

**DECISION AND FINDING OF NO SIGNIFICANT IMPACT
FOR THE ENVIRONMENTAL ASSESSMENT:
WATERFOWL DAMAGE MANAGEMENT IN THE STATE OF MINNESOTA**

June 2007

I. INTRODUCTION

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services program (WS) receives and responds to a variety of requests for assistance from individuals, organizations, and agencies experiencing damage and other problems related to wildlife. Wildlife damage management is the alleviation of damage or other problem caused by or related to the presence of wildlife and is recognized as an integral part of wildlife management (The Wildlife Society 1992). In February 2007, WS released an Environmental Assessment (EA) “*Waterfowl Damage Management in Minnesota*”. Ordinarily individual WS damage management actions are categorically excluded and do not require an environmental assessment (EA) (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). However, in order to facilitate planning, interagency coordination, and the streamlining of program management, and to clearly communicate with the public the analysis of cumulative impacts from WS’ proposed program, the EA on alternatives for managing Canada geese (*Branta canadensis*), mallard ducks (*Anas platyrhynchos*), mute swans (*Cygnus olor*) and domestic or feral waterfowl damage in Minnesota was prepared. The EA documented the need for waterfowl damage management (WDM) in Minnesota and analyzed the environmental impacts of alternative ways for WS to protect 1) property, 2) agriculture, 3) natural resources, 4) human health and 5) human safety, The EA and supporting documentation are available for review at the USDA-APHIS-WS Office, 34912 U.S. Hwy. 2, Grand Rapids, MN 55744.

The purpose of the proposed program is to reduce damage to property, agriculture, natural resources, human health and human safety from the activities of waterfowl in Minnesota. The EA was prepared in consultation with the Minnesota Department of Natural Resources (MDNR) and U.S. Fish and Wildlife Service (USFWS) to determine impacts on state wildlife populations and to ensure that the proposed actions are in compliance with relevant laws, regulations, policies, orders and procedures. All WS WDM activities will be conducted consistent with all applicable Federal, State and local laws, regulations and policies including the Endangered Species Act of 1973.

II. BACKGROUND

The determination of a need for WS assistance with WDM in Minnesota is based on requests for assistance with waterfowl damage to property, agricultural and natural resources, and waterfowl-related risks to human health and human safety. Details on the

damage and risks to human health and safety caused by the target species are provided in the EA.

The WS EA only evaluated alternatives for WS involvement in WDM and cannot change Minnesota state statutes, MDNR policy or federal regulations permitting private landowners access to lethal and non-lethal alternatives for managing waterfowl damage on their own. Therefore, a major overarching factor in determining how to analyze potential environmental impacts of WS' involvement in WDM is that in most instances, such management would likely be conducted by state, local government, or private entities that are not subject to compliance with NEPA if WS is not involved. This means that the Federal WS program has limited ability to affect the environmental outcome of WDM in the state, except that the WS program is likely to have lower risks to nontarget species and less impact on wildlife populations than some alternatives available to resource owners/managers. Therefore, WS has limited ability to affect the environmental *status quo*. Despite this limitation to federal decision-making, this EA process is valuable for informing the public and decision-makers of the substantive environmental issues and alternatives for management of damage by these species.

Affected Environment

This EA evaluates waterfowl damage management by WS to protect human health, human safety, property, natural resources and agriculture on private or public land whenever or wherever such management is requested from the WS program in Minnesota.

III. ISSUES ANALYZED IN THE EA

The following issues were identified as important to the scope of the analysis (40 CFR 1508.25) and each of the proposed alternatives was evaluated relative to its impacts on these issues.

- Effects on target waterfowl populations
- Effectiveness of wildlife damage management methods
- Affects on aesthetic values
- Humaneness and animal welfare concerns of methods used by WS
- Effects on non-target wildlife species populations, including threatened and endangered (T&E) species

An additional 4 issues were discussed but not addressed in detail for each alternative including:

- Appropriateness of preparing an EA (instead of an EIS) for such a large area
- Effects on human health from consumption of waterfowl

IV. ALTERNATIVES ANALYZED IN DETAIL

The following Alternatives were developed to analyze and respond to issues. Four additional alternatives were considered but not analyzed in detail. A detailed discussion of the effects of the Alternatives on the issues is analyzed in the EA (Chapter 3).

