DECISION

ENVIRONMENTAL ASSESSMENT: MANAGING DAMAGE AND THREATS CAUSED BY BIRDS IN THE STATE OF MISSISSIPPI

I. PURPOSE

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program, in cooperation with the Tennessee Valley Authority (TVA), have 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.

Damage and threats of damage associated with the following bird species were addressed in the EA: eared grebes (*Podiceps nigricollis*), American white pelicans (*Pelecanus erythrorhynchos*), great blue herons (*Ardea herodias*), great egrets (*Ardea alba*), snowy egrets (*Egretta thula*), little blue herons (*Egretta caerulea*), cattle egrets (*Bubulcus ibis*), green herons (*Butorides virescens*), black vultures (*Coragyps atratus*), turkey vultures (*Cathartes aura*), snow geese (*Chen caerulescens*), wood ducks (*Aix sponsa*), gadwalls (*Anas strepera*), mallards (domestic/wild) (*Anas platyrhynchos*), blue-winged teal (*Anas discors*), feral ducks, feral geese, ospreys (*Pandion haliaetus*), northern harriers (*Circus cyaneus*), sharp-shinned hawks (*Accipiter striatus*), Cooper's hawks (*Accipiter cooperii*), red-shouldered hawks (*Buteo lineatus*), red-tailed hawks (*Buteo jamaicensis*), American kestrels (*Falco sparverius*), wild turkeys (*Meleagris gallopavo*), American coots (*Fulica americana*), killdeer (*Charadrius vociferous*), lesser yellowlegs (*Tringa flavipes*), least sandpipers (*Calidris minutilla*), spotted sandpipers (*Actitis macularia*), upland sandpipers (*Bartramia longicauda*), common snipe (*Gallinago gallinago*), laughing gulls (*Leucophaeus atricilla*), ring-billed gulls (*Larus delawarensis*), herring gulls (*Larus argentatus*), rock pigeons (*Columba livia*), Eurasian collared-doves (*Streptopelia decaocto*), mourning doves (*Zenaida macroura*), barred owls (*Strix varia*), chimney swifts (*Chaetura pelagica*), Eastern kingbirds (*Tyrannus tyrannus*), American crows (*Corvus brachyrhynchos*), horned larks (*Eremophila alpestris*), purple martins (*Progne subis*), tree swallows (*Tachycineta bicolor*), Northern rough-winged swallows (*Stelgidopteryx serripennis*), bank swallows (*Riparia riparia*), cliff swallows (*Hirundo pyrrhonota*), barn swallows (*Hirundo rustica*), Eastern bluebirds (*Sialia sialis*), American robins (*Turdus migratorisus*), European starlings (*Sturnus vulgaris*), cedar waxwings (*Bombycilla cedrorum*), field sparrows (*Spizella pusilla*), savannah sparrows (*Passerculus sandwichensis*), red-winged blackbirds (*Agelaius phoeniceus*), Eastern meadowlarks (*Sturnella magna*), Brewer's blackbirds (*Euphagus cyanocephalus*), common grackles (*Quiscalus quiscula*), brown-headed cowbirds (*Molothrus ater*), house finches (*Carpodacus 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, including properties owned or managed by the TVA. When assistance is requested on properties owned or managed by the TVA, WS would coordinate activities with the TVA. The EA was prepared by WS and the TVA to determine if the alternatives could have a significant impact on the quality of the human environment. Specifically, the EA was prepared to: 1) facilitate planning and interagency coordination, 2) streamline program management, 3) evaluate the potential environmental consequences of the alternatives related to the issues of managing damage caused by birds, and 4) 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, a Memorandum of Understanding, cooperative service agreement, or other comparable document would be signed between WS and the cooperating entity, which lists all the methods the property owner or manager would allow to be used 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 may also be requested to participate in disease surveillance and monitoring in the event of a disease outbreak or potential outbreak in a bird population.

