DECISION

ENVIRONMENTAL ASSESSMENT: MANAGING DAMAGE TO RESOURCES AND THREATS TO HUMAN SAFETY CAUSED BY BIRDS IN THE STATE OF MARYLAND

I. PURPOSE

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program, in cooperation with the Migratory Bird Program within Region 5 of the United States Fish and Wildlife Service (USFWS), prepared an Environmental Assessment (EA) to analyze the potential environmental and social impacts to the quality of the human environment from resolving damage, including conflicts and threats, associated with birds. The EA documents the need for bird damage management in the State and assesses potential impacts on the human environment of three alternatives to address that need. The proposed action alternative in the EA would continue an integrated damage management program to address the need to manage damage and threats associated with birds.

The EA addresses damage and threats of damage associated with the following bird species: snow geese (*Chen caerulescens*), mute swans (*Cygnus olor*), mallards (*Anas platyrhynchos*), feral and free-ranging waterfowl[1], double-crested cormorants (*Phalacrocorax auritus*), great blue herons (*Ardea herodius*), great egrets (*Ardea alba*), snowy egrets (*Egretta thula*), cattle egrets (*Bubulcus ibis*), black vultures (*Corgyps atratus*), turkey vultures (*Cathartes aura*), ospreys (*Pandion haliaetus*), Northern harriers (*Circus cyaneus*), sharp-shinned hawks (*Accipiter striatus*), Cooper's hawks (*Accipiter cooperii*), red-shouldered hawks (*Buteo lineatus*), broad-winged hawks (*Buteo platypterus*), red-tailed hawks (*Buteo jamaicensis*), American coots (*Fulica americana*), killdeer (*Charadrius vociferus*), Bonaparte's gulls (*Chroicocephalus philadelphia*), laughing gulls (*Leucophaeus atricilla*), ring-billed gulls (*Larus delawarensis*), herring gulls (*Larus argentatus*), great black-backed gulls (*Larus marinus*), rock pigeons (*Columba livia*), mourning doves (*Zenaida macroura*), barn owls (*Tyto alba*), great horned owls (*Bubo virginianus*), barred owls (*Strix varia*), chimney swift (*Chaetura pelagica*), red-headed woodpeckers (*Melanerpes erythrocephalus*), red-bellied woodpeckers (*Melanerpes carolinus*), yellow-bellied sapsuckers (*Sphyrapicus varius*), downy woodpeckers (*Picoides pubescens*), hairy woodpeckers (*Picoides villosus*), Northern flickers (*Colaptes auratus*), pileated woodpeckers (*Dryocopus pileatus*), American kestrels (*Falco sparverius*), blue jays (*Cyanocitta cristata*), tree swallows (*Tachycineta bicolor*), Northern rough-winged swallows (*Stelgidopteryx serripennis*), bank swallows (*Riparia riparia*), cliff swallows (*Petrochelidon pyrrhonota*), barn swallows (*Hirundo rustica*), gray catbirds (*Dumetella carolinensis*), Northern mockingbirds (*Mimus polyglottos*), European starlings (*Sturnus vulgaris*), Northern cardinals (*Cardinalis cardinalis*), red-winged blackbirds (*Agelaius phoeniceus*), Eastern meadowlarks (*Sturnella magna*), common grackles (*Quiscalus quiscula*), brown-headed cowbirds (*Molothrus ater*), house finches (*Haemorhous mexicanus*), and house sparrows (*Passer domesticus*).

The EA evaluated the issues and alternatives associated with WS' potential participation in managing damage and threats caused by birds in the State and the issuance of depredation permits by the USFWS to manage damage caused by birds, when required. WS and the USFWS prepared the EA to determine if the alternatives could have a significant impact on the quality of the human environment. Specifically, WS and the USFWS prepared the EA to: 1) facilitate planning, 2) promote interagency coordination, 3)

[1]Free-ranging or feral domestic waterfowl refers to captive-reared, domestic, of some domestic genetic stock, or domesticated breeds of ducks, geese, and swans. Examples of free ranging domestic waterfowl include, but are not limited to, mute swans; Muscovy ducks (*Cairina moschata*); mallard (*Anas platyrhynchos domestica*) derived breeds including Pekin ducks, Rouen ducks, Cayuga ducks, Swedish ducks, and Khaki Campbell ducks; swan goose (*Anser cygnoides*) derived breeds including Chinese geese; and graylag goose (*Anser anser domesticus*) derived breeds including Toulouse geese, Embden geese, and pilgrim geese. Feral ducks may include a combination of domesticated mallards, mallard derived breeds, Muscovy ducks, and mallard-Muscovy hybrids, as well as hybrids of domestic breeds with wild mallards or American black ducks.

streamline program management, 4) evaluate the potential environmental consequences of the alternatives related to the issues of managing damage caused by birds, and 5) clearly communicate to the public the analysis of individual and cumulative impacts.

II. NEED FOR ACTION

The need for action arises from requests for assistance received to reduce and prevent damage associated with birds from occurring to four major categories: agricultural resources, natural resources, property, and threats to human safety. WS would only conduct bird damage management after receiving a request for assistance. Before initiating damage management activities, WS and the cooperating entity would sign a Memorandum of Understanding (MOU), cooperative service agreement, or other comparable document. The MOU, cooperative service agreement, or other comparable document would list all the methods the property owner or the property manager would allow WS to use on property they own and/or manage.