Alternative 1: Integrated Waterfowl Damage Management Program (Proposed Action/No Action)

Wildlife Services proposes a waterfowl damage management program that uses an IWDM approach to respond to damage to property, natural and agricultural resources, and public health and public safety caused by waterfowl in the State of Minnesota. Damage management would be conducted on public and private property in Minnesota when the resource owner (property owner) or manager requests assistance. The IWDM strategy would encompass the use of practical and effective methods of preventing or reducing damage while minimizing harmful effects of damage management measures on humans, target and non-target species, and the environment. Under this action, WS could provide technical assistance and direct operational damage management, including non-lethal and lethal management methods by applying the WS Decision Model (Slate et al. 1992). When appropriate, physical exclusion, habitat modification, harassment, repellents and nest/egg destruction would be recommended and utilized to reduce damage. In other situations, waterfowl would be removed as humanely as possible using: firearms and/or, trapping followed by humane euthanasia. Alpha-chloralose would also be used to capture waterfowl where appropriate. In determining the damage management strategy, preference would be given to practical and effective non-lethal methods. However, non-lethal methods may not always be applied as a first response to each damage problem. The most appropriate response could often be a combination of non-lethal and lethal methods, or could include instances where application of lethal methods alone would be the most appropriate strategy.

Alternative 2: Technical Assistance Only

This alternative would not allow for WS operational WDM in Minnesota. WS would only provide technical assistance and make recommendations when requested. Producers, property owners, agency personnel, or others could conduct WDM using any legal lethal or non-lethal method available to them. Currently, alpha-chloralose is only available for use by WS employees; therefore its use by others would be illegal.

Alternative 3: Non-lethal Waterfowl Damage Management Only by WS

This alternative would require WS to only use non-lethal methods to resolve waterfowl damage problems. Requests for information regarding lethal management approaches would be referred to MDNR, FWS, local animal control

agencies, or private businesses or organizations. Individuals might choose to implement WS non-lethal recommendations, implement lethal methods or other methods not recommended by WS, contract for WS nonlethal direct control services, use contractual services of private businesses, or take no action. Persons receiving WS' non-lethal technical and direct control assistance could still resort to lethal methods that were available to them. Currently, alpha-chloralose is only available for use by WS employees; therefore, its use by others would be illegal.

Alternative 4: No Waterfowl Damage Management by WS

This alternative would eliminate federal involvement in WDM in Minnesota. WS would not provide direct operational or technical assistance and requesters of WS' assistance would have to conduct their own WDM without WS input. Information on WDM methods would still be available to producers and property owners through other sources such as USDA Agricultural Extension Service offices, universities, or pest control organizations. Requests for information would be referred to MDNR, FWS, local animal control agencies, or private businesses or organizations. Individuals might choose to conduct WDM themselves, use contractual services of private businesses, or take no action. Currently, alpha-chloralose is only available for use by WS employees; therefore, its use by others would be illegal.

V. MONITORING

The Minnesota WS program will annually monitor the impacts of its actions relative to each of the issues analyzed in detail in the EA. This evaluation will include reporting the WS take of all target and nontarget species to help ensure no adverse impact on the viability of any target or non-target species populations including State and Federally listed threatened and endangered species. MDNR expertise will be used to assist in determining impacts on state wildlife populations.

VI. PUBLIC INVOLVEMENT

As part of this process, and as required by the CEQ and APHIS-NEPA implementing regulations, and new WS NEPA implementation procedures published in the Federal Register March 21, 2007 (Vol. 72, No. 54: 13237-13238). An announcement of the availability of the EA for public review and comment was made through "Notices of Availability" (NOA) published in the *Minneapolis Star Tribune* and *Duluth News Tribune*, February 16-17, 2007, through direct mailings to parties that have specifically requested notification, and on the WS website http://www.aphis.usda.gov/wildlife_damage/nepa.shtml. Seventeen copies of the pre-decisional EA were sent to organizations, individuals, and public agencies that had previously requested copies of all WS EAs, and 40 letters were sent out announcing that the EA was available. WS received one request for a copy of the EA for review, and received only 1 comment letter

on the EA. WS responses to the issues raised in the comment letter are provided in Appendix A of this document.

VII. AGENCY AUTHORITIES

United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services (WS) WS is the Federal program authorized by law to help reduce damage caused by wildlife. The primary statutory authorities for the APHIS-WS program are the Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C. 426-426b) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 U.S.C. 426c). The mission of the USDA/APHIS/WS program is to provide federal leadership in managing conflicts with wildlife. WS recognizes that wildlife is an important public resource greatly valued by the American people. By its very nature, however, wildlife is a highly dynamic and mobile resource that can cause damage to agriculture and property, pose risks to human health and safety, and affect industrial and natural resources. WS conducts programs of research, technical assistance and applied management to resolve problems that occur when human activity and wildlife conflict.

United States Department of the Interior, Fish and Wildlife Service (USFWS) The primary responsibility of the USFWS is conserving fish, wildlife, plants and their habitats. While some of the USFWS' responsibilities are shared with other Federal, State, tribal, and local entities, the USFWS has special authorities in managing the National Wildlife Refuge System; conserving migratory birds, endangered species, certain marine mammals, and nationally significant fisheries; and enforcing Federal wildlife laws. The Migratory Bird Treaty Act (MBTA) gives the USFWS primary statutory authority to manage migratory bird populations in the United States. The USFWS is also charged with implementation and enforcement of the Endangered Species Act of 1973, as amended and with developing recovery plans for listed species.