The TVA owns and manages over 293,000 acres in the Tennessee River system, which supports the goal of power generation and transmission, flood control, and economic development of the Tennessee River Valley. Bird damage and threats of damage occurring at facilities and properties owned or managed by the TVA have occurred primarily to property and human safety. Birds roosting at TVA facilities can cause considerable economic damage due to the excessive amount of droppings on buildings, equipment, and facilities resulting in constant cleaning. The droppings can occur in work areas which can be aesthetically displeasing to employees, can be a safety concern, and can pose a threat to people from the potential transmission of zoonotic diseases. Birds can also roost on or enter electrical substations and power generation facilities and threaten the interruption of power.

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 such management is requested by a cooperator, including properties owned or managed by the TVA. The analyses in the EA were intended to 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 Mississippi, including TVA properties. The EA emphasizes major issues as they relate to specific areas; however, the issues addressed 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 Mississippi.

The United States Fish and Wildlife Service (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. Native migratory bird species are afforded protection from take by the Migratory Bird Treaty Act (MBTA); however, the MBTA does allow for the lethal take 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. 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 EA was made available to the public for review and comment by a legal notice published in the *Clarion Ledger* from May 22, 2012 through May 24, 2012. A notice of availability and the EA were also made available for public review and comment on the APHIS website at

http://www.aphis.usda.gov/wildlife_damage/nepa.shtml beginning on May 8, 2012. A letter of availability was also mailed directly to agencies, organizations, and individuals with probable interest in bird damage management in the State. The public involvement process ended on June 22, 2012. WS received one comment letter during the public comment period in support of the proposed action alternative.

IV. RELATIONSHIP OF THE EA TO OTHER ENVIRONMENTAL DOCUMENTS

Several environmental documents have been developed 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) and a resident Canada goose management Final Environmental Impact Statement (USFWS 2005). In addition, the USFWS has prepared a snow goose management Final Environmental Impact Statement (USFWS 2007). WS has also issued EAs that address damage management activities in Mississippi associated with cormorants (USDA 2004) and Canada geese (USDA 2008). The TVA has also developed a Natural Resources Plan (TVA 2011*a*) and a Final Environmental Impact Statement that evaluates the implementation of the Natural Resources Plan (TVA 2011*b*).

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). The TVA is a federal corporation created by an Act of Congress in May 18, 1933 [48 Stat. 58-59, 16 U.S.C. Sec. 831, as amended]. The TVA provides electricity to 9 million people, businesses, and industries and manages 293,000 acres of public land and 11,000 miles of reservoir shoreline in the 7-state Tennessee Valley region.

Management of native migratory birds is the responsibility of the USFWS under the MBTA. As the authority for the management of birds, the USFWS was consulted during the development of the EA and provided input to ensure an interdisciplinary approach according to the National Environment Policy Act (NEPA) and agency mandates, policies, and regulations. The Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) is responsible for managing wildlife in the State of Mississippi, including birds. Information from the USFWS and the MDWFP has been provided to assist in the analysis of potential impacts associated with the implementation of the alternatives on bird populations in the State.

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). All bird damage management activities, including disposal requirements, would be conducted 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 (FIFRA), 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 conduct bird damage management to alleviate damage to agriculture, property, natural resources, and threats to human health and safety, 2) should WS conduct disease surveillance and monitoring in the bird population when requested, 3) should WS implement an integrated wildlife damage management strategy, including technical assistance and direct operational assistance, to meet the need for bird damage management in Mississippi, 5) if not, should WS attempt to implement one of the alternatives to an integrated damage

management strategy as described in the EA, and 6) would the proposed action or the other alternatives result in adverse impacts to the environment requiring the preparation of an Environmental Impact Statement (EIS).