Most requests for WS' assistance are associated with areas where birds congregate during migration periods and during nesting periods. Those requests for assistance are associated with fecal accumulations in public-use areas, damage to agricultural resources, hazards posed to aircraft from bird strikes, and damage occurring to property. WS could also participate in disease surveillance and monitoring in the event of a disease outbreak or potential outbreak in a bird population.

III. SCOPE OF ANALYSES IN THE EA

The EA evaluates bird damage management under three alternatives to reduce threats to human health and safety and to resolve damage to property, natural resources, and agricultural resources wherever a cooperator requests such management. The analyses in the EA apply to any action taken by WS to alleviate damage or threats of damage associated with birds that may occur in any locale and at any time within the State of Maryland. The EA emphasizes major issues as those issues relate to specific areas; however, the issues addressed would apply wherever bird damage and the resulting damage management activities could occur. The standard WS Decision Model (Slate et al. 1992) would be the site-specific procedure for individual actions conducted by WS in Maryland.

The USFWS has jurisdiction over the management of migratory birds and has specialized expertise in identifying and quantifying potential adverse effects to the human environment from damage management activities. The Migratory Bird Treaty Act (MBTA) prohibits the "*take*" of migratory bird species; however, the MBTA does allow for the lethal removal of those bird species listed in 50 CFR 10.13 when depredation occurs through the issuance of depredation permits or the establishment of depredation/control orders (see 50 CFR 13 and 50 CFR 21). Under authorities in the MBTA, the USFWS is the federal agency responsible for the issuance of depredation permits or the establishment of depredation/control orders for the take of those protected bird species when damage or threats of damage are occurring. The Maryland Department of Natural Resources (MDNR) is responsible for managing wildlife in the State, including birds.

WS made the EA available to the public for review and comment by a legal notice published in the *Capitol-Gazette* from August 16, 2013 through August 18, 2013. WS also made the EA available to the public for review and comment by posting a notice of availability and the EA on the APHIS website at http://www.aphis.usda.gov/wildlife_damage/nepa.shtml beginning on August 7, 2013. In addition, WS mailed a letter of availability directly to agencies, organizations, and individuals with probable interest in bird damage management in the State. The public involvement process ended on September 20, 2013. WS received no comment letters during the public comment period.

IV. RELATIONSHIP OF THE EA TO OTHER ENVIRONMENTAL DOCUMENTS

WS and other entities have developed several environmental documents to address the need for damage management activities associated with bird species. The USFWS, in cooperation with WS, have issued a double-crested cormorant management Final Environmental Impact Statement (USFWS 2003, USFWS 2009). The USFWS has also issued a snow goose management Final Environmental Impact Statement (USFWS 2007). The Mid-Atlantic/New England/Maritime (MANEM) Working Group developed a regional waterbird conservation plan for the MANEM region of the United States and Canada (MANEM Waterbird Conservation Plan 2006). In response to increasing populations of mute swans along the Atlantic Flyway, the Atlantic Flyway Council (2003) developed a mute swan plan to reduce swan populations in the Flyway to minimize negative ecological damages occurring to wetland habitats from the overgrazing of submerged aquatic vegetation by swans. The Chesapeake Bay Mute Swan Working Group (2004) and the MDNR (2003) prepared plans to manage mute swan populations in Chesapeake Bay and throughout the State, respectively. WS previously developed an EA that analyzed the need for action to manage damage associated with crows in the State (USDA 2009). WS has also prepared a separate EA to evaluate the need to manage damage associated with Canada geese in Maryland (USDA 2011).

V. AUTHORITY AND COMPLIANCE

WS is authorized by law to reduce 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). Management of migratory birds is the responsibility of the USFWS under the MBTA. As the authority for the management of birds, WS and the USFWS cooperated on the development of the EA. The USFWS provided input to ensure an interdisciplinary approach according to the National Environment Policy Act (NEPA) and agency mandates, policies, and regulations. The MDNR is responsible for managing wildlife in the State of Maryland, including birds. Information provided by the USFWS and the MDNR assisted in the analysis of potential impacts associated with the implementation of the alternatives.

The EA and this Decision ensures WS' actions comply with the NEPA, with the Council on Environmental Quality guidelines (40 CFR 1500), and with APHIS' NEPA implementing regulations (7 CFR 372). WS would conduct all damage management activities, including disposal requirements, consistent with: 1) the Endangered Species Act of 1973, 2) the MBTA, 3) the National Historic Preservation Act, 4) the Federal Insecticide, Fungicide, and Rodenticide Act, 5) applicable Executive Orders, and 6) applicable federal, state, and local laws, regulations, and policies, including WS' Directives.

VI. DECISIONS TO BE MADE

Based on the scope of the EA, the decisions to be made are: 1) should WS, in cooperation with the USFWS, conduct bird damage management to alleviate damage, 2) should the Migratory Bird Program in Region 5 of the USFWS issue depredation permits to WS and other entities to conduct bird damage management activities when requested, 3) should WS conduct disease surveillance and monitoring in the bird population when requested by other agencies, 4) should WS, in cooperation with the USFWS, implement an integrated damage management strategy, including technical assistance and direct operational assistance, to meet the need for bird damage management, 5) if not, should WS and/or the USFWS attempt to implement one of the other alternatives described in the EA, and 6) would the alternatives result in effects to the human environment requiring the preparation of an EIS.

