

## DECISION

### ENVIRONMENTAL ASSESSMENT: REDUCING THE EFFECTS OF PREDATION ON THREATENED AND ENDANGERED BIRDS IN THE STATE OF MAINE

#### PURPOSE

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program, in cooperation with the United States Fish and Wildlife Service (USFWS), have prepared an Environmental Assessment (EA) to analyze the potential environmental and social impacts to the quality of the human environment from reducing the effects of predation on threatened and endangered birds in Maine (USDA 2012). The EA documents the need for managing predation risks in the State and assesses potential impacts on the human environment of four alternatives to address that need.

Predation and predation risks associated with the following species were addressed in the EA: red fox (*Vulpes vulpes*), gray fox (*Urocyon cinereoargenteus*), coyotes (*Canis latrans*), raccoons (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), striped skunks (*Mephitis mephitis*), mink (*Mustela vison*), long-tailed weasels (*Mustela frenata*), short-tailed weasels (*Mustela erminea*), feral and domestic cats (*Felis* spp.), feral and domestic dogs (*Canis* spp.), eastern chipmunks (*Tamias striatus*), ring-billed gulls (*Larus delawarensis*), herring gulls (*Larus argentatus*), great black-backed gulls (*Larus marinus*), laughing gulls (*Larus atricilla*), American crows (*Corvus brachyrhynchos*), American kestrels (*Falco sparverius*), merlins (*Falco columbarius*), and great horned owls (*Bubo virginianus*). Collectively, those species of wildlife are known to feed on eggs, adults, and nestlings of ground nesting bird species, including threatened and endangered (T&E) bird species, and will be referred to collectively as nest predators<sup>1</sup>.

The EA evaluated the need to manage predation risks associated with nest predators, the potential issues associated with managing predation or threats of predation on nesting bird populations, and the environmental consequences of conducting different alternatives to meet the need for action and to address the identified issues. The EA was prepared by WS and the USFWS 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, 2) facilitate interagency coordination, 3) streamline program management, 4) evaluate the potential environmental consequences of the alternatives related to the issues associated with managing predation risks, and 5) clearly communicate to the public the analysis of individual and cumulative impacts.

#### NEED FOR ACTION

The need for action arises from requests for assistance received by WS to reduce and prevent predation associated with nest predators. WS would only conduct activities after receiving a request for assistance. Before initiating activities, a Memorandum of Understanding, cooperative service agreement, or other comparable document would be signed between WS and the entity requesting assistance, which would list all the methods the property owner or manager would allow to be used on property they own and/or manage.

---

<sup>1</sup> Although collectively referred to as “nest” predators, those mammalian and avian species are known to feed on the eggs, nestlings, and adults of ground nesting birds and are not restricted to destroying just the nests of ground nesting birds. Furthermore, the presence of these predators at nesting sites frequently causes adult birds to abandon their nest and eggs, or entire colonies to abandon nesting areas.

## SCOPE OF ANALYSES IN THE EA

The EA evaluates the need for action to manage nest predation, the potential issues associated with managing nest predation, and the environmental consequences of conducting different alternatives to meet the need for action while addressing the identified issues. The EA evaluates meeting the need for action under four alternatives. The methods available for use or recommendation under each of the alternatives evaluated were provided in Appendix B of the EA. The actions evaluated were the use of those methods available under the alternatives and the employment of those methods by WS to manage or prevent damage and threats associated with nest predators. The standard WS Decision Model (Slate et al. 1992) would be the site-specific procedure for individual actions conducted by WS (see WS Directive 2.201).

Issues related to managing predation caused by nest predators in Maine were initially developed by WS and the USFWS in consultation with the Maine Department of Inland Fisheries and Wildlife (MDIFW). Additional issues were identified during a public scoping session held in Kennebunk, Maine. Issues were defined and preliminary alternatives were identified through the scoping process. As part of the scoping process, the EA was made available to the public for review and comment by a legal notice published daily in *Kennebec Journal* and the *Portland Press Harold* newspapers from December 10, 2012 through December 12, 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](http://www.aphis.usda.gov/wildlife_damage/nepa.shtml) beginning on November 29, 2012. A letter of availability was also mailed directly to agencies, organizations, and individuals with probable interest in mammal damage management in the State. The public involvement process ended on January 11, 2013.

WS received two comment letters related to the public comment period. The comment letters received during the public involvement process were reviewed for substantive issues and alternatives, which were considered in developing this Decision for the EA. A summary of the comments received and responses to the comments are provided in Appendix A of this Decision.

## RELATIONSHIP OF THE EA TO OTHER ENVIRONMENTAL DOCUMENTS

The mission of WS, the USFWS, and the MDIFW would be to conduct a coordinated program in accordance with plans, goals, and objectives developed to reduce predation associated with wildlife. Several EAs, recovery plans, and species assessments were identified in Section 1.4 of the EA that would influence activities conducted under the selected alternative.