Minnesota Department of Natural Resources (MDNR) The Minnesota Department of Natural Resources is responsible for managing resident wildlife species in Minnesota. WS and the MDNR currently have a MOU that allows USDA-APHIS-WS to participate in a cooperative wildlife damage management program in Minnesota. The MOU establishes a cooperative relationship between WS, the MDNR, the Minnesota Department of Agriculture (MDA), the Minnesota Board of Animal Health (MBAH), the Minnesota Department of Health (MDH) and the University of Minnesota Extension Service (UMES) for planning, coordinating and implementing wildlife damage management policies to prevent or minimize damage caused by wild animal species (including Threatened and Endangered species) to agriculture, horticulture, aquaculture, animal husbandry, forestry, wildlife, public health/safety, property, natural resources and to facilitate the exchange of information among the cooperating agencies.

VI. ENDANGERED SPECIES CONSULTATIONS

As stated in the EA, WS has conducted an informal Section 7 consultation with the USFWS regarding potential risks to federally-listed threatened and endangered species. WS determined that the proposed action would either have no effect on or may affect but would not adversely affect federally listed species in Minnesota. On September May 1, 2007, WS received notice that the USFWS concurred with this determination.

Wildlife Services has also consulted with the Minnesota Department of Natural Resources regarding potential threats to State-listed species from the proposed action. WS determined that the proposed action would not adversely affect populations of state-listed species. On June 6, 2007, WS received notice that the MDNR concurred with this determination. WS will comply with MDNR requests and recommendations regarding the management of state-listed threatened and endangered species.

VII. CONSISTENCY WITH MINNESOTA LAKE SUPERIOR COASTAL ZONE MANAGEMENT PROGRAM

WS determined that the actions proposed in this EA were consistent with the Minnesota Lake Superior Coastal Program. On April 30, 2007, WS received notice that the Minnesota Lake Superior Coastal Program concurred with this determination.

VIII. DECISION AND RATIONALE

I have carefully reviewed the EA and the input resulting from the EA review process. I believe the issues identified in the EA are best addressed by selecting Alternative 1, *Integrated Wildlife Damage Management Program (Proposed Action/No Action)*, and applying the associated standard operating procedures and monitoring measures discussed in Chapter 3 of the EA. The analyses in the EA demonstrate that Alternative 1 provides the best range of damage management methods considered practical and effective, has low impacts on target and non-target species, provides safeguards for public safety, addresses the issues, and accomplishes WS' Congressionally directed role in protecting the Nation's agricultural and other resources. WS policies and social considerations, including humane issues, would be considered while conducting WDM. While Alternative 1 does not require non-lethal methods to be used, WS would continue to provide information and encourage the use of practical and effective non-lethal methods (WS Directive 2.101). I have adopted the EA as final because no information was received during the public comment period that would change the analysis.

IX. FINDING OF NO SIGNIFICANT IMPACT

The EA indicates that there will not be a significant impact, individually or cumulatively, on the quality of the human environment because of this proposed action, and that these actions do not constitute a major Federal action. I agree with this conclusion and therefore determine that an EIS will not be necessary or prepared. This determination is based on the following factors:

1. Waterfowl damage management, as conducted in Minnesota is not regional or national in scope.
2. 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. Built in standard operating procedures and adherence to all applicable state and federal laws and regulations will further ensure that WS activities do not harm the environment.
3. The effects on the quality of the human environment are not highly controversial. Although there is opposition to WS damage management, this action is not controversial in relation to size, nature or effects.
4. Standard Operating Procedures adopted as part of the proposed action lessen risks to the public and prevent adverse effects on the human environment and reduce uncertainty and risks.
5. The proposed action does not establish a precedent for future actions with significant effects. This action would not set precedence for additional WS damage management that may be implemented or planned in Minnesota.
6. The number of animals taken (both target and non-target) by WS annually is small in comparison to their total populations. Adverse effects on wildlife or wildlife habitats would be minimal.
7. No significant cumulative effects were identified by this assessment or other actions implemented or planned within the area.
8. Wildlife Services' waterfowl damage management activities would not affect cultural or historic resources. The proposed action does not affect districts, sites, highways, structures or objects listed in or eligible for listing in the National Register of Historic Places, nor will it cause a loss or destruction of significant scientific, cultural, or historical resources.
9. An evaluation of the proposed action and its effects on State and Federally listed T/E species determined that there would be no significant adverse effects on these species. The proposed action will fully comply with the Endangered Species Act of 1973, as

amended. Consultations with the MDNR have taken place and their input was used to develop Standard Operating Procedures for the proposed action.

10. This action would be in compliance with federal, state and local laws or requirements for damage management and environmental protection.