VII. AFFECTED ENVIRONMENT

Upon receiving a request for assistance, WS could conduct activities to alleviate bird damage or threats on federal, state, tribal, municipal, and private properties in Maryland. Assistance requests to resolve bird damage could occur, but would not necessarily be limited to, areas in and around commercial, industrial, public, and private buildings, facilities and properties and at other sites where birds may roost, loaf, feed, nest, or otherwise occur. Examples of areas where bird damage management activities could be conducted are residential buildings, golf courses, athletic fields, recreational areas, swimming beaches, parks, corporate complexes, subdivisions, businesses, industrial parks, schools, agricultural areas, wetlands, restoration sites, cemeteries, public parks, bridges, industrial sites, urban/suburban woodlots, hydro-electric dam structures, reservoirs and reservoir shore lands, nuclear, hydro and fossil power plant sites, substations, transmission line rights-of-way, landfills, on ship fleets, military bases, or at any other sites where birds may roost, loaf, or nest. WS could conducted damage management activities at agricultural fields, vineyards, orchards, farmyards, dairies, ranches, livestock operations, grain mills, and grain handling areas (*e.g.*, railroad yards) where birds destroy crops, feed on spilled grains, or contaminate food products for human or livestock consumption. Additionally, activities could be conducted at airports and surrounding properties where birds represent a threat to aviation safety.

VIII. ISSUES ASSOCIATED WITH BIRD DAMAGE MANAGEMENT ACTIVITIES

WS and the USFWS defined the issues related to bird damage management in Maryland and identified preliminary alternatives through consultation with the MDNR. To identify additional issues and concerns, WS and the USFWS also made the EA available to the public for review and comment through notices published in local media and through direct notification of interested parties.

Chapter 2 of the EA describes in detail the issues considered and evaluated in the EA. WS and the USFWS identified the following issues as important to the scope of the analysis (see 40 CFR 1508.25) with each alternative evaluated in the EA relative to the impacts on the major issues:

- Issue 1 - Effects of Damage Management Activities on Target Bird Populations
- Issue 2 - Effects on Non-target Wildlife Species Populations, Including T&E Species
- Issue 3 - Effects of Damage Management Methods on Human Health and Safety
- Issue 4 - Effects on the Aesthetic Values of Birds
- Issue 5 - Humaneness and Animal Welfare Concerns of Methods
- Issue 6 - Effects of Bird Damage Management Activities on the Regulated Harvest of Birds
- Issue 7 - Effectiveness of Bird Damage Management Methods

IX. ISSUES CONSIDERED BUT NOT IN DETAIL WITH RATIONALE

In addition to those issues analyzed in detail, WS and the USFWS identified several issues during the development of the EA but did not consider those issues in detail. The EA provided the rationale for the decision not to analyze those issues in detail. Those issues not analyzed in detail were:

- Appropriateness of Preparing an EA (Instead of an EIS) For Such a Large Area
- WS' Impact on Biodiversity
- A Loss Threshold Should Be Established Before Allowing Lethal Methods
- Bird Damage Management Should Not Occur at Taxpayer Expense
- Cost Effectiveness of Management Methods
- Impacts of Avian Influenza on Bird Populations
- Bird Damage Should Be Managed By Private Nuisance Wildlife Control Agents

- Effects from the Use of Lead Ammunition in Firearms
- Impacts of Dispersing a Bird Roost on People in Urban/Suburban Areas
- A Site Specific Analysis Should be Made for Every Location Where Bird Damage Management Could Occur

X. DESCRIPTION OF THE ALTERNATIVES

WS and the USFWS developed the following three alternatives to respond to the issues identified in Chapter 2 of the EA and to meet the need for action discussed in Chapter 1. Chapter 4 of the EA analyzes the environmental consequences of each alternative in comparison to determine the extent of actual or potential impacts on the issues. The EA analyzed the following alternatives in detail.

Alternative 1 - Continuing the Current Integrated Approach to Managing Bird Damage (Proposed Action/No Action)

The proposed action would continue the current program of employing an integrated damage management approach using methods, as appropriate, to reduce damage associated with birds in the State. A major goal of the program would be to resolve and prevent bird damage and to reduce threats to human safety. To meet this goal, WS would continue to respond to requests for assistance with, at a minimum, technical assistance, or when funding was available, operational damage management. WS would recommend and employ an integrated damage management strategy, encompassing the use of practical and effective methods of preventing or reducing damage while minimizing harmful effects of damage management measures on people, other species, and the environment. WS would give non-lethal methods preference during the formulation of each damage management strategy. WS would recommend or implement non-lethal methods when practical and effective before recommending or implementing lethal methods. However, WS would not always apply non-lethal methods as a first response to each damage problem. The most appropriate response could often be a combination of non-lethal and lethal methods, or there could be instances where application of lethal methods alone would be the most appropriate strategy.

WS could employ all the methods addressed in Appendix B of the EA to resolve requests for assistance to manage damage associated with birds in the State. Using the WS Decision model discussed in the EA, WS could employ methods singularly or in combination in an integrated approach to alleviate damage caused by birds.

Alternative 2 - Bird Damage Management by WS through Technical Assistance Only

Under the technical assistance only alternative, WS would address every request for assistance with technical assistance only. Technical assistance would provide those people seeking assistance with information and recommendations on bird damage management that those cooperators could employ without WS' direct involvement in the action. Technical assistance could be employed through personal or telephone consultations and through site visits. Under this alternative, the people experiencing damage caused by birds would be responsible for implementing methods to resolve that damage or threat of damage. Those people could employ those methods recommended by WS, could employ other methods, could seek assistance from other entities, or could take no further action.