## AUTHORITY AND COMPLIANCE

WS is authorized by law to reduce damage caused by animals 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 native migratory birds is the responsibility of the USFWS under the Migratory Bird Treaty Act. As the authority for the management of birds, the USFWS was a cooperating agency 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. In addition, the USFWS provides funding mechanisms under grant programs administered by the Wildlife and Sport Fish Program for the conservation of T&E species. The MDIFW is responsible for managing wildlife in the State of Maine, including those wildlife species addressed in the EA. Information from the USFWS and the MDIFW has been provided to assist in the analysis of potential impacts associated with the implementation of the alternatives on wildlife 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 activities, including disposal requirements, would be conducted consistent with: 1) the Endangered Species Act of 1973, 2) the Federal Insecticide, Fungicide, and Rodenticide Act, 3) applicable Executive Orders, and 4) applicable Federal, State, and local laws, regulations, and policies, including WS' Directives.

## **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, continue to conduct activities to alleviate and prevent predation on ground nesting T&E species, 2) should the Migratory Bird Program in Region 5 of the USFWS issue depredation permits to WS and other entities to conduct activities to alleviate nest predation, 3) should funding be provided to WS by the USFWS to address nest predation, 4) should WS implement an adaptive integrated methods strategy, including technical assistance and direct operational assistance, to meet the need to alleviate predation risks in Maine, 5) if not, should WS attempt to implement one of the alternatives to an integrated methods strategy as described in the EA, and 6) would the proposed action or the other alternatives result in impacts to the environment requiring the preparation of an Environmental Impact Statement (EIS).

## **AFFECTED ENVIRONMENT**

Predation management conducted under the alternatives to protect nesting piping plovers, least terns, and roseate terns would be limited to proximal areas to where those birds nest during the nesting season. Piping plovers along the Atlantic Coast nest on coastal beaches above the high tide line, sand flats at the ends of sand spits and barrier islands, gently sloping foredunes, blowout areas behind primary dunes, and washover areas cut into or between dunes. They may also nest on areas where suitable dredge spoils have been deposited. Piping plovers breed and nest on sandy beach habitats in York, Cumberland, and Sagadahoc Counties in Maine from late March through August of each year.

In Maine, least terns nest exclusively in scattered colonies on points and spits of sand beaches south of the Kennebec River. These sand beaches are characterized by highly dynamic areas of accretion and erosion, sparse vegetation, and coarse sand, gravel, and bits of broken shells. Roseate terns are exclusively a marine species, nesting on rocky or sandy islands, barrier beaches, or salt marsh islands. In the northeastern United States, roseate terns generally nest under dense vegetation, rocks, or driftwood.

## **ISSUES ASSOCIATED WITH MAMMAL DAMAGE MANAGEMENT ACTIVITIES**

Issues related to managing nest predation in Maine were defined and preliminary alternatives were identified by WS and the USFWS and through consultation with the MDIFW. Additional issues were identified during a public scoping session that occurred in Kennebunk, Maine on January 27, 2010. The EA was also made available to the public for review and comment through notices published in local media and through direct notification of potentially interested parties.

Chapter 2 of the EA describes in detail the issues considered and evaluated in the EA (USDA 2012). 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 those major issues:

- Issue 1 - Effects of Activities on Target Wildlife Populations
- Issue 2 - Effects of Activities on the Populations of Non-target Wildlife
- Issue 3 - Effects of Activities on Threatened and Endangered Species

- Issue 4 - Effectiveness of Methods and Strategies for Alleviating Nest Predation Risks
- Issue 5 - Effects of Management Methods on Human Health and Safety
- Issue 6 - Effects on the Socio-cultural Elements of the Human Environment
- Issue 7 - Humaneness and Animal Welfare Concerns of Methods
- Issue 8 - Effects of Nest Predator Management Activities on the Regulated Harvest of Those Species
- Issue 9 - Effects on Recreation in Areas Where Nest Predation Management Activities Occur

## **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 is 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
- Impact on Biodiversity
- A Loss Threshold Should Be Established Before Allowing Lethal Methods
- Nest Predator Management Should Not Occur at Taxpayer Expense
- Cost Effectiveness of Management Methods
- Risks of Nest Predation Should Be Managed By Private Entities
- Effects from the Use of Lead Ammunition in Firearms
- Impacts of Dispersing Wildlife to other Areas
- A Site Specific Analysis Should be Made for Every Location Where Mammal Damage Management Would Occur
- Inability to Know if an Individual of a Given Wildlife Species is Actually a Nest Predator
- Effects on Local Economies in Areas Where Activities are Conducted
- Animals Should Not Be Killed For Engaging In Natural Behaviors
- Education and Information Efforts Need to Increase
- Predators are Targeted too far from Nesting Grounds
- Removing Predators Causes an Increase in Small Mammal Populations
- Removing Nest Predators in Summer Causes Orphaning of Young
- Baiting of Traps Attracts Predators to Nesting Areas
- Habitat Loss from the Growing Human Population Not Nest Predation is the Cause of Declines

## **DESCRIPTION OF THE ALTERNATIVES**

The following four alternatives were developed to respond to the issues identified in Chapter 2 of the EA (USDA 2012). A detailed discussion of the effects of the alternatives on the issues is described in the EA under Chapter 4; below is a summary of the alternatives.