For additional information regarding this decision, please contact William J. Paul, USDA, APHIS, WS, 34912 U.S. Hwy. 2, Grand Rapids, MN 55744.

//Signed-CSB//
Charles S. Brown, Regional Director
USDA-APHIS-WS – Eastern Region

Date

APPENDIX A

RESPONSES TO COMMENTS

WS only received one letter in response to the request for public comments on the EA. The following is a summary of comments and WS' response to the comments. Issues raised by the commenter are in bold text. WS response to each issue is in standard text.

1. It is not necessary to kill waterfowl to resolve conflicts and damage problems. The majority of conflicts are over the aesthetic impact of fecal accumulations in public areas. It is especially inappropriate to use lethal methods to resolve problems that are not real or significant threats to people.

We realize that the death of any animal is unacceptable to many people and regrettable. WS continues to pursue efforts to improve non-lethal methods and the selectivity of our damage management methods, and maintain and fund the National Wildlife Research Center (NWRC) to develop such methods. Research by NWRC was instrumental to the development of methyl anthranilate as an avian repellent which can be used to deter damage by waterfowl and the Canada goose reproductive inhibitor, Nicarbazin.

Despite extensive research, the efficacy of many non-lethal techniques remains unproven or inconsistent (Bomford and O'Brien 1990, Conover 2002). Research suggests that most animals adjust and habituate to non-lethal methods such as sounds or scare techniques and the methods soon become unsuccessful (Bomford and O'Brien 1990, Conover 2002). Further, if waterfowl are relocated or moved to a different location (e.g., via hazing or harassment), a consideration of success of the non-lethal program depends on where the relocated birds move, because waterfowl can also cause a problem at the new location. Limiting waterfowl damage management to non-lethal methods would not allow for a full range of integrated techniques to resolve damage management problems. We believe that implementation of only non-lethal methods would not allow WS the ability to address every damage situation in the most effective manner. This restriction in WS ability to respond to waterfowl damage problems could be especially problematical in situation where expediency is required to address public health and safety risks.

Differences in human values regarding what does and does not constitute an appropriate response to a wildlife conflict are addressed in the EA in sections 2.3.3, 2.3.4, 4.1.3 and 4.1.4. Minnesota WS is, and will continue to be, committed to resolving human-waterfowl conflicts with nonlethal methods whenever practical and effective options are available. However, as discussed in the EA and above, experience indicates that nonlethal techniques may not be appropriate or effective in all situations. In some instances, use of nonlethal techniques does not actually resolve the damage problem; it just moves it to a different location.

2. Minnesota WS should use community-based humane program like that used by WS in New York.

WS waterfowl damage management alternatives in New York were analyzed in the EA, “Canada Goose Damage Management” (USDA 2004). The alternative selected in the EA’s Decision and Finding of No Significant Impact (FONSI), “Integrated Wildlife Damage Management Program”, is virtually identical to “Alternative 1 - Integrated Wildlife Damage Management”, the preferred alternative, for this EA. Nothing about the preferred alternative would preclude the development or implementation of a program similar to that used in New York (Pecor et al. 2007).

3. The WS programmatic EIS (USDA 1997 Revised) is outdated and does not adequately address impacts of WS actions. The EA is tiered to the EIS and, therefore, fails to adequately consider the environmental impacts of the proposed action.

Comment is inaccurate. The EA is not tiered to the EIS although relevant sections of the EIS are incorporated by reference. The relationship between the EA and WS programmatic EIS was provided Section 1.4 of the EA.

4. This EA fails to fully explain what procedures WS would use under either the proposed action or the other alternatives to evaluate damage.

We disagree with this claim as demonstrated by the analysis in the EA and WS’ programmatic EIS (USDA 1997 Revised). The WS Decision Making process is a thought process for evaluating and responding to routine damage complaints (Section 3.1.2) similar to other professions (Slate et al. 1992). Slate et al. (1992) is a published article that is cited in the EA during discussion of the WS Decision Model. The article provides more detail about the WS Decision Model, and USDA (1997 Revised) provides detail and examples of how the model is used. WS’ professionals evaluate the appropriateness of strategies, and methods are evaluated for their availability (*i.e.*, legal and administrative) and suitability based on biological, economic, environmental and social considerations. Following this thought process, the methods deemed practical for the situation are developed into a management strategy and the results are documented in our Management Information System. The results are summarized and provided to the cooperating agencies to use for monitoring and evaluation purposes. We attempted to reach a balance between providing enough information for the public and decision makers and to also comply with CEQ regulations to reduce bulk and excessive paperwork (Eccleston 1995).

5. Reporting the number of birds killed or otherwise affected by each example of past projects is somewhat helpful. However numbers in examples don’t match numbers of birds reported in Table 8.

Commenter appears to be making a comparison between the information in Section 3.1.6 and data on total WS take in Table 8. Commenter has identified a data entry error, the

total Canada Goose take in Table 8 for 2005 should be 548 geese including 198 geese that were relocated and not euthanized. In Section 3.1.6, the number of Canada geese taken in rocket nets in 2005 should be 15 birds not 16 birds.