VII. AFFECTED ENVIRONMENT

Upon receiving a request for assistance, activities to alleviate bird damage or threats could be conducted on federal, state, tribal, municipal, and private properties in Mississippi. In addition, when requested, activities could be conducted on properties owned or managed by the TVA. 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 include 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. Damage management activities could be conducted 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 ADDRESSED IN THE ANALYSIS OF ALTERNATIVES

Issues related to wildlife damage management were initially identified and defined during the development of WS' programmatic FEIS (USDA 1997). Issues related to bird damage management in Mississippi were defined and preliminary alternatives were identified through consultation with the USFWS, TVA, and with the MDWFP. The EA was also made 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. The following issues were identified as important to the scope of the analysis (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 ANALYZED IN DETAIL WITH RATIONALE

In addition to those issues analyzed in detail, several issues were identified during the development of the EA but were not considered in detail. The rationale for the decision not to analyze those issues in detail was discussed in the EA. 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

The following three alternatives were developed 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 alternatives analyzed in detail are summarized below.

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 damages 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 is available, operational damage management. An integrated damage management strategy would be recommended and used, 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. Non-lethal methods would be given first consideration in the formulation of each damage management strategy, and would be recommended or implemented when practical and effective before recommending or implementing lethal methods. However, non-lethal methods would 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 there could be instances where application of lethal methods alone would be the most appropriate strategy.

All methods addressed in Appendix B of the EA could be employed by WS to resolve requests for assistance to manage damage associated with birds in the State. Using the WS Decision model discussed in the EA, WS would 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 persons 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 immediate burden of resolving threats or damage associated with birds would occur to those persons experiencing damage. Those persons 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 take birds to alleviate damage under this alternative when those birds are 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, snow geese, wood ducks, gadwall, mallards, blue-winged teal, American coots, common snipe, mourning doves, and crows could continue to be taken during the regulated hunting seasons in the State. The MBTA does not protect feral waterfowl, pigeons, starlings, and house sparrows from lethal take and those persons experiencing damage can lethally remove those birds using legally available methods at any time. In addition, crows, red-winged blackbirds, common grackles, and brown-headed cowbirds can be removed when committing or about to commit damage without the need for a depredation permit under the blackbird depredation order established by the USFWS. Muscovy ducks can be lethally removed 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 persons experiencing damage or threats associated with birds in the State except for alpha-chloralose, DRC-1339, and mesurol, 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 be involved with any aspect of damage management activities associated with birds in Mississippi. All requests for assistance received by WS would be referred to the USFWS, the MDWFP, 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 the 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, the avicide DRC-1339, and the repellent mesurol which are only available for use by WS.

XI. ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL WITH RATIONALE

Additional alternatives were also evaluated but were not considered in detail in the EA with rationale provided in the EA. The alternatives analyzed but not in detail included:

- Use of Non-lethal Methods Before Lethal Methods
- Use of Non-lethal Methods Only by WS
- Use of Lethal Methods Only by WS
- Trap and Translocate Birds Only
- 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. Standard operating procedures are discussed in Chapter 3 of the EA. Those standard operating procedures would be incorporated into activities conducted by WS when addressing bird damage and threats in Mississippi

under the proposed action alternative (Alternative 1). Those applicable procedures would also be incorporated into activities under the technical assistance alternative (Alternative 2). If the no involvement by WS alternative (Alternative 3) were selected, 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

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 Mississippi are not expected to be significantly impacted by any of the alternatives analyzed in the EA: soils, geology, minerals, water quality/quantity, flood plains, wetlands, critical habitats (areas 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, the TVA, and the MDWFP. 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 all or a combination of methods could be employed to resolve a request for assistance. WS could recommend and 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 are causing damage; thereby, reducing the presence of birds at the site and potentially the immediate area around the site where non-lethal methods are employed. Non-lethal methods would be given priority when addressing requests for assistance (WS Directive 2.101). However, non-lethal methods would not necessarily be employed to resolve every request for assistance if deemed inappropriate by WS' personnel using the WS Decision Model, especially in situations where the requesting entity has already attempted to resolve the damage or threats of damage using non-lethal methods. Non-lethal methods would be used to exclude, harass, and disperse 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 those methods were employed. From FY 2005 through FY 2011, WS employed non-lethal methods to harass and disperse birds in Mississippi as part of an integrated approach to managing damage and threats. Non-lethal methods are generally regarded as having minimal impacts on overall populations of birds since those species are unharmed. Those species would be dispersed to other areas with minimal impact on those species' populations. Non-lethal methods are not employed over large geographical areas or applied 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.