### **Alternative 1 – No Involvement by WS in Managing Predation Risks**

Under the no involvement alternative, WS would not be involved with any aspect of managing nest predation in Maine. All requests for assistance received by WS would be referred to the USFWS, the MDIFW, and/or other entities. The take of nest predators could continue to occur under this alternative when predation was occurring or could occur in accordance with depredation permits issued by the USFWS and the MDIFW as well as under the depredation orders and during the regulated hunting/trapping season in the State. Most of the methods described in Appendix B of the EA under this alternative to alleviate nest predation would be available under any of the alternatives and would be



available to all entities (USDA 2012). The only methods that would not be available to most entities would be the avicide DRC-1339 and mesurol, which can only be used by WS. Immobilizing drugs and euthanasia chemicals could only be used by WS or appropriately licensed veterinarians.

### **Alternative 2 – Managing Nest Predation Risks 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 nest predator 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 of nest predation associated with avian and mammalian predators would be placed on property owners and managers where nesting occurs. 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. Only those methods legally available for use by the appropriate individual would be recommend or loaned by WS. WS would continue to recommend an integrated approach using lethal and non-lethal methods. Similar to Alternative 1, most methods described in Appendix B of the EA would be available to those persons seeking assistance with alleviating nest predation.

### **Alternative 3 - Continuing the Current Integrated Approach to Managing Nest Predation (Proposed Action/No Action)**

The proposed action/no action alternative would continue the current implementation of an adaptive integrated approach utilizing non-lethal and lethal techniques, as deemed appropriate using the WS Decision Model, to reduce nest predation caused by avian and mammalian predators. 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. Funding could occur through federal appropriations or from cooperative funding.

All methods addressed in Appendix B of the EA would be available for use by WS to resolve requests for assistance to manage nest predation in the State. 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 situation involving nest predation. 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. Using the WS Decision model discussed in the EA, WS would employ methods singularly or in combination in an integrated approach to alleviate risks of nest predation.

### **Alternative 4 – Managing Nest Predation Using Non-lethal Methods Only**

Under this alternative, WS would be required to implement non-lethal methods only to resolve nest predation when a request for assistance was received. Only those methods discussed in Appendix B of the EA that were considered non-lethal would be employed by WS. No lethal take would occur by WS. The use of lethal methods could continue to be used under this alternative by those persons in areas where nest predation occurs. The non-lethal methods used or recommended by WS under this alternative would be identical to those identified in any of the alternatives except the repellent mesurol would only be available for use by WS' personnel.

### **ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL WITH RATIONALE**

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

- Non-lethal Methods Implemented Before Lethal Methods
- Use of Lethal Methods Only by WS
- Trap and Translocate Nest Predators Only
- Reducing Nest Predation by Managing Nest Predator Populations through the Use of Reproductive Inhibitors
- Short Term Eradication and Long Term Population Suppression
- Bounties
- Use of an Integrated Approach using Non-lethal, Non-chemical Methods Only (No Chemical Methods)
- Use of Supplemental Feeding of Nest Predators to Reduce Nest Predation
- Manage Human Population Growth and Expansion
- Protect Coyotes, which Would Allow a Balance in Mesopredator Populations
- Use of Volunteers to Protect Nest Sites
- Habitat Preservation Should be utilized as a Focal Point for Restoration
- A Holding Facility Should be Established Instead of Lethal Control or Translocation

## **STANDARD OPERATING PROCEDURES FOR MAMMAL DAMAGE MANAGEMENT**

The current WS program uses many standard operating procedures. Standard operating procedures were discussed in Chapter 3 of the EA (USDA 2012). Those standard operating procedures would be incorporated into activities conducted by WS under the proposed action alternative (Alternative 3) and when applicable, under the technical assistance alternative (Alternative 2) and the non-lethal methods only alternative (Alternative 4). If the no involvement by WS alternative (Alternative 1) were selected, the lack of assistance by WS would preclude the employment or recommendation of those standard operating procedures addressed in the EA.

## **ENVIRONMENTAL CONSEQUENCES FOR ISSUES ANALYZED IN DETAIL**

The EA analyzed the environmental consequences of each alternative as that alternative related 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 Maine 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 because of any of the alternatives. Those alternatives would meet the requirements of applicable laws, regulations, and Executive Orders, including the Clean Air Act and Executive Order 13514.

Chapter 4 of the EA analyzed the environmental consequences of each alternative in comparison to determine the extent of actual or potential impacts on the major issues identified in the EA. The proposed action/no action alternative served as the baseline for the analysis and the comparison of expected impacts among the alternatives. The analyses also take into consideration mandates, directives, and the procedures of WS, the USFWS, and the MDIFW. The analyses in Chapter 4 of the EA indicated the potential impacts to the quality of the human environment would be similar across the alternatives.



## **Issue 1 - Effects of Activities on Target Wildlife Populations**

Under the proposed action, WS would 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 would recommend and operational employ both non-lethal and lethal methods, as governed by federal, State, and local laws and regulations under the proposed action. The appropriateness of methods and techniques would be applied based on the WS Decision Model using inputs from each request for assistance.

Non-lethal methods can disperse or otherwise make an area unattractive to nest predators, which could reduce the presence of those species at the site and potentially the immediate area around the site where non-lethal methods were employed. Non-lethal methods would be given priority when addressing requests for assistance (see 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 had already attempted to resolve predation risks using non-lethal methods. Non-lethal methods would be used to exclude, harass, and disperse target wildlife from areas where predation was occurring or could occur. When effective, non-lethal methods would disperse nest predators from the area resulting in a reduction in the presence of those species at the site where those methods were employed. Non-lethal methods are generally regarded as having minimal impacts on overall populations of wildlife since those species are unharmed. The continued use of non-lethal methods often leads to the habituation to those methods, which can decrease their effectiveness. Lethal methods are often employed to reinforce non-lethal methods and to remove nest predators that have been identified as posing a threat of predation. The use of lethal methods would result in local reductions of nest predators in the areas where predation had occurred or could occur. The number of individual nest predators removed from the population using lethal methods would be dependent on the number of requests for assistance received, the number of individuals involved with the associated predation threat, and the efficacy of methods employed.