Those entities experiencing damage or threats of damage associated with birds could still lethally remove birds to alleviate damage under this alternative when those birds were committing or about to commit damage or posing a human health and safety threat in accordance with depredation permits issued by the USFWS or under the established depredation/control orders. In addition, people could continue to harvest snow geese, mallards, coots, and mourning doves during the regulated hunting seasons in the State. The

MBTA does not protect European starlings, rock pigeons, house sparrows, mute swans, and domesticated waterfowl from lethal removal and those people experiencing damage could lethally remove birds of those species using legally available methods at any time. People could remove red-winged blackbirds, common grackles, and brown-headed cowbirds when those species commit or are about to commit damage without the need for a depredation permit under the blackbird depredation order established by the USFWS. Entities could also lethally remove Muscovy ducks at any time pursuant to a control order established by the USFWS.

Similar to Alternative 1, those methods described in Appendix B would be available to those people experiencing damage or threats associated with birds in the State, except for alpha-chloralose and DRC-1339, which are only available to WS. All other methods described in Appendix B of the EA would be available to those persons experiencing damage.

Alternative 3 – No Bird Damage Management Conducted by WS

Under the no involvement alternative, WS would not provide any assistance related to bird damage management in Maryland. WS would refer all requests for assistance received to the USFWS, the MDNR, and/or other entities. The take of birds by other entities could continue to occur under this alternative when damage or threats were occurring in accordance with depredation permits issued by the USFWS as well as under depredation/control orders and during the regulated hunting season in the State. Most of the methods described in Appendix B of the EA, under this alternative to alleviate bird damage and threats, would be available under any of the alternatives. The only methods that would not be available to manage damage caused by birds under this alternative would be the immobilizing drug alpha chloralose and the avicide DRC-1339, which are only available for use by WS.

XI. ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL WITH RATIONALE

The EA also evaluated additional alternatives; however, WS and the USFWS did not consider those alternatives in detail for the reasons provided in Chapter 3 of the EA. The alternatives analyzed but not in detail included:

- Use of Non-lethal Methods by WS Before Lethal Methods
- Use of Non-lethal Methods Only by WS
- Use of Lethal Methods Only by WS
- Trap and Translocate Birds Only by WS
- Reducing Damage by Managing Bird Populations through the Use of Reproductive Inhibitors
- Compensation for Bird Damage

XII. STANDARD OPERATING PROCEDURES

The WS program would incorporate many standard operating procedures that improve the safety, selectivity, and efficacy of activities to manage damage associated with birds. Chapter 3 of the EA discusses standard operating procedures. WS would incorporate those standard operating procedures into activities when addressing bird damage and threats in Maryland under the proposed action alternative (Alternative 1). WS would also incorporate those applicable procedures into recommendations under the technical assistance alternative (Alternative 2). 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 by WS.

XIII. ENVIRONMENTAL CONSEQUENCES FOR ISSUES ANALYZED IN DETAIL

Chapter 4 of the EA analyzes the environmental consequences of each alternative as that alternative relates to the issues identified to provide information needed for making informed decisions in selecting the appropriate alternative to address the need for action. The following resource values in Maryland are not expected to be significantly affected by any of the alternatives analyzed in the EA: soils, geology, minerals, water quality/quantity, flood plains, wetlands, critical habitats (areas listed in threatened and endangered (T&E) 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 from 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.

Chapter 4 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 serves as the baseline for the analysis and the comparison of potential impacts among the alternatives. The analysis also takes into consideration mandates, directives, and the procedures of WS, the USFWS, and the MDNR. The analyses in Chapter 4 of the EA indicate the potential impacts to the quality of the human environment would be similar across the alternatives.

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

Under the proposed action, WS could incorporate non-lethal and lethal methods described in Appendix B of the EA in an integrated approach in which WS could employ all or a combination of methods to resolve a request for assistance. WS could recommend and/or operationally employ both non-lethal and lethal methods, as governed by federal, state, and local laws and regulations under the proposed action.

Non-lethal methods could disperse or otherwise make an area unattractive to birds that were causing damage, which would reduce the presence of those birds at the site and potentially the immediate area around the site where WS employed non-lethal methods. WS would give non-lethal methods priority when addressing requests for assistance (see WS Directive 2.101). However, WS 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 in situations where the requesting entity had already attempted to resolve the damage or threats of damage using non-lethal methods. WS would use non-lethal methods to exclude and harass target birds from areas where damage or threats were occurring. When effective, non-lethal methods would disperse birds from the area resulting in a reduction in the presence of those birds at the site where an entity employed those methods. From federal Fiscal Year 2006 through federal Fiscal Year 2012, WS employed non-lethal methods to harass and disperse birds in Maryland as part of an integrated approach to managing damage and threats. Generally, many entities regard non-lethal methods as having minimal impacts on overall populations of birds since those birds are unharmed. Dispersing those birds to other areas would have minimal impact on the populations of those bird species. WS would not employ non-lethal methods over large geographical areas or apply those methods at such intensity that essential resources (*e.g.*, food sources, habitat) would be unavailable for extended durations or over such a wide geographical scope that long-term adverse effects would occur to a species' population. The continued use of non-lethal methods often leads to the habituation of birds to those methods, which can decrease the effectiveness of those methods.