6. EA covers too broad an area. EA does not meet the need for site specific analysis required by NEPA. WS should produce several regional EAs for the state or a statewide Environmental Impact Statement (EIS)

We believe the scope of the EA and impact to waterfowl from implementation of the proposed action were analyzed at a level appropriate for the proposed action. The waterfowl species analyzed in the EA are the species for which requests for assistance have been received by WS and services were provided (Section 1.3 in the EA). The impacts of WS' damage management actions were analyzed for each species (Chapter 4).

WS has determined that preparation of an EA to address waterfowl damage management activities is appropriate. Minnesota WS only conducts waterfowl damage management in a very small area of the State where damage is occurring or likely to occur. In terms of considering cumulative impacts, one EA covering the entire State provides a better analysis than multiple EAs covering smaller zones. The EA emphasizes major issues as they relate to specific areas whenever possible, however, many issues apply wherever waterfowl damage and resulting management occurs, and are treated as such. In addition, the agency has the discretion to determine the geographic scope of its NEPA analyses (*Kleppe v Sierra Club*, 427 U.S. 390, 414 (1976), CEQ 1508.25) and WS has determined that the scope of this EA is appropriate (Sections 1.5 and 2.4.1 in the EA). If in fact a determination was made that the proposed action would have a significant environmental impact, then WS would have prepared an EIS before actions were taken (40 CFR 1508.9).

WS personnel use the WS Decision Model (Slate et al. 1992, USDA 1997 Revised) to develop the most appropriate strategy to reduce damage and detrimental environmental effects from damage management actions (Section 3.1.2 in the EA). When a request for assistance is received and after consultation with the requester, WS personnel evaluate the appropriateness of strategies and methods in the context of their availability (i.e., legal and administrative) and suitability based on biological, environmental, economic and social considerations. Damage management actions are generally conducted on only a small portion of the habitat occupied by the target species. As professional wildlife biologists, WS analyzed the effects to waterfowl populations, and recognize that the damage situation may change at any time in any location. Wildlife populations are dynamic, mobile and renewable. Decisions made using the Decision Model (Slate et al. 1992) are in accordance with plans, goals, and objectives of WS, MDNR the USFWS and all other applicable management authorities and any minimization and standard operating procedures (SOP) described in the EA and adopted or established as part of the Decision.

Like other management organizations (e.g., fire departments, emergency clean-up organizations, etc.), WS can sometimes predict the location and types of needs, damage, and risks from historical records or past damage problems, and take action to prevent or

reduce the damage. We cannot, however, always predict the exact locations or need to reduce wildlife damage at all locations and to do so would be highly speculative. This phenomenon would be like a fire department predicting where the next fire will occur. WS can and does provide an analysis of impacts of their actions to reduce waterfowl damage within the scope of the EA. The site-specificity problem occurs when trying to determine the exact location and animal(s) that is, or would be responsible for damages before the damage situation occurs. Preparing individual EAs for each project would be managerially impossible while still providing for public input during the NEPA process and would not allow WS to respond to requests nor deliver services in a timely manner.

In summary, WS has prepared an EA that provides as much information as possible to address and predict the locations of potential waterfowl damage management actions and coordinates efforts with the USFWS and MDNR as appropriate, to insure that protected waterfowl populations remain healthy and viable. Thus, the EA addresses substantive environmental issues pertaining to waterfowl damage management in Minnesota. WS can and does provide an analysis of affects of their actions to reduce waterfowl damage within the scope of the EA. WS believes it meets the intent of NEPA and that this EA is the only practical way for WS to comply with NEPA and still be able to accomplish its mission, particularly under emergency situations. WS determined that a more detailed analysis would not substantially improve the public's understanding of the proposal, the analysis, the decision-making process, and pursuing a more detailed analysis might even be considered inconsistent with NEPA's emphasis on reducing unnecessary paperwork (Eccleston 1995).

7. Incentives or disincentives for WS to engage in different management approaches should be discussed.

Under various acts of Congress, the Secretary of Agriculture is authorized to carry out wildlife control programs necessary to protect the Nation's agricultural and other resources (46 Stat. 1468-69, 7 U.S.C. ' ' 426-426b, as amended and Public Law No. 100-202, ' 101(k), 101 Stat. 1329-331, 7 U.S.C. ' 426c). This authority has been delegated to the WS program. WS is a cooperatively funded, service-oriented program that only responds to damage situations after a request for assistance is received and an Agreement for Control is signed by the landowner/ administrator for other comparable document is in place. WS cooperates with other Federal, State, Tribal, and local government entities, educational institutions, private property owners and managers, and with appropriate land and wildlife management agencies, as requested, with the goal of effectively and efficiently resolving wildlife damage problems in compliance with all applicable Federal, State, and local laws.