Nest predators that could be lethally taken by WS under the proposed action could be taken by other entities in the absence of WS' direct involvement under the other alternatives since the take of those species could occur when a permit had been issued by the USFWS and/or the MDIFW for the take of nest predators or during annual hunting and trapping seasons. Crows could be lethally taken to alleviate predation threats under depredation orders and/or during the regulated hunting seasons in the State. Since the lack of WS' direct involvement does not preclude the taking of nest predators by other entities, WS' involvement in the taking of those nest predators under the proposed action would not be additive to the number of predators that could be taken by other entities in the absence of WS' involvement. The number of individuals taken annually would likely be similar across the alternatives, since take could occur even if WS was not directly involved with providing assistance under Alternative 1 or only providing limited assistance under Alternative 2 and Alternative 4. Those activities proposed, including the proposed take of nest predators, under Alternative 3 would not be additive to the number of each species that could be taken by other entities under the other alternatives despite the lack of WS' direct involvement.

In addition, most non-lethal and lethal methods available for resolving nest predation would be available under any of the alternatives. Therefore, WS' use of those methods available under all of the alternatives would not be additive to the environmental status quo since most of those methods could be employed by any entity to alleviate nest predation.

Based on those quantitative and qualitative parameters addressed in the EA, the proposed take levels of each species of nest predators addressed under the proposed action alternative (Alternative 3) would be considered of low magnitude when compared to population trend data, population estimates, and/or



harvest data. The number of each species that could be lethally taken annually under the alternatives would likely be similar since the take of those species could occur despite no involvement by WS. As was shown in the EA, other entities have addressed those species to alleviate damage; therefore, any of those species 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 nest predators taken annually by other entities. WS' take of nest predators would only occur at levels authorized and only when permitted by the USFWS and/or the MDIFW for those species for which a permit is required for take.

Based on the levels of take that have occurred previously by WS and by other entities and anticipating the take of nest predators at levels addressed in the EA, the cumulative take levels addressed are also of low magnitude when compared to those quantitative and qualitative parameters addressed in the EA. The permitting of take by the MDIFW and the USFWS ensures that cumulative take levels occur within allowable levels to maintain species' populations and meet population objectives for each species.

## **Issue 2 - Effects of Activities on the Populations of Non-target Wildlife**

Another issue often raised is the potential impacts to populations of wildlife that could be taken as non-targets during nest predator management activities. While every effort would be made to minimize the risks of lethally taking non-target wildlife, the potential does exist for the unintentional take of non-targets during management activities. The non-targets taken previously by WS are representative of non-targets that could be lethally taken by WS under the proposed action alternative. Although additional species of non-targets could be lethally taken by WS, take of individuals from any species is not likely to increase substantively above the number of non-targets taken annually by WS during previous damage management activities.

Methods available to address nest predation 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. Most methods discussed in Appendix B that are available for use to manage nest predation would be available to all entities under all of the alternatives. Although some risks to non-targets do occur from the use of those methods, those risks would be minimal when those methods were used by trained personnel in accordance with WS Directive 2.430 and use guidelines.

Under the no involvement by WS alternative, WS would not be directly involved with any aspect of nest predator 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 nest predation risks. 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 were provided technical assistance but do not implement any of the recommended actions and take no further action, the potential impacts to non-targets would be lower compared to the proposed action. If those persons requesting assistance implemented recommended methods appropriately and as instructed or demonstrated, the potential impacts to non-targets would be similar to the proposed action. Methods or techniques not implemented as recommended or used inappropriately 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 risks of nest predation would be variable and would be based upon the skills and abilities of the person implementing actions under Alternative 1 and Alternative 2. If those methods



available were applied as intended, risks to non-targets would be minimal to non-existent. If methods available were applied incorrectly or applied without knowledge of nest predator or non-target behavior, risks to non-target wildlife would be higher under any of the alternatives. Under the proposed action alternative, those persons could request direct operational assistance from WS to reduce risks of nest predation, which increases the likelihood that non-target species would be unaffected by management activities.

### **Issue 3 – Effects of Activities on Threatened and Endangered Species**

Special efforts are made to avoid jeopardizing T&E species through biological evaluations of the potential effects and the establishment of special restrictions or mitigation measures. SOPs to avoid T&E effects are described in Chapter 3 of the EA (USDA 2012).

The current list of species designated as threatened and endangered in Maine as determined by the USFWS and the National Marine Fisheries Services was obtained and reviewed during the development of this EA. WS has determined that the proposed action alternative may affect, but would not likely adversely affect the piping plover and the roseate tern based primarily on the beneficial effects that could occur from reducing predation risks. The USFWS concurred with WS' determination that activities related to nest predator management would not adversely affect piping plovers and roseate terns. In addition, WS has determined the proposed action alternative would have no effect on other T&E species based on the absence of those species in the project areas or based on the use profiles of the methods available to address nest predation.