Lethal methods are often employed to reinforce non-lethal methods and to remove birds that have been identified as causing damage or posing a threat to human safety. The use of lethal methods would 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.

Birds that could be taken by WS under the proposed action could be taken by those persons experiencing damage or threats in the absence of WS' direct involvement under the other alternatives since the take of birds could occur when a depredation permit has been issued by the USFWS pursuant to the MBTA. In addition, birds could be lethally taken 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 take can occur at any time without a need for a depredation permit. Since the lack of WS' direct involvement does not preclude the taking of birds by those persons experiencing damage or threats, WS' involvement in take of 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, take of bird species addressed in the assessment have been lethally taken by other entities in the State to alleviate damage or threats of damage. The number of birds taken 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 take of birds, under Alternative 1 would not be additive to the number of birds that could be taken by other entities under the other alternatives despite the lack of WS' involvement.

The level of take under Alternative 2 and Alternative 3 is likely to remain at least similar to the levels of take 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 taken in the State since WS' take would likely not be additive to the number of birds that could have been taken 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, the avicide DRC-1339, and the repellent mesurol would be the only methods that would not be available under all of the alternatives. The use of alpha chloralose, DRC-1339, and mesurol would only be available under the proposed action alternative since those products are only available for use by WS' personnel. 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. Alpha chloralose is only available to live-capture waterfowl, coots, and pigeons. DRC-1339 is only available for use to manage damage associated with blackbird species and gulls. Mesurol is registered to discourage crows from feeding on eggs of threatened and endangered species. Based on the evaluation in the EA, the availability of alpha chloralose, DRC-1339, and mesurol to manage damage or threats of damage associated with birds under the proposed action would not pose significant environmental risks when used by trained WS' personnel and in accordance with use guidelines.

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) would be considered of low

magnitude when compared to population trend data, population estimates, and/or harvest data. The number of birds lethally taken annually under the alternatives is likely to be similar since the take 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 could be lethally taken under the proposed action alternative could be taken by other entities under the other alternatives. WS does not have the authority to regulate the number of birds taken annually by other entities. WS' take of birds would only occur at levels authorized and only when permitted by the USFWS for those species for which a depredation permit is required for take.

In addition, based on the levels of take that occurred previously by WS and other entities and in anticipation of the USFWS permitting the take of birds at levels addressed in the EA, the cumulative take of levels addressed are also of low magnitude when compared to those quantitative and qualitative parameters addressed in the EA. The permitting of the take by the USFWS would ensure that cumulative take levels occur 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 that could be taken as non-targets during damage management activities. While every effort is made to minimize the risks of lethally taking non-target wildlife, the potential does exist for the unintentional take of non-targets during damage management activities. Since FY 2005, no non-targets were known to have been killed by WS during previous bird damage management activities using an integrated approach. 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 those methods are used as intended. The only methods that would not be available under all the alternatives analyzed in detail would be the use of alpha chloralose, DRC-1339, and mesurol, which are restricted to use by personnel of WS only. Although some risks to non-targets do occur from the use of those methods, those risks are minimal when those methods are used by trained personnel in accordance with WS Directive 2.430 and use guidelines. Based on information in the EA, the use patterns of alpha chloralose, DRC-1339, and mesurol would not pose increased risks to non-targets.