8. EA inaccurately characterizes lethal methods as nonlethal. Nonlethal capture methods that are used to capture birds which are subsequently killed should be classified as lethal methods. EA leaves out the method that is actually most commonly used – slaughter – and understates the real impact of the proposed action on animal welfare.

We do not agree. The live-capture methods do not kill the birds and it would be inaccurate to imply otherwise. Waterfowl captured in live-capture devices or through the use of alpha-chloralose are not automatically killed or euthanized. As is indicated in Canada goose data for 2005 in Table 8 and discussed in the Appendix B section on capture and relocation, WS has worked with the MDNR to relocate Canada geese in the past and, under the preferred alternative (Alternative 1) and Alternative 3 (Only Nonlethal WDM), WS would continue to be able to do so in the future. Live capture and release is also used to sample for diseases in waterfowl.

WS did not omit any information on the fate of waterfowl that would be captured under any of the alternatives discussed in the EA. Information on all the methods used to kill waterfowl is presented in Section 3.1.5 and Appendix B. Information on the maximum number of birds that could be killed annually by WS under each of the alternatives and the anticipated impact on waterfowl populations is presented in Section 4.1.1. In the event that the waterfowl that are killed are used for human consumption, Minnesota WS would use the methods described in the EA. The dead birds could be given to a meat packing facility for processing, but these facilities would not be permitted to kill the birds unless authorized to do so by the MDNR and USFWS, as appropriate.

9. Lethal control is not effective. Commenter wants data on efficacy and cost-effectiveness of the alternatives, especially the proposed action, and duration of control actions using different approaches.

We disagree with this claim, and as referenced by commenter, Avery (2002) also cited studies where lethal damage management did reduce losses to crops (Elliott 1964, Larsen and Mott 1970, Palmer 1970, Plessner et al. 1983, Tahon 1980, Glahn et al. 2000 as cited in Avery 2002) and posed little danger to non-target species (Glahn et al. 2000). Avery (2002) also states that it seems reasonable that local, short-term crop protection can be achieved through reduction in depredating bird populations, however, quantification of the relationship between the numbers of birds killed and the associated reduction in crop damage is lacking.

It is recognized that the most effective approach to resolving wildlife damage is to use an integrated approach which may call for the use of several damage management methods simultaneously or sequentially (USDA 1997 Revised). The purpose behind Integrated Wildlife Damage Management (IWDM) is to implement effective management methods in a cost-effective manner while minimizing the potentially harmful effects on humans, target and non-target species, and the environment¹. Under the proposed alternative, the

¹ The cost of management may sometimes be secondary because of overriding environmental, legal, human health and safety, animal welfare, or other concerns.

analysis showed that the methods proposed for use under an IWDM approach are the most effective and practical way to resolve damage problems. The efficacy of each alternative is based on the types of methods employed under that alternative. The efficacy of each method is based, in part, on the application of the method, the restriction on the use of the method(s), the skill of the personnel using the method and, for WS personnel, the guidance provided by WS Directives and policies. It is recognized that some methods may be more or less effective, or applicable depending on weather conditions, time of year, biological considerations, economic considerations, legal and administrative restrictions, the species responsible, magnitude of the damage, extent of damage, duration and frequency of the damage, prevention of future damage, presence of non-target species, or other factors. Because these various factors may preclude the use of certain methods, it is important to maintain the widest possible selection of damage management methods to most effectively resolve bird damage problems.

Further, perhaps a better way to state this is by asking the question, “Does the value of damage or the damage avoided equal or exceed the cost of providing bird damage management?” CEQ does not require a formal, monetized cost-benefit analysis to comply with NEPA (40 CFR 1508.14) and consideration of this issue is not essential to making a reasoned choice among the alternatives being considered. The WS Programmatic EIS (USDA 1997 Revised, Appendix L) states:

“Cost effectiveness is not, nor should it be, the primary goal of the APHIS WS program. Additional constraints, such as the environmental protection, land management goals, and others, are considered whenever a request for assistance is received. These constraints increase the cost of the program while not necessarily increasing its effectiveness, yet they are a vital part of the APHIS WS Program.”

An analysis of cost-effectiveness in many bird damage management situations is difficult or impossible to determine because the value of benefits may not be readily calculable and personal perspectives differ about damage. For example, no studies of disease problems with and without bird damage management have been conducted², and, therefore, the number of cases prevented because of bird damage management are not possible to estimate. The issue is further complicated because it is rarely possible to conclusively prove that birds are responsible for individual disease cases or outbreaks. Similarly, there are no studies available to assess the potential damage with and without bird damage management at airports. When a problem is identified at an airport and WS is requested to assist in reducing bird/aircraft strike risks, WS responds. Whether a damaging or fatal bird/aircraft strike would have occurred is speculative, however because of the risks to human safety, airport managers, the FAA and WS err on the side of reducing risks and potential bird strike damage. Another example of the difficulties inherent in determining the cost-effectiveness is the management of some wildlife species

² These questions and relationships are outside the scope of this EA and are more appropriate as research projects. We have used the best information available to prepare the analysis in the EA (40 CFR 1502.22). More than 170 research and other pertinent documents were used to prepare the EA (40 CFR 1502.24).

to protect other wildlife species. For example, it is difficult to put a price tag on the value of preventing the establishment of a free-ranging non-native species like mute swans.