As part of the development of this EA, WS prepared standard operating procedures to safeguard state T&E species. WS has received concurrence from the MDIFW on those standard operating procedures.

### **Issue 4 - Effectiveness of Methods and Strategies for Alleviating Nest Predation Risks**

The methods available to reduce risks of nest predation would be similar across the alternatives analyzed in detail. Since most of those methods available for reducing risks of nest predation would be available under all the alternatives, the effectiveness of those methods when used as intended would be similar among the alternatives. A common issue raised is that the use of lethal methods is ineffective because nest predators are likely to return to the area, either after removal occurs or the following year when dispersal of young occurs, which gives the impression of creating a financial incentive to continue the use of only lethal methods. This argument assumes nest predators only return to an area where predation was occurring if lethal methods were used. However, the effects of non-lethal methods are also often temporary, which could result in nest predators returning to an area where predation was occurring once those methods are no longer used or target individuals habituate to the methods. The common factor when employing any method is that nest predators would return if suitable habitat continued to exist at the location where predation was occurring and population densities of those species were sufficient to occupy all available habitats.

Dispersing nest predators using non-lethal methods often requires repeated application, which increases costs, moves predators to other areas where they could cause damage, and could be temporary if habitat conditions remain unchanged. Dispersal and translocation of nest predators could be viewed as moving a problem from one area to another, which would require addressing damage caused by those species at another location. WS' recommendation of, or use of techniques to modify existing habitat or to make areas unattractive to nest predators was discussed in Appendix B of the EA. WS' objective under the proposed action/no action alternative would be to respond to requests 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 nest predation that was agreed upon by the cooperator.

As part of an integrated approach to managing nest predation, WS would have the ability to adapt methods to predation situations to effectively reduce or prevent predation 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. Once employed, methods would be further evaluated for effectiveness based on a continuous evaluation of activities by WS. Therefore, the effectiveness of methods would be considered as part of the decision-making process for each management request based on continual evaluation of methods and results.

Similarly, under the technical assistance only alternative (Alternative 2) and the non-lethal methods only alternative (Alternative 4), WS would recommend an integrated approach to resolving predation risks using those methods deemed appropriate using the WS Decision Model. Under the no involvement by WS alternative (Alternative 1), WS would not be involved with any aspect of nest predator management and all requests for assistance received by WS would be referred to other entities (*e.g.*, MDIFW, USFWS, private entities).

#### **Issue 5 - Effects of Management Methods on Human Health and Safety**

The threats to human safety of methods available would be similar across the alternatives since those same methods would be available. However, the expertise of WS' employees in using those methods available likely would reduce threats to human safety since WS' employees would be trained and knowledgeable in the use of those methods. 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. All methods described in Appendix B would be available for use to all entities to reduce risks of nest predation except for the use of DRC-1339 and mesurol, which can only be used by WS. The EA determined that the availability of DRC-1339 and mesurol under the proposed action would not increase risks to human safety from the use of those methods (USDA 2012). Although risks do occur from the use of DRC-1339 and mesurol, when used in consideration of human safety, their use would not pose additional risks to human safety beyond those associated with the use of other methods.

#### **Issue 6 - Effects on the Socio-cultural Elements of the Human Environment**

Those species of nest predators addressed in the EA often provide aesthetic enjoyment to many people in the State through observations, photographing, and knowing they exist as part of the natural environment. Under all the alternatives, methods available that could be employed are intended to make resources unavailable or unattractive, or to remove those individual nest predators posing a risk of predation. Management actions often result in the removal of nest predators from the area where predation could occur or in the dispersal of nest predators from an area. Since methods available would be similar across the alternatives, the use of those methods would have similar potential impacts on the aesthetics of nest predators. However, even under the proposed action alternative, the dispersal and/or take of nest predators under the alternatives would not reach a magnitude that would prevent the ability to view nest predators outside of the area where predation or the threat of predation was occurring. The effects on the aesthetic values of nest predators would therefore be similar across the alternatives and would be minimal.

#### **Issue 7 - 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 would be available under all the alternatives, the issue of



method humaneness would be similar for those methods across all the alternatives. The ability of WS to provide direct operational assistance under the proposed action alternative would ensure methods were employed by WS as humanely as possible. Under the other alternatives, methods could be used inhumanely if used inappropriately or without consideration of nest predator behavior. However, most methods, when used as intended, would be considered humane and when applied appropriately, would not increase distress of nest predators.

#### **Issue 8 - Effects of Nest Predator Management Activities on the Regulated Harvest of Those Species**

Hunting and/or trapping seasons in the State exist for red fox, gray fox, coyotes, raccoons, opossum, skunks, mink, weasels, and crows. WS would have no impact on regulated hunting under Alternative 1 since WS would not be involved with any aspect of reducing nest predation. Similarly, WS would have no impact on regulated hunting under Alternative 2 and Alternative 4 since WS would not lethally remove nest predators under those alternatives. However, resource/property owners may remove mammalian nest predators under permits issued by the MDIFW, when required, and depredation permits or depredation orders established by the USFWS resulting in impacts similar to the proposed action. The recommendation of non-lethal methods under Alternative 2, Alternative 3, and Alternative 4 could disperse or exclude nest predators from areas under this alternative, which could limit the ability of those persons interested to harvest those species in the management area. However, the populations of those nest predators would be unaffected from the use of non-lethal methods.