Employing lethal methods often reinforces non-lethal methods and removes birds that caused damage or posed a threat to human safety. The use of lethal methods could result in local reductions of birds in the area where damage or threats were occurring. The number of birds removed from the population using

lethal methods would be dependent on the number of requests for assistance received, the number of birds involved with the associated damage or threat, and the efficacy of methods employed.

Under Alternative 2 and Alternative 3, other entities could remove those birds causing damage or posing threats of damage in the absence of WS' direct involvement since the take of birds could occur when the USFWS issued a depredation permit pursuant to the MBTA. In addition, other entities could lethally remove birds to alleviate damage or reduce threats under depredation/control orders and/or during the regulated hunting seasons in the State. For those bird species afforded no protection under the MBTA, lethal removal could occur at any time without the need for a depredation permit. Since the lack of WS' direct involvement does not preclude the lethal removal of birds by those persons experiencing damage or threats, WS' involvement in removing those birds under the proposed action would not be additive to the number of birds that could be taken by other entities in the absence of WS' involvement. As was shown in the EA, other entities have lethally removed many of the bird species addressed in the EA to alleviate damage or threats of damage. The number of birds lethally removed annually would likely be similar across the alternatives, since the take of birds could occur even if WS was not directly involved with providing assistance under Alternative 2 and Alternative 3. Those activities proposed, including the proposed lethal removal of birds, under Alternative 1 would not be additive to the number of birds that could be lethally removed by other entities under the other alternatives despite the lack of WS' involvement.

The level of lethal removal under Alternative 2 and Alternative 3 would likely remain at least similar to the levels of removal that have occurred previously but could increase to levels addressed under the proposed action alternative even if WS only provides technical assistance or provides no assistance. The lack of direct operational assistance provided by WS would not likely result in a decline in the number of birds lethally removed in the State since removal by WS would likely not be additive to the number of birds that could have been removed if WS had not participated in those activities.

In addition, most non-lethal and lethal methods available for resolving damage or threats associated with birds would be available under any of the alternatives. The immobilizing drug alpha chloralose and the avicide DRC-1339 would be the only methods that would not be available under all of the alternatives. The use of alpha chloralose and DRC-1339 would only be available under the proposed action alternative since those products are only available for use by WS' personnel. DRC-1339 is the only avicide the EA considered for use to manage bird damage. Formulations of DRC-1339 are registered with the Environmental Protection Agency (EPA) to manage damage associated with rock pigeons, European starlings, red-winged blackbirds, brown-headed cowbirds, common grackles, American crows, and several gull species. During the development of the EA, formulations of DRC-1339 were registered with the Maryland Department of Agriculture for use to manage damage associated with pigeons, starlings, and blackbirds. Alpha chloralose is only available to live-capture waterfowl, coots, and pigeons.

Based on the evaluation in the EA, the availability of alpha chloralose and DRC-1339 to manage damage or threats of damage associated with certain bird species under the proposed action would not pose significant environmental risks when used by trained WS' personnel and in accordance with use guidelines. Therefore, WS' use of those methods available under all of the alternatives would not be additive to the environmental status quo since those methods could be employed by any entity experiencing damage or threats caused by birds.

Based on those quantitative and qualitative parameters addressed in the EA, the proposed take levels of bird species addressed under the proposed action alternative (Alternative 1) were of low magnitude when compared to population trend data, population estimates, and/or harvest data. The number of birds lethally removed annually under the alternatives would likely to be similar since the removal of birds could occur despite no involvement by WS. As was shown in the EA, other entities have addressed bird

species to alleviate damage. Therefore, any birds that WS could lethally remove under the proposed action alternative, other entities could remove under the other alternatives. WS does not have the authority to regulate the number of birds lethally removed annually by other entities. WS' lethal removal of birds would only occur at levels authorized and only when the USFWS issues a permit for those species for which a depredation permit is required for lethal removal.

In addition, based on the levels of lethal removal that occurred previously by WS and other entities and in anticipation of the USFWS permitting the lethal removal of birds at levels addressed in the EA, the cumulative removal at levels addressed would also be of low magnitude when compared to those quantitative and qualitative parameters addressed in the EA. The permitting of lethal removal by the USFWS would ensure that cumulative take levels occurred within allowable levels to maintain species' populations and meet population objectives for each species.

Issue 2 - Effects on Non-target Wildlife Species Populations, Including T&E Species

Another issue often raised is the potential impacts to populations of wildlife due to the unintentional lethal removal of animals as non-targets during damage management activities. While WS would attempt to minimize the risks of lethally removing non-target wildlife, the potential would exist for the unintentional removal of non-targets during damage management activities. Since federal Fiscal Year 2006, WS' use of an integrated methods approach has not resulted in the known lethal removal of non-target animals in the State. Methods available to address bird damage would be similar across all the alternatives. Therefore, risks to non-targets from the use of those methods would be similar across the alternatives analyzed in detail when using those methods as intended. The only methods that would not be available under all the alternatives analyzed in detail would be the use of alpha chloralose and DRC-1339, which would be restricted to use by personnel of WS only, if available. Although some risks to non-targets do occur from the use of those methods, those risks would be minimal when trained WS' personnel used those methods in accordance with WS Directive 2.430 and use guidelines. Based on information in the EA, the use patterns of alpha chloralose and DRC-1339 would not pose increased risks to non-targets.