Only limited data is available comparing the cost and efficacy of waterfowl damage management techniques. The EA provides information on the efficacy of waterfowl damage management strategies in Section 4.1.2 and Appendix B. A feasibility study by Keef (1996) was prepared on the cost effectiveness of alternatives for removing nuisance Canada geese in the Twin Cities, MN. Costs per bird removed of the management strategies considered included: relocation - \$10 per goose; capture, euthanasia and donation for human consumption - \$20 per goose; egg destruction \$40 per goose, surgical sterilization \$100 per goose, and habitat modification (extremely high – no cost provided). A more recent evaluation of a community based integrated nonlethal program to reduce Canada goose numbers at specific sites in New York (Pecor et al. 2007) demonstrated that the integrated use of multiple nonlethal techniques was successful in reducing goose numbers and fecal counts at treatment sites. However, geese hazed from treatment sites did not appear to travel far and were often observed at an unmanaged site within 1-2 miles of the treated site. Although it's possible that the geese may relocate to a site where they won't cause problems, it is also possible that the relocated geese may cause similar or even worse problems at the new site(s). Consequently, the exclusive use of nonlethal WDM methods would usually require coordination with other nearby landowners in order to resolve and not just relocate the problem. When this occurs, the problem involves more than the original landowner. Relocation programs require a community based approach because like many waterfowl damage management methods, this strategy would require ongoing annual efforts, but data indicate the total annual effort required declined over the period of the study. However, at least some level of effort would be required each year. NY WS personnel estimate that the cost of the program, excluding the costs of research data collection and monitoring, would be approximately \$10,000 per site annually, with some variation depending upon the size and nature of the site and number of birds present. A similar program using goose removal would cost approximately \$3,000-5,000 per site excluding the cost of meat processing that is paid by the cooperator if the geese are donated for human consumption (A. Gosser, NY WS, pers. comm.). Goose removal programs would also likely require an additional commitment to future work, but would likely require fewer resources than harassment programs. Combining goose removal in an integrated approach with egg/oiling and harassment increases overall efficacy and efficiency of the program.

10. We are concerned that the management methods used by WS may not include the most recent innovations in methods for preventing and reducing waterfowl damage.

WS uses trained professional employees to conduct waterfowl damage management programs in Minnesota and continues to train employees on newly developed and available techniques. As commenter noted, the NWRC functions as the research arm of WS by providing scientific information and development of methods for wildlife damage management that are effective and environmentally responsible. NWRC scientists work closely with WS managers and field personnel, wildlife managers, researchers, and others

to develop and evaluate wildlife damage management techniques. In addition to regular interaction with NWRC biologists, WS communicates information on the latest WDM techniques to its personnel using a variety of methods including but not limited to helping to organize and/or participating in professional conferences, distribution and notification of publications on WDM to staff, state WS training meetings, encouraging employees to maintain membership in and certification by professional organizations.

The analysis in the EA is based on the best information and methods available, or that are being developed but not yet available. As mentioned numerous times, WS uses an integrated approach and the WS Decision Model to develop management strategies that alleviate damage in the most cost effective manner possible while minimizing the potentially harmful risks to humans, pets, non-target species and individuals. Chapter 2 and Appendix B discuss products that are currently available as well as products that may be considered should they become available at a future time (e.g., nicarbazin).

11. Commenter encourages WS to work to facilitate the registration of nicarbazin (trade name OvoControl) in Minnesota

WS is a service-based program which responds to requests for assistance with wildlife damage management. WS does not have regulatory authority. However, WS has worked to facilitate state registration of wildlife damage management products when there has been sufficient interest from WS cooperators in using the product. To date, requests for Minnesota WS operational assistance with waterfowl damage management are still relatively limited and there has been little interest in use of nicarbazin. Nicarbazin was registered for use in Minnesota in 2006, but the manufacturer withdrew the renewal on the registration because of lack of demand for the product. (Nick Reindl, MDNR Depredation Specialist, pers. comm.).

12. WS has omitted an alternative that would require, in each damage situation, that all feasible non-lethal methods be exhausted before turning to lethal control.