The USFWS and the MDIFW could continue to regulate populations through adjustments in allowed take during the regulated harvest seasons and through depredation orders or permits to manage predation or threats of predation. The magnitude of lethal take addressed in the proposed action would be low when compared to the mortality of those species from all known sources. When WS' proposed take of nest predators was included as part of the known mortality of those species from other sources and compared to estimated populations of those species, the impact on populations was below the level of removal required to lower population levels. The USFWS and the MDIFW would determine the number of nest predators taken annually by WS through the issuance of permits or adjustments in depredation orders.

Nest predator management activities conducted by WS would occur after consultation with the USFWS and the MDIFW. With oversight by the USFWS and the MDIFW, the number of individual nest predators allowed to be taken by WS would not limit the ability of those persons interested to harvest those species during the regulated season. All take by WS would be reported to the USFWS and the MDIFW annually to ensure take by WS was incorporated into population management objectives established for those species' populations. Based on the limited take proposed by WS and the oversight by the USFWS and the MDIFW, WS' take annually would have no effect on the ability of those persons interested to harvest any of the species addressed in the EA during the regulated harvest seasons.

#### **Issue 9 - Effects on Recreation in Areas Where Nest Predation Management Activities Occur**

Another concern raised is the potential effects on other recreation activities in areas where nest predator management activities were conducted in the State. Coastal areas used for nesting by ground nesting waterbird species are often utilized for a wide variety of recreational activities including swimming, hiking, dog walking, fishing, off road/all terrain vehicle use, picnicking, and bird/wildlife watching.

WS would have no impact on the ability to utilize nesting areas for any recreational activity under Alternative 1 since WS would not be involved with any aspect of managing predation associated with nest predators. Under the technical assistance only alternative (Alternative 2), WS would have no direct impact on recreational activities in coastal areas where nesting occurs since WS would not be responsible for restricting recreational access to any sites. However, WS might recommend restricting recreational



access to resource/property owners/managers to reduce impacts to nesting colonial birds and/or T&E species or during control activities being conducted by other entities resulting in impacts similar to the proposed action and the other alternatives. However, any closure or restriction would be made at the discretion of the property owner/manager. Restrictions may be based on safety concerns due to control methods such as shooting implemented by the property owner/manager.

Under the proposed action alternative (Alternative 3) and the non-lethal methods only alternative (Alternative 4), nest predator management activities would most likely occur from March through July and would have little impact on recreation activities that take place during the summer months. However, during the nesting season most local areas with current nesting activity and many with historic nesting activity are closed to public access by both private and public property owners and/or resource managers to limit damage to nesting habitat and disturbance of nesting birds or survival of fledglings. Those access restrictions occur regardless of whether or not nest predator management activities occur by WS.

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

No significant cumulative environmental impacts would be expected from any of the four alternatives, including the proposed action. Under the proposed action, the lethal removal of nest predators by WS would not have significant impacts on statewide populations of those species 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 2, Alternative 3, and Alternative 4, since only trained and experienced personnel would conduct and/or recommend management activities. There would be a slight increased risk to public safety when persons who reject assistance and recommendations conduct their own activities under Alternative 2, and when no assistance was provided under Alternative 1. 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 predation by those avian and mammalian predators addressed in the EA would not result in significant cumulative impacts on the quality of the human environment.

### **DECISION AND RATIONALE**

Based on the analyses in the EA of the alternatives developed to address issues associated with managing nest predation risks, 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 3) to be environmentally acceptable, addressing the issues and needs while balancing the environmental concerns of management agencies, landowners, advocacy groups, and the public. The analyses in the EA adequately address the identified issues which reasonably confirm that no significant impact, individually or cumulatively, to wildlife populations or the quality of the human environment are likely to occur from the proposed action, 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 3 (proposed action/no action) and applying the associated standard operating procedures discussed in Chapter 3 of the EA. Alternative 3 successfully addresses (1) nest predator 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; (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 nest predator 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 3) 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 3) 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. Nest predator 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. 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 park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. WS' SOPs 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 wildlife 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 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 by this assessment or other actions implemented or planned within the area.
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 consulted with the USFWS and the MDIFW during the development of the EA. The USFWS have concurred with WS' determination that the proposed action would not adversely affect piping plovers and roseate terns in the State. In addition, the MDIFW has concurred with WS' determination for State-listed species.
10. The proposed action would be in compliance with all applicable federal, State, and local laws.

### ***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) nest predator 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 Maine would continue to provide effective and practical technical assistance and direct management techniques that reduce predation risks.



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

1/28/13  
Date

### **LITERATURE CITED**

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. 2012. Environmental Assessment: Reducing the effects of predation on threatened and endangered birds in the State of Maine. USDA/APHIS/ Wildlife Services, Augusta, Maine.



## APPENDIX A

### RESPONSES TO COMMENTS ON THE ENVIRONMENTAL ASSESSMENT: REDUCING THE EFFECTS OF PREDATION ON THREATENED AND ENDANGERED BIRDS IN THE STATE OF MAINE

During the public involvement process for the EA, WS received two comment letters. WS has reviewed those comment letters to identify additional issues, alternatives, and/or concerns that were not addressed in the EA. Those comments received during the public involvement process are summarized below along with WS' response to those comments.