Under the no involvement by WS alternative, WS would not provide any assistance related to bird damage management in Maryland; therefore, no direct impacts to non-targets would occur from WS. Under the technical assistance only alternative, WS could provide information on the proper use of methods and provide demonstrations on the use of methods. However, WS would not directly use methods to alleviate bird damage or threats. Similar to the no WS involvement alternative, under the technical assistance alternative, if other entities applied methods as intended and with regard for non-target hazards, those methods would not result in the decline in non-target species' populations. If WS provided requestors with technical assistance but those entities did not implement any of the recommended actions and conducted no further action, the potential for impacts to occur could be lower than the risks associated with the proposed action. If those persons requesting assistance implemented methods appropriately that WS recommended and as instructed or demonstrated, the potential impacts to non-targets would be similar to the proposed action. Methods not implemented as recommended by WS or the use of methods not recommended by WS would likely increase risks to non-targets. When employing direct operational assistance under the proposed action alternative, WS would employ methods and use techniques in accordance with the Standard Operating Procedures discussed in Chapter 3 of the EA, which would lower the risk of lethally removing a non-target animal unintentionally.

The ability of other entities to reduce damage and threats caused by birds could be variable under Alternative 2 and Alternative 3 since the skills and abilities of the person implementing damage management actions would determine success. If other entities applied those methods available as intended, risks to non-targets would be minimal to non-existent. If other entities applied those methods

available incorrectly or if other entities applied those methods without knowledge of wildlife behavior, risks to non-target wildlife could be higher under any of the alternatives. If frustration from the lack of available assistance under Alternative 2 and Alternative 3 caused those persons experiencing bird damage to use methods that were not legally available for use, risks to non-targets 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 wildlife. Under the proposed action alternative, those persons could request direct operational assistance from WS to reduce damage and threats occurring, which would increase the likelihood that non-target species would be unaffected by damage management activities.

Based on a review of those T&E species listed in the State during the development of the EA, WS determined that activities conducted pursuant to the proposed action would not likely adversely affect those species listed in the State by the USFWS and the National Marine Fisheries Services nor their critical habitats. Based on a review of the proposed action and the methods available under the proposed action, WS has determined that the proposed damage management program would not adversely affect any of the species listed by the MDNR in the State. The USFWS and the MDNR have concurred with WS' determinations. Appendix C and Appendix D in the EA contain lists of those species currently considered threatened and endangered in the State.

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

The threats to human safety of methods available would be similar across the alternatives since those methods would be available across the alternatives. 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. If WS or other entities used methods incorrectly or without regard for human safety, risks to human safety could increase under any of the alternatives. The EA determined that the availability of alpha chloralose and DRC-1339 would not increase risks to human safety from the use of those methods under the proposed action alternative. Although risks do occur from the use of alpha chloralose and DRC-1339, when WS uses those methods in consideration of human safety, the use of those methods would not pose additional risks to human safety beyond those associated with the use of other methods.

Issue 4 - Effects on the Aesthetic Values of Birds

Birds often provide aesthetic enjoyment to many people in the State through observations, photographing, and knowing they exist as part of the natural environment. Since those birds that could be removed by WS under the proposed action alternative could be removed by other entities in the absence of WS' involvement, WS' involvement in lethally removing those birds would not likely be additive to the number of birds that could be removed in the absence of WS' involvement. Birds could be lethally removed by other entities if a depredation permit were issued by the USFWS, under depredation/control orders, without the need for a permit from the USFWS (*e.g.*, some non-native species), or during the regulated hunting seasons.

The potential impacts on aesthetics from a technical assistance program (Alternative 2) would only be lower than the proposed action if those persons experiencing damage were not as diligent as WS would be in employing methods. If those persons experiencing damage abandoned the use of those methods, then birds would likely remain in the area and available for viewing and enjoying for those people interested in doing so. Similar to the other alternatives, activities conducted by other entities to disperse or remove birds, after WS recommended those methods through a technical assistance program, would be limited geographically. Those activities conducted by other entities would not occur over such large areas that opportunities to view and enjoy birds would be severely limited.

Since other entities could continue to disperse and lethally remove birds under Alternative 3, despite WS' lack of involvement, the ability to view and enjoy birds would likely be similar to the other alternatives. The lack of WS' involvement would not likely result in a reduction in the number of birds dispersed or lethally removed since WS has no authority to regulate lethal removal or the harassment of birds in the State.

Under all the alternatives, the intent of using non-lethal and lethal methods, that WS and/or other entities could employ, would be to make resources unavailable, unattractive, or to remove birds causing damage. Therefore, the use of methods often results in the removal or dispersal of birds from the area where damage was occurring. Since methods available would be similar across the alternatives, the use of those methods would have similar potential impacts on the aesthetics of birds. However, even under the proposed action alternative, the dispersal and/or lethal removal of birds would not reach a magnitude that would prevent the ability to view birds outside of the area where damage was occurring. The effects on the aesthetic values of birds would therefore be similar across the alternatives and would be minimal.