This comment apparently suggests that WS does not consider non-lethal methods when devising a management strategy. This is far from the truth and all reasonable alternatives were evaluated in the EA. WS' proposed alternative, Integrated Wildlife Damage Management, as outlined in the EA is similar to an "all feasible non-lethal before lethal" alternative because WS encourages and considers the use of non-lethal methods before lethal methods (WS Directive 2.101). Adding an "all feasible non-lethal before lethal" alternative and the associated analysis would not add additional information to the analysis for the public or decision maker. WS recognizes that the most effective approach to resolving wildlife damage is to use an integrated approach which may call for the use of several damage management methods (non-lethal and/or lethal) simultaneously or sequentially. If the requester is already using non-lethal methods or if the birds have habituated to scare tactics, repellents or loud noises, etc., WS would not consider continuing to implement those techniques because they have not proven effective. When evaluating methods for a damage situation, WS recognizes that some methods may be more or less effective, or applicable.

13. Commenter considers it humane to treat new-laid eggs prior to significant embryo development (up to 14 days incubation in Canada Geese)...Therefore we would include early egg treatment with non-lethal techniques for the purpose of such an alternative.

WS appreciates the comment, yet we are also aware that there are some members of the public who consider any method which results in the death of even an early embryo to be a lethal technique. It is for this reason that egg-oiling was classified as a lethal method in the EA. It should be noted that when conducting egg-oiling programs for waterfowl damage management, Minnesota WS strives to times treatments so that they occur at intervals of 14 days or less to help ensure that eggs are treated early in their development.

14. The EA fails to objectively analyze the issue of humaneness and it is the agency's responsibility to take this issue seriously.

WS disagrees with this claim and takes the issue of humaneness of methods seriously (Section 2.3.4 and 4.1.4 in the EA). WS continues to evaluate existing and new methods for animal welfare and humaneness concerns. WS' mission is to reduce wildlife damage, not wildlife populations and spends thousands of dollars each year to develop and bring to the field newly developed and more species specific and humane methods.

Commenter stated that, "We note as well that unnecessary death is a significant issue in any proposed management action." WS couldn't agree more with that sentiment. While it is regrettable that wild animals die to alleviate damage in some situations, WS believes that if an animal death must occur, then it should occur with a minimum amount of distress and pain, in as short a period of time as practical, and with compassion.

Commenter was apparently suggesting that only non-lethal methods should be used to protect resources from waterfowl damage or potential damage. What if damage occurs in spite of the use of non-lethal methods? WS is trying to achieve a "balance" between the needs of people, recognizing that people are part of the environment, and animals while keeping issues like protection of the environment, economics, humaneness, etc. in perspective. Questions like, "Is it more humane to allow birds to fly across runways or to remove the birds and the hazards that exist?" need to be asked and answered. WS recognizes that animal welfare organizations are concerned that some methods used to manage wildlife damage may expose animals to pain and suffering. However, WS also recognizes another side to this issue, as perceived by traveling publics, airport managers, natural resource managers concerned about the impacts of non-native species, and others. WS believes that humaneness of an action or management plan must not only consider the effects of the action on the wildlife but also on the people or other species that may be or are affected by the wildlife. Ideally, such protection would be achieved through non-lethal means, but when non-lethal means are not practical or effective, lethal means may be the only way to accomplish such protection.

15. An action is not more or less humane because it is more or less technically feasible. WS must be clear about the fact that it is not using the most humane method possible for reasons of feasibility or cost effectiveness.

WS does not contend that a technique is humane because it is more or less technically feasible. WS states that it seeks to use methods that cause the least amount of animal suffering within the constraints imposed by current technology and funding, while still providing sufficient damage management to resolve problems. Humaneness is addressed in the EA sections 2.3.4 and 4.1.4 and in the discussion of WS mitigation in standard operating procedures in EA Section 3.4.

16. Local concerns are not always considered before individual damage actions are taken. As described in the EA, the process only considers the opinions of the resource owner/manager in the decision. Neighbors of private property owners can be significantly affected by WS actions but are not included or even informed about the process. WS needs to inform local stakeholders of actions under consideration and include the views of local stakeholders well beyond the interests of one or a very few individuals.

The NEPA analysis process is one way in which WS involves the public in wildlife damage management decision making. Additionally, when WS works on public property like city parks, management decisions and public involvement are conducted in accordance with the public notification and public involvement procedures and policies of the land management agency. In areas where there is a property owners association or lake association, WS will work with the affected property owner and the appropriate association. However, at times, the problem is located on private property like the grounds of a large private company or a private golf course. These entities are not required to seek public involvement in their decision-making process. However, when developing a site-specific management plan, WS will make the landowner aware of sociological concerns regarding the various waterfowl damage management techniques. Community outreach programs can be used by organizations and individuals opposed to specific damage management techniques to inform private landowners of the aesthetic value people place on waterfowl using their property so resource owners can consider and balance their needs against the needs of others before wildlife damage management actions are considered. It will require effort on the part of organizations and individuals to get to know their neighbors in order to influence decisions.

APPENDIX B

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