#### **Comment 1 - Human society has always chosen to kill native carnivores, with no interest in changing their own behavior**

The difference in human values regarding what does and does not constitute an appropriate response to wildlife damage, including the humaneness of the response was addressed in the EA. The effectiveness of methods available for use to manage nest predation was identified as an issue in the EA (see Section 2.2 in the EA). WS would only provide assistance when requested and would only employ those methods agreed upon by the appropriate landowner or land manager. The need to increase education and the dissemination of information regarding cultural practices was identified as an issue that was considered during the development of the EA (see Section 2.3 of the EA). Educational efforts were also discussed as part of the alternatives analyzed in detail (see Section 3.1 of the EA). However, WS does not have the authority to determine what is or is not proper societal values and does not have the authority to require people change their behavior or values.

The EA identified and considered several alternatives that would involve the use of non-lethal methods by WS, including an alternative that would require the use of only non-lethal methods to meet the need for action (see Section 3.1 and Section 3.2 of the EA). Under the relevant alternatives evaluated in detail, preference would be given to the use and recommendation of non-lethal methods by WS when practical and effective (see WS Directive 2.201).

#### **Comment 2 – Killing always ends up being the answer**

The EA evaluated in detail an alternative to address nest predation using non-lethal methods only by WS (see Section 3.1 of the EA). As was discussed throughout the EA, WS' personnel use a thought process for evaluating and responding to requests for assistance which is depicted by the WS Decision Model (see WS Directive 2.201) and described by Slate et al. (1992). Once WS receives a request for direct operational assistance, WS would conduct site visits to assess predation or threats, would identify the species responsible, and would apply the Decision Model described by Slate et al. (1992) and WS Directive 2.201 to determine the appropriate methods to resolve or prevent predation. WS' Decision Model would be the implementing mechanism for selecting methods under the proposed action alternative that would be adapted to each request.

Under WS Directive 2.101, preference would be given to non-lethal methods when developing approaches to managing nest predation. WS' personnel would assess the predation event or the risk of predation and then evaluate the appropriateness and availability (legal and administrative) of strategies and methods that would be based on biological, economic, and social considerations. Following this evaluation, methods that were deemed practical for the situation would be incorporated into a strategy to alleviate or prevent predation. After this strategy was implemented or recommended, monitoring would be conducted and evaluation would continue to assess the effectiveness of the strategy. If the strategy were effective at alleviating or preventing predation or the risk of predation, the need for further

management would be ended. In terms of the WS Decision Model, most efforts consist of continuous feedback between receiving the request and monitoring the results of the strategy to alleviate or prevent predation. Under the proposed action alternative, WS could employ only non-lethal methods when determined to be appropriate to alleviate nest predation by using the WS Decision Model.

**Comment 3 – Attention should be focused on habitat fragmentation caused by human development**

It is well documented that habitat degradation, manipulation, and loss has been the major cause that led to the population declines of piping plovers and least terns. Habitat fragmentation was discussed in Section 1.2 of the EA and identified as an issue in Section 2.2 of the EA. Habitat management and preservation is often paramount in T&E species recovery programs. Recovery efforts for piping plovers, least terns, and roseate terns are no different, and extensive progress has been made to acquire, protect, or preserve the habitats in which these species exist. Furthermore, the ESA has specific language and provisions to preserve T&E species habitat. As was stated in the EA, wildlife management in modern environments has to contend with the inheritance of faunal and landscape changes caused by humans, which can affect the relationships between predators and prey.

Avian and mammalian predators prey on a variety of natural resources, including T&E species. Native predators would normally be considered part of the function of a healthy ecosystem. Declines in bird populations associated with habitat loss and fragmentation may be compounded by predation. Many of the nest predators addressed in the EA are native to Maine; however, many changes have occurred in the coastal ecosystem of Maine that has disrupted natural predator-prey relationships. Many of the changes that have occurred can be attributed to human influence, including habitat fragmentation, landscape alteration, and environmental contamination. In addition, human habitation alone alters the biological carrying capacity of the coastal environment. Some species such as raccoons and skunks live in high densities because of human activity. Those human-induced changes can negatively affect the viability of some native bird populations that ground nest in coastal areas. The effects of predation on birds can be detrimental to local populations, especially when predator densities are high or when predators gain access to areas not historically occupied. Although the loss and degradation of habitat have been major contributors to the decline of plovers and terns, predation has also been identified as a limiting factor in the successful recovery of ground nesting birds.

**Comment 4 – No right to kill seagulls**

The Migratory Bird Treaty Act makes it unlawful to pursue, hunt, take, capture, kill, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or their parts, nests, or eggs (16 USC 703-711). A list of bird species protected under the MBTA can be found in 50 CFR 10.13.

The Migratory Bird Treaty Act 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 orders. Under authorities in the MBTA, the USFWS is the federal agency responsible for the issuance of depredation permits or the establishment of depredation orders for the take of those protected bird species when damage or threats of damage are occurring. Information regarding migratory bird permits can be found in 50 CFR 13 and 50 CFR 21.

**Comment 5 – Lobstermen are pouring left over fish into the ocean instead of bringing it to shore, which has caused the gull population to increase; should change the behavior of lobstermen**



As stated previously, WS does not have the authority to require that people change their behavior or to regulate the disposal of fish associated with harvesting lobsters. Population trend data available for gull species occurred in Section 4.1 of the EA.