Under the no involvement by WS alternative, WS would not be directly involved with any aspect of bird damage management; 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 demonstration on the use of methods but would not be directly involved with using methods to alleviate bird damage or threats. Similar to the no WS involvement alternative, under the technical assistance alternative, if methods were applied as intended and with regard for non-target hazards, those methods would not result in the decline in non-target species' populations. If requestors are provided technical assistance but do not implement any of the recommended actions and takes no further action, the potential impacts to non-targets would be lower compared to the proposed action. If those persons requesting assistance implement recommended methods appropriately and as instructed or demonstrated, the potential impacts to non-targets would be similar to the proposed action. Methods not implemented as recommended would likely increase risks to non-targets. When employing direct operational assistance under the proposed action alternative, WS could employ methods and use techniques that would avoid non-target take as described in Chapter 3 of the EA under the Standard Operating Procedures.

The ability to reduce damage and threats caused by birds would be variable based upon the skills and abilities of the person implementing damage management actions under Alternative 2 and Alternative 3. If those methods available were applied as intended, risks to non-targets would be minimal to non-existent. If methods available are applied incorrectly or applied without knowledge of bird behavior,

risks to non-target wildlife would be higher under any of the alternatives. If frustration from the lack of available assistance under Alternative 2 and Alternative 3 causes those persons experiencing bird damage to use methods that are 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 take 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 increases 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 (see Appendix C and Appendix D in 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 MDWFP 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 are trained and knowledgeable in the use of those methods. If methods were used incorrectly or without regard for human safety, risks to human safety would increase under any of the alternatives that those methods could be employed. The EA determined that the availability of alpha chloralose, DRC-1339, and mesurol 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, DRC-1339, and mesurol, when those methods are used in consideration of human safety, the use of those methods does 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 removed by WS under the proposed action alternative could be removed with a depredation permit issued by the USFWS, under depredation orders, under control orders, without the need for a permit (non-native species), or during the regulated hunting seasons, WS' involvement in taking those birds would not likely be additive to the number of birds that could be taken in the absence of WS' involvement.

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 are not as diligent in employing those methods as WS would be if conducting an operational program. 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 persons interested in doing so. Similar to the other alternatives, the geographical area in which damage management activities occurs would not such that birds would be dispersed or removed from such large areas that opportunities to view and enjoy birds would be severely limited.

Since birds could continue to be taken 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 taken since WS' has no authority to regulate take or the harassment of birds in the State.

Under all the alternatives, non-lethal and lethal methods available that could be employed are intended 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 is occurring. Since methods available are 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 take 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 issue of humaneness was also analyzed in detail in relationship to the alternatives. Since many methods addressed in Appendix B of the EA are 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, DRC-1339, and mesurol are the only methods that would not be available under all the alternatives. The ability of WS to provide direct operational assistance under the proposed action alternative would ensure methods are employed by WS as humanely as possible. Under the other alternatives, methods could be used inhumanely if used inappropriately or without consideration of bird behavior. However, when used as intended and attended to appropriately, most methods would be considered humane and would not increase the distress of birds.

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

Hunting seasons in the State exist for the following bird species addressed in the EA: snow geese, wood ducks, gadwall, mallards, blue-winged teal, American coots, common snipe, mourning doves, and crows. 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 under the alternative. However, resource/property owners could remove birds under depredation permits and depredation/control orders issued by the USFWS resulting in impacts similar to the proposed action and Alternative 3. The recommendation of non-lethal methods could disperse or exclude birds from areas under Alternative 2, which could limit the ability of those persons interested to harvest birds in the damage management area. However, the bird populations would be unaffected by WS under the technical assistance alternative (Alternative 2).

Similarly, WS would have no impact on regulated hunting under Alternative 3. WS would not be involved with any aspect of bird damage management. The USFWS and the MDWFP could continue to regulate bird populations through adjustments in allowed take during the regulated harvest season and through depredation/control orders or permits to manage damage or threats of damage.

The magnitude of lethal bird take addressed in the proposed action would be low when compared to the mortality of those bird species from all known sources. When WS' proposed take of birds was included as part of the known mortality of birds and compared to the known populations of those species, the impact on bird populations was below the level of removal required to lower population levels. The USFWS would determine the number of birds taken annually by WS through the issuance of depredation permits.

