend damage management activities. There could be a slight increased risk to public safety when persons who reject assistance and recommendations made by WS and conduct their own activities under Alternative 2, and when no assistance is provided under Alternative 3. 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 geese 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 the proposed action/no action alternative (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 wildlife populations or the quality of the human environment are likely to occur from the proposed action/no action alternative, nor does the proposed action/no action 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 (proposed action/no action alternative) 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 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 the proposed action/no action alternative (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 the proposed action/no action alternative (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 the proposed action 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. The proposed action 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 Mississippi.
8. The proposed activities 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. WS has reviewed those threatened or endangered species listed in the State and determined that activities would not adversely affect the federally listed threatened or endangered species currently listed in the State and the USFWS has concurred with WS' determination. In addition, WS has determined that the proposed activities would not adversely affect State-listed species.
10. The proposed action would be in compliance 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) damage management would only be conducted by WS 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 Mississippi would continue to provide effective and practical technical assistance and direct management techniques that reduces damage and threats of damage.



Charles S. Brown, Director-Eastern Region  
USDA/APHIS/WS  
Raleigh, North Carolina

Date

1/11/16

#### LITERATURE CITED

- Mowbray, T. B., C. R. Ely, J. S. Sedinger, and R. E. Trost. 2002. Canada goose (*Branta canadensis*). Issue No. 682 in A. Poole, editor. The Birds of North America Online. Cornell Lab of Ornithology, Ithaca, New York, USA. <<http://bna.birds.cornell.edu/bna/species/682>>.
- USDA. 2008. Environmental Assessment: Reducing Canada goose damage throughout the State of Mississippi. USDA, APHIS, WS, Mississippi State, Mississippi.
- USDA. 2015. Environmental Assessment: Managing damage caused by Canada geese in the State of Mississippi. USDA, APHIS, WS, Mississippi State, Mississippi.
- USFWS. 2005. Final Environmental Impact Statement, Resident Canada Goose management. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C., USA.

## APPENDIX A

### RESPONSES TO COMMENTS ON THE ENVIRONMENTAL ASSESSMENT: MANAGING DAMAGE CAUSED BY CANADA GEESE IN THE STATE OF MISSISSIPPI

During the public involvement process for the draft EA, WS received two comments. WS has reviewed the comments to identify additional issues, alternatives, and/or concerns that were not addressed in the EA. The comments received during the public involvement process are summarized below along with responses to the comments.

#### I. COMMENTS ON THE NEED FOR ACTION

##### **Comment – Geese do not pose a threat to human safety**

**Response:** Section 1.2 of the EA addresses the need for action associated with the threat to human safety caused by Canada geese, including disease threats and threats to human safety associated with aircraft striking geese at air facilities in the State. For example, 24 people lost their lives when a military aircraft struck a flock of Canada geese and crashed at Elmendorf, Alaska in 1995. In January 2009, United States Airways Flight 1549 made an emergency landing in the Hudson River after ingesting multiple Canada geese into both engines shortly after takeoff from New York's LaGuardia Airport (Dolbeer et al. 2009). The aircraft was destroyed after sinking in the river; however, all 150 passengers and five crewmembers survived (Wright 2010). Injuries can also occur to pilots and passengers from goose strikes. Between 1990 and 2013, 15 strikes involving Canada geese have resulted in injuries to 117 people (Dolbeer et al. 2014). Therefore, geese can pose a threat to human safety.

#### II. COMMENTS RELATING TO AN ALTERNATIVE

##### **Comment – Commenter opposes any involvement by WS.**

**Response:** WS and the TVA developed alternative approaches to meet the need for action and to address the identified issues associated with managing damage caused by Canada geese. The EA analyzed a no involvement by the WS program alternative (Alternative 3; see Section 3.1 of the EA). Under Alternative 3, the WS program would not be involved with any aspect of managing Canada goose 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 – Geese should be translocated to areas far from the areas where they were removed and permits to harvest geese should only be given if the geese return to the area where they were initially removed.**

**Response:** The WS program identified and considered an alternative to reduce Canada goose damage that would have required WS' personnel to live-capture geese and translocate those geese to other areas for release. However, WS did not consider that alternative in detail for the reasons provided in Section 3.2 of the EA. As described in Section 3.2 of the EA, the translocation of geese causing damage to other areas following live-capture would generally be ineffective because geese are highly mobile and can easily return to damage sites from long distances, geese generally already inhabit other areas, and translocation may result in goose damage problems at the new location. In addition, WS would need to capture and translocate hundreds of geese to solve some damage problems; therefore, translocation could

be unrealistic. Translocation of wildlife is also discouraged by WS policy (see WS Directive 2.501) because of stress to the relocated animal, poor survival rates, and difficulties animals have in adapting to new locations or habitats (Nielsen 1988).