Issue 5 - Humaneness and Animal Welfare Concerns of Methods

The EA also evaluated in detail the issue of humaneness and animal welfare concerns as those concerns relate to methods and activities that would be available for use and conducted under each of the alternatives analyzed in detail. 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. As stated previously, alpha chloralose and DRC-1339 would be the only methods that would not be available under all the alternatives. When providing direct operational assistance as the proposed action alternative describes, WS would apply methods as humanely as possible. Under the other alternatives, other entities could apply methods inhumanely if those entities use methods inappropriately or without consideration of wildlife behavior. However, when used as intended and attended to appropriately, many people would consider most of the methods as humane.

Issue 6 - Effects of Bird Damage Management Activities on the Regulated Harvest of Birds

Of the bird species addressed in the EA, hunting seasons in the State exist for snow geese, mallards, coots, and mourning doves. WS would not adversely affect the ability to harvest birds during the regulated hunting seasons under Alternative 2 since WS would not lethally remove birds to alleviate damage under the alternative. However, other entities could remove birds under depredation permits and depredation/control orders issued by the USFWS resulting in the potential for impacts similar to the proposed action and Alternative 3. The use and/or recommendation of non-lethal methods could disperse or exclude birds from areas under Alternative 1 and Alternative 2, which could limit the ability of those persons interested to harvest birds in the damage management area. However, bird populations would be unaffected by WS under the technical assistance alternative (Alternative 2).

Similarly, WS would have no effect on regulated hunting under Alternative 3 since WS would not conduct any activities related to bird damage management in the State. The USFWS and the MDNR could continue to regulate bird populations through adjustments in allowed removals during the regulated harvest season and through depredation/control orders or permits to manage damage or threats of damage. If those people experiencing damage or threats conducted damage management activities or contacted other entities to provide assistance, the number of birds removed annually under Alternative 2 and Alternative 3 could be similar to the proposed action alternative.

The magnitude of lethal removal addressed in the proposed action would be low when compared to the mortality of those bird species from all known sources. When the number of birds that WS could lethally remove annually to meet the need for action was included as part of the known mortality of birds and

compared to the known populations of those species, the potential impact on the populations of the species harvestable was below the level of removal that would be required to lower population levels.

Activities to alleviate damage or threats of damage conducted by WS would occur after consultation and approval by the USFWS. With oversight by the USFWS and the MDNR, the number of birds that WS could lethally remove would not limit the ability of those persons interested to harvest birds during the regulated season. WS would report the number of birds lethally removed to the USFWS annually, which would ensure the USFWS incorporated the number of birds lethally removed by WS into population management objectives established for bird populations. Based on the limited take proposed by WS and the oversight by the USFWS and the MDNR, WS' lethal removal of birds annually would have no effect on the ability of those persons interested to harvest birds during the regulated harvest season.

Issue 7 - Effectiveness of Bird Damage Management Methods

The methods available to those people experiencing damage would be similar across the alternatives analyzed in detail. The only methods that would not be available under all the alternatives analyzed in detail would be the use of alpha chloralose and DRC-1339, which are restricted to use by personnel of WS only. Those methods would only be available and employed to alleviate damage or threats of damage under the proposed action alternative; however, alpha chloralose would only be available to manage damage associated with waterfowl and DRC-1339 would only be available to address damage associated with pigeons, starlings, blackbirds, and gulls, if registered for use in the State.

Since those methods available for resolving bird damage would be available to those people experiencing damage or threats under all the alternatives, the effectiveness of those methods when used as intended would be similar amongst the alternatives. A common issue raised is that the use of lethal methods would be ineffective because additional birds would likely return to the area after removal occurs or the following year when birds return to the area, which gives the impression of creating a financial incentive to continue the use of only lethal methods. This assumes birds only return to an area where damage was occurring if WS or other entities used lethal methods. However, the use of non-lethal methods can often be temporary, which could result in birds returning to an area where damage was occurring once those methods are no longer used or birds become habituated to those methods. The common factor when employing any method is that birds could return if suitable conditions continue to exist at the location where damage was occurring and bird densities were sufficient to occupy all available habitats.

Dispersing birds using non-lethal methods often requires repeated application to discourage birds from an area, which increases costs, moves birds to other areas where they could cause damage, and could be temporary if conditions attracting those birds to an area remained unchanged. Some entities could view the dispersal and the translocating of birds as moving a problem from one area to another, which would require addressing damage caused by those birds at another location. WS' recommendation of or use of techniques to modify existing habitat or making areas unattractive to birds was discussed in Appendix B of the EA. WS' objective would be to respond to a request for assistance with the most effective methods and to provide for the long-term solution to the problem using WS' Decision Model to adapt methods in an integrated approach to managing bird damage.

As part of an integrated approach to managing bird damage, WS would have the ability to adapt methods to damage situations to effectively reduce or prevent damage from occurring. Under the proposed integrated approach, WS could employ all methods, individually or in combination, as deemed appropriate through WS' Decision Model to address requests for assistance. WS' objective when receiving a request for assistance under the proposed action would be to reduce damage and threats to human health and safety or to prevent damage from occurring using an integrated approach to managing

bird damage. Therefore, under the proposed action, WS would employ methods adaptively to achieve that objective.