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 MDWFP, the number of birds that could be taken by WS would not limit the ability of those persons interested to harvest birds during the regulated season. All take by WS would be reported to the USFWS annually to ensure take by WS is incorporated into population management objectives established for bird populations. Based on the

limited take proposed by WS and the oversight by the USFWS and the MDWFP, WS' take 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 persons 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, DRC-1339, and mesurol 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, DRC-1339 would only be available to address damage associated with blackbirds and gulls while mesurol would only be available to manage egg predation associated with crows.

Since those methods available for resolving bird damage would be available to those persons 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 are likely to return to the area, either 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 lethal methods are used. However, the use of non-lethal methods is also often 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 continues to exist at the location where damage was occurring and bird densities are 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 are temporary if conditions attracting those birds to an area remain unchanged. Dispersing and the translocating of birds could be viewed 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 is discussed in Appendix B of the EA. WS' objective is 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 that is agreed upon by the cooperator.

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, all methods, individually or in combination, could be employed 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

No significant cumulative environmental impacts are expected from any of the three alternatives, including the proposed action. Under the proposed action, the lethal removal of birds by WS would not have significant impacts on statewide bird populations when known sources of mortality were considered. No risk to public safety would be expected when activities were provided and expected by requesting

individuals in Alternative 1 and Alternative 2 since only trained and experienced personnel would conduct and/or recommend damage management activities. There is a slight increased risk to public safety when persons who reject assistance and recommendations and conduct their own activities under Alternative 2, and when no assistance is provided under Alternative 3. However, under all of the alternatives, those risks would not be to the point that the impacts would be significant. The analysis in this EA indicates that an integrated approach to managing damage and threats caused by birds would not result in significant cumulative adverse impacts on the quality of the human environment.

XV. DECISION AND RATIONALE

Based on the analyses of the alternatives developed to address those issues in the EA, including individual and cumulative impacts of those alternatives, the following decision has been reached:

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 analyses in the EA, the issues identified are best addressed by selecting Alternative 1 (proposed action/no action) and applying the associated Standard Operating Procedures discussed in Chapter 3 of the EA. Alternative 1 successfully addresses (1) bird damage management using a combination of the most effective methods and does not adversely impact the environment, property, human health and safety, and/or non-target species, including T&E species; (2) it offers 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; (3) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and (4) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of those issues are considered. Further analysis would be triggered if changes occur that broaden the scope of damage management activities in the State, that affect the natural or human environment, or from the issuance of new environmental regulations. Therefore, it is my decision to implement the proposed action/no action alternative (Alternative 1) as described in the EA.

Finding of No Significant Impact

Based on the analyses provided in the EA, there are no indications that the proposed action (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. This determination is based on the following factors:

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

2. The proposed action would pose minimal risk to public health and safety. Risks to the public from many of the methods described in the EA were determined to be low in a formal risk assessment (USDA 1997). Based on the analyses in the EA, the methods available would not adversely affect human safety based on their use patterns.

3. There are no unique characteristics such as parklands, prime farmlands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. WS' standard operating procedures and adherence to applicable laws and regulations would further ensure that WS' activities do not harm the environment.

4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to 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. No significant cumulative effects were identified through the assessment. 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 Mississippi.

8. The proposed activities would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources.

9. WS has 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. No significant cumulative effects were identified by this assessment or other actions implemented or planned within the area.

Rationale

The rationale for this decision is based on several considerations. This decision takes into account public comments, social/political and economic concerns, public health and safety, and the best available science. The foremost considerations are that: 1) bird damage management would only be conducted by WS at the request of landowners/managers, 2) management actions are consistent with applicable laws, regulations, policies and orders, and 3) no adverse impacts to the environment were identified in the analysis. As a part of this Decision, the WS program in Mississippi would continue to provide effective and practical technical assistance and direct management techniques that reduce damage and threats of damage.

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

7/11/12
Date

XVI. LITERATURE CITED

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