Translocation of geese could only occur under the authority of the USFWS and the MDWFP. Therefore, the translocation of geese by WS would only occur as directed by those agencies. WS' personnel would have to identify release sites and obtain approval to release the geese from the USFWS, the MDWFP, and/or the property owner prior to live-capture. When authorized by the USFWS and/or the MDWFP, WS could translocate geese under Alternative 1 when WS provides direct operational assistance. Although not practical as the sole method of alleviating damage, the translocation of geese could be practical in some situations. Therefore, WS considered translocation as a possible method to alleviate damage. Since WS does not have the authority to translocate geese in the State unless permitted by the USFWS and the MDWFP, those agencies would maintain the ability determine when translocation was appropriate. The issuance of permits to take/harvest geese is outside the authority of the WS program.

### III. COMMENTS ON METHODS

#### **Comment – Farmers should just use a dog to alleviate damage**

**Response:** The EA discusses numerous harassment methods to disperse geese, including the use of dogs. Dogs can be effective at harassing geese and keeping them off turf and beaches (Conover and Chasko 1985, Castelli and Sleggs 2000). Around water, this technique appears most effective when people use dogs around bodies of water that are less than two acres in size (Swift and Felegy 2009). Besides the need for action associated with damage to agricultural resources, the EA also identifies a need to manage damage associated with property, natural resources, and threats to human safety. The use of dogs would not be practical as the sole method of alleviating damage in all situations (*e.g.*, damages occurring during the nesting season); however, the use of dogs by WS' personnel or the recommendation of the use of dogs by WS could be practical in some situations. WS' employees could use or recommend the use of dogs to harass geese under Alternative 1 and Alternative 2 when personnel determine the use of a dog is an appropriate method to resolve the damage or threat occurring.

### IV. COMMENTS ON FUNDING

#### **Comment - Tax dollars should not be used to kill geese. The WS program should be eliminated.**

**Response:** WS considered this issue during the development of the EA but did not analyze the issue in detail for the reasons provided in Section 2.3 of the EA. 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 Canada goose damage in Mississippi (Alternative 3). Therefore, adding an analysis of an additional alternative whereby WS or another entity pursued the termination of the authority of WS would not add to the existing analyses in the EA. Under Alternative 3, the WS program would not be involved with any aspect of managing Canada goose damage; however, other entities could conduct damage management activities in the absence of the WS program.

## V. COMMENTS ON COMMUNITY INVOLVEMENT

### **Comment - Ensure local concerns are considered before activities are conducted.**

**Response:** As discussed in Section 3.1 of the EA, the WS program would follow the “*co-managerial approach*” to solve goose damage or conflicts as described by Decker and Chase (1997). Within this management model, WS could provide technical assistance regarding the biology and ecology of Canada geese and effective, practical, and reasonable methods available to a local decision-maker(s) to reduce damage or threats. Generally, a decision-maker seeking assistance would be part of a community, municipality, business, governmental agency, and/or a private property owner. In the case of private property owners, the decision-maker for what occurs on their property would be the individual that owns or manages the affected property. The private property owner would have the discretion to involve others as to what occurs or does not occur on property they own or manage; therefore, in the case of an individual property owner or manager, the involvement of others and to what degree others were involved in the decision-making process would be a decision made by that individual.

## VI. LITERATURE CITED

- Castelli, P. M., and S. E. Sleggs. 2000. The efficacy of border collies for nuisance goose control. *Wildlife Society Bulletin* 28:385-293.
- Conover, M. R., and G. Chasko. 1985. Nuisance Canada geese problems in the eastern United States. *Wildlife Society Bulletin* 13:228–232.
- Decker, D. J., and L. C. Chase. 1997. Human dimensions of living with wildlife—a management challenge for the 21st century. *Wildlife Society Bulletin* 25:788–795.
- Dolbeer, R. A., S. E. Wright, J. Weller, and M. J. Begier. 2009. Wildlife strikes to civil aircraft in the United States, 1990-2008, Serial Report 15. Federal Aviation Administration, National Wildlife Strike Database, Office of Airport Safety and Standards, Washington, D.C., USA.
- Dolbeer, R. A., S. E. Wright, J. R. Weller, and M. J. Begier. 2014. Wildlife strikes to civil aircraft in the United States 1990–2013, Serial report 20. U.S. Department of Transportation, Federal Aviation Administration, Office of Airport Safety and Standards, Washington, D.C.
- Nielsen, L. 1988. Definitions, considerations, and guidelines for translocation of wild animals. Pages 12-51 in L. Nielsen and R. D. Brown, editors. *Translocation of wild animals*. Wisconsin Humane Society, Inc., Milwaukee and Caesar Kleberg Wildlife Research Institute, Kingsville, Texas, USA.
- Swift, B. L., and M. Felegy. 2009. Response of resident Canada Geese to chasing by border collies. New York State Department of Environmental Conservation, Albany, New York, USA.
- Wright, S. 2010. Some significant wildlife strikes to civil aircraft in the United States, January 1990-November 2009, United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services, Sandusky, Ohio, USA.