XIV. CUMULATIVE IMPACTS OF THE PROPOSED ACTION

Based on evaluations documented in the EA, implementation of the any of the three alternatives, including the proposed action, would not result in significant cumulative environmental impacts. Under the proposed action, the lethal removal of birds by WS would not have significant impacts on statewide bird populations when considering known sources of mortality. When WS receives a request for assistance and provides direct assistance and/or provides technical assistance recommendation under Alternative 1 or provides only technical assistance recommendations under Alternative 2, no expected risks to public safety would occur since only trained and experienced personnel would conduct activities and/or make recommendations. If persons receiving technical assistance from WS under Alternative 1 or Alternative 2 implemented methods incorrectly without regard to WS' recommendations, there could be a higher risk potential to public safety from the use of those methods. There would be a potential increased risk to public safety when persons reject assistance and recommendations and conduct their own activities under Alternative 2, and when WS provides no assistance 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 approach to managing damage and threats caused by birds would not result in significant cumulative effects on the quality of the human environment.

XV. DECISION AND RATIONALE

Based on the analyses of the alternatives developed to address those issues analyzed in detail within the EA, including individual and cumulative impacts of those alternatives, I, the decision-maker, have made the following decision.

Decision

I have carefully reviewed the EA prepared to meet the need for action. I find the proposed 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 addresses 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, nor does the proposed action constitute a major federal action. Therefore, the analysis in the EA does not warrant the completion of an EIS.

Based on the evaluation documented in the EA, I find that implementing Alternative 1 (proposed action/no action) and applying the Standard Operating Procedures discussed in Chapter 3 of the EA would best meet the need for action and would address the issues identified during the development of the EA. Alternative 1 would successfully address bird damage management using a combination of the most effective methods and does not adversely affect the environment, property, human health and safety, and/or non-target species, including T&E species. Alternative 1 would offer the greatest chance of maximizing effectiveness and benefits to resource owners and managers while minimizing cumulative impacts on the quality of the human environment that might result from the program's effect on target and non-target species populations. In addition, Alternative 1 would present the greatest chance of maximizing net benefits while minimizing adverse effects to public health and safety. Alternative 1 would also offer a balanced approach to the issues of humaneness and aesthetics when all facets of those issues are considered. As stated in the EA, WS would continue to monitor activities associated with the selected alternative. Changes that broaden the scope of damage management activities in the State beyond those described in the EA, changes that affect the natural or human environment, or changes from

the issuance of new environmental regulations would trigger further analysis pursuant to the NEPA. 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 (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 EIS should not be prepared. I base this determination on the following factors:

1. Bird damage management as conducted by WS in the State would not be regional or national in scope.

2. The proposed action would pose minimal risk to public health and safety. Based on the analyses in the EA, the methods available would not adversely affect human safety based on their use patterns.

3. No significant effects would occur to unique characteristics, such as parklands, prime farmlands, wetlands, wild and scenic areas, or ecologically critical areas. 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 bird damage management, 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. The evaluation documented in the EA did not identify significant cumulative effects. The EA analyzed cumulative effects on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within the State of Maryland.

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 determined that the proposed program would not adversely affect any federally listed T&E 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 comply with all applicable federal, state, and local laws.

11. The evaluation documented in the EA found no significant cumulative effects associated with other actions implemented or planned within the area.

Rationale

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 bird damage management at the request of landowners/managers, 2) management actions would be consistent with applicable laws, regulations, policies and orders, and 3) the analyses identified no cumulative effects to the environment. As a part of this Decision, the WS program in Maryland would continue to provide effective and practical technical assistance and direct management techniques that reduce damage and threats of damage.

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

9/30/13
Date

XVI. LITERATURE CITED

Atlantic Flyway Council. 2003. Atlantic Flyway mute swan management plan 2003–2013. Atlantic Flyway Council, Atlantic Flyway Technical Section, Snow Goose, Brant, and Swan Committee.

Chesapeake Bay Mute Swan Working Group. 2004. Mute swan (Cygnus olor) in the Chesapeake Bay: A bay-wide management plan. 45 pp.

MDNR. 2003. Mute swans in Maryland: A statewide management plan. Maryland Department of Natural Resources, Wildlife and Heritage Service, Mute Swan Task Force. 39 pp.

MANEM Region Waterbird Working Group. 2006. Waterbird Conservation Plan: 2006–2010 Mid-Atlantic / New England / Maritimes Region. A plan for the Waterbird Conservation for the Americas Initiative. http://www.waterbirdconservation.org/pdfs/regional/manem_binder_appendix_1b.pdf. Accessed December 11, 2012.

Slate, D.A., R. Owens, G. Connolly, and G. Simmons. 1992. Decision making for wildlife damage management. Trans. N. A. Wildl. Nat. Res. Conf 57:51-62.

USDA. 2009. Environmental Assessment: Management of Crow Damage in the state of Maryland. USDA-APHIS-WS, 1568 Whitehall Road, Annapolis, Maryland, USA.

USDA. 2011. Environmental Assessment: Reducing Canada goose damage throughout the State of Maryland. United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services, 1568 Whitehall Road, Annapolis, Maryland, USA.

USFWS. 2003. Final Environmental Impact Statement: Double-crested cormorant management. U.S. Dept. of the Interior, USFWS, Div. of Migratory Bird Management, 4401 N. Fairfax Drive MS 634, Arlington, Virginia 22203.

USFWS. 2007. Final Environmental Impact Statement: Light goose management. United States Fish and Wildlife Service, Division of Migratory Birds. Arlington, Virginia.

USFWS. 2009. Environmental Assessment: Extended management of double-crested cormorants under 50 CFR 21.47 and 21.48. United States Fish and Wildlife Service, Division of Migratory Bird Management, 4401 N. Fairfax Drive, Mail Stop 4107, Arlington, Virginia 22203.