**Comment 6 – Should create a new paradigm that is long-term, creative, collaborative, courageous, human directed, and community involved**

Under the proposed action alternative, WS' objective would be to respond to requests 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 nest predation that is agreed upon by the cooperator.

As part of an integrated approach to managing nest predation, WS would have the ability to adapt the widest range of methods to effectively reduce or prevent predation 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 nest predation or to prevent predation from occurring using an integrated approach. Therefore, under the proposed action, WS would employ methods adaptively to achieve that objective.

WS typically institutes an integrated approach that utilizes a broad range of management tools. Lethal methods could be used as a part of an integrated approach when non-lethal methods alone were ineffective. The proposed action has the greatest potential of successfully reducing nest predation and allows those methods determined to be effective, when using WS' Decision Model, to be applied to resolve requests for assistance. The purpose behind integrated management is to implement methods in the most effective manner while minimizing the potential effects on humans, target and non-target species, and the environment<sup>2</sup>. Efficacy is based on the types of methods employed, the application of the method, restrictions on the use of the method(s), the skill of the personnel using the method and, for WS' personnel, the guidance provided by WS Directives and policies. Once employed, methods would be further evaluated for effectiveness based on a continuous evaluation of activities by WS. Therefore, the effectiveness of methods would be considered as part of the decision-making process for each request for assistance based on the continual evaluation of methods and results under WS' Decision Model (see Appendix J of the EA).

**Comment 7 – Coyotes can effectively act as a keystone carnivore in Maine; research has shown the presence of coyotes can control predation on ground nesting birds by mesopredators**

An alternative that would protect coyotes to balance mesopredator populations was considered during the development of the EA (see Section 3.2 of the EA). However, the alternative was not evaluated in detail within the EA because coyotes and other nest predators would continue to threaten nesting plovers and terns through direct predation or abandonment of nesting locations by their presence.

**Comment 8 - Removing predators to enhance nesting success of seabirds carries many assumptions**

The need for action associated with alleviating nest predation risks was discussed in Section 1.2 of the EA. Historic management activities associated with alleviating nest predation risks were also addressed in Section 1.2 of the EA. As was documented in the EA, managing nest predation to enhance nesting success rates by reducing threats of predation on eggs and nestlings of ground nesting bird species can be successful.

---

<sup>2</sup>The cost of management may sometimes be secondary because of overriding environmental, legal, human health and safety, animal welfare, or other concerns.

**Comment 9 – WS should evaluate an alternative that uses volunteers to protect nesting birds from human intrusion and predation**

This alternative was considered during the development of the EA (see Section 3.2 of the EA). However, the alternative was not analyzed in detail for the reasons provided in the EA. The use of volunteers to protect nesting birds has drawbacks, including the potential difficulties of recruiting enough volunteers to cover a broad area, costs associated with training, safety, and transporting volunteers, and human presence alone often being insufficient to prevent predation, especially for many bird species.

**Comment 10 - To continue to not look at how people affect the lives of other non-human beings, and to continue the use of killing as the alternative of choice, dishonors the heritage we want to pass on to our children**

Non-lethal methods that would be available under the alternatives were discussed in Section 3.1, Section 4.1, Section 4.2, and Appendix B of the EA. Under WS Directive 2.101, preference would be given to non-lethal methods when developing approaches to managing nest predation. WS' personnel would assess the predation event or the risk of predation and then evaluate the appropriateness and availability (legal and administrative) of strategies and methods that would be based on biological, economic, and social considerations. As was discussed in Section 3.1 of the EA, many non-lethal methods would be available to address predation risks under the alternatives. WS has employed many non-lethal methods previously to address nest predation risks.

As has been stated previously, the discussion of regulating human behavior is outside the scope of WS' authority. WS does not have the authority to implement or require broad changes across human society to limit current human activities.

However, as discussed in the EA, Alternative 2, Alternative 3, and Alternative 4 would allow WS to provide information on practices and behaviors that those persons requesting assistance could implement to reduce the presence of nest predators in the area where damages or threats of damages were occurring, which could include changes to cultural practices. WS would only respond to requests for assistance when received from other entities. Therefore, WS does not possess the ability to impose changes on other entities that do not request assistance from WS to manage wildlife damage. WS would only make recommendations through technical assistance and whether those recommendations were implemented becomes the decision of those entities requesting assistance. WS does not have the authority to require those entities requesting assistance to implement the recommendation(s) made by WS.

**Comment 11 – Support for the proposed action alternative; an integrated approach that utilizes all the tools and techniques that are practical and available is necessary to improve populations of threatened and endangered birds**

Chapter 3 of the EA contains a discussion of the alternatives that were developed to address the identified issues discussed in Chapter 2. Alternatives were developed for consideration using the WS Decision model based on issues identified in the EA. The EA discusses issues associated with conducting activities to reduce predation risks to meet the need for action and evaluates different alternatives to meet that need while addressing those issues.

The proposed action alternative (Alternative 3) would continue the current integrated approach to managing damage by adaptively using those methods available. Methods available under the alternatives, including the proposed action alternative, were discussed in Section 3.1, Section 4.1, Section 4.2, and Appendix B of the EA.