

**DECISION
AND
FINDING OF NO SIGNIFICANT IMPACT**

**Management of Predation Losses to State and Federally
Endangered, Threatened, and Species of Special Concern; and
Feral Hog Management
to Protect Other State and Federally Endangered, Threatened,
Species of Special Concern, and
Candidate Species of Fauna and Flora
in the State of Florida**

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program responds to requests for assistance from individuals, organizations and agencies experiencing damage caused by wildlife in Florida. WS has prepared an environmental assessment (EA) that analyzes alternatives for managing predation losses to state and federally endangered, threatened, species of special concern, and candidate species of plants and animals in the state of Florida. APHIS procedures for implementing the National Environmental Policy Act (NEPA) allows for the categorical exclusion of individual wildlife damage management actions (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). However, to properly address WS involvement in this action statewide, an EA was prepared to facilitate planning, interagency coordination, and the streamlining of program management, and to clearly communicate with the public the analysis of cumulative impacts. The pre-decisional EA released by WS in August 2001, documented the need for assisting natural resource managers in reducing predation losses to state and federally listed species in Florida and assessed potential impacts of various alternatives for responding to predation issues involving listed species. Comments from the public involvement process were reviewed for substantial issues and alternatives which were considered in developing this decision. The EA is tiered to the programmatic Environmental Impact Statement (EIS) for the Wildlife Services Program¹ (USDA 1997).

WS's proposed action was to implement an integrated wildlife damage management program that would include education and non-lethal and lethal methods to reduce predation losses to listed species throughout the State of Florida and to incorporate WS's current technical assistance approach to managing listed species and predator conflicts. Direct control assistance will only take place after a request for services has been received and where permission has been granted by private landowner or government manager. Based on the analysis in the EA, I have determined that there will not be a significant impact, individually or cumulatively, on the quality of the human environment from implementing the proposed action, and that the action does not constitute a major federal action significantly affecting the quality of the human environment.

¹ USDA (U.S. Department of Agriculture), Animal and Plant Health Inspection Service (APHIS), Animal Damage Control (ADC). 1997 (revised). Animal Damage Control Program, Final Environmental Impact Statement. Anim. Plant Health Inspection Serv., Anim. Damage Control. Hyattsville, MD. Volume 1, 2 & 3.

Public Involvement

The pre-decisional EA was prepared and released to the public for a 30-day comment period by a legal notice in the Tampa Tribune, Tallahassee Democrat, Miami Herald, and The Florida Times Union (Jacksonville) on August 26, 2001. The pre-decisional EA was also mailed directly to agencies, organizations, and individuals with probable interest in the proposed program. No comment letters were received by WS within the said comment period.

Affected Environment

The areas of the proposed action include the entire State of Florida, but more specifically, areas where predation losses to listed species has occurred or may occur in the future. The proposed action could occur on private or public properties within the State of Florida.

Objectives

The objectives of the proposed action are to:

- 1) Respond to 100% of the requests for assistance with the appropriate action (technical assistance or direct control) as determined by Florida WS personnel, applying the ADC Decision Model (Slate et al. 1992).
- 2) Hold sea turtle nest predation to less than 20% per year, on properties with a federal WS operational program.
- 3) Hold American crocodile nest predation to less than 20% per year, on properties with a federal WS operational program.
- 4) Hold beach mouse and nesting-wintering shorebird predation to less than 20% per year, on properties with a federal WS operational program.
- 5) Reduce feral hog populations to the greatest extent possible, on properties with a federal WS operational program.
- 6) Maintain the lethal take of nontarget animals by WS personnel during damage management to less than 10% of the total animals taken.

Major Issues

Several major issues were contained in scope of this EA. These issues were consolidated into the following 6 primary issues to be considered in detail:

- 1) Effects of Predation on Resources Protected, Including Native Wildlife and Plant Species
- 2) Effects on Target Species Populations
- 3) Effects of Control Methods on Nontarget Species Populations, Including T&E Species
- 4) Humaneness of Control Methods

5) Effects of Control Methods on Human Health and Safety

6) Effects on the Aesthetic Values of Targeted Species and Protected T&E Species

Alternatives Analyzed in Detail

Five potential alternatives were developed to address the issues identified above. A detailed discussion of the anticipated effects of the alternatives on the objectives and issues are contained in the EA. The following summary provides a brief description of each alternative and its anticipated impacts.

Alternative 1 - No Action - This alternative precludes any and all WDM activities by WS to protect T&E species in Florida. A natural resource manager or any other entity directed at preventing or reducing predation of sea turtle nests, crocodile nests, beach mice, and shorebirds could conduct WDM activities in the absence of WS involvement.

Alternative 2 - Nonlethal Control Before Lethal Control - This alternative would not allow the use or recommendation of lethal control by WS until all available nonlethal methods had been applied and determined to be inadequate in each damage situation.

Alternative 3 - Nonlethal Control Only - This alternative would involve the use and recommendation of nonlethal management techniques only by WS.

Alternative 4 - Lethal Control Only - This alternative would involve the use and recommendation of lethal management techniques only by WS.

Alternative 5 - Integrated Wildlife Damage Management (the Proposed Action) - This alternative would incorporate an integrated approach to wildlife damage management using components of the wildlife damage management techniques and methods addressed in Alternatives 2, 3, and 4, as deemed appropriate by WS and other participating entities.

Alternatives Considered but not Analyzed in Detail with Rationale

1) Aversive Conditioning (taste aversion) Alternative -The objective of aversive conditioning would be to feed egg predators a prey-like bait (eggs) laced with an aversive agent that causes them to become ill, resulting in the subsequent avoidance of the prey (eggs).

The use of any taste aversive agent would be experimental. No compounds are currently registered by the Environmental Protection Agency (EPA) for use in this situation. While some aversive conditioning studies involving raccoons and ravens have proven successful, results with coyotes, wild hogs, and armadillos have been less conclusive. To be successful the predator must be enticed to eat the egg baits; the predator aversive agent used must induce enough discomfort to condition the predator to avoid the baits; and this avoidance must be transferred to sea turtle and shorebird nests. Furthermore, the avoidance must persist long enough without reinforcement for this method to offer realistic protection to sea turtle, crocodile, and shorebird

eggs. This method would not address the problem with predation on beach mice, shorebirds, nor sea turtle and crocodile hatchlings.

2) Frightening Devices Alternative - Frightening devices such as electronic guards, pyrotechnics, propane cannons, and lights can be used to temporarily alleviate predation. The effectiveness of these devices depends upon the individual predator's fear of, and subsequent aversion to the offensive stimuli. Once a predator habituates to these stimuli, it often resumes its normal activities and movements.

The continuous and prolonged utilization of artificial lighting along the beach could have a negative impact on sea turtle, crocodile, and shorebird nesting activity, and endangered beach mice foraging. The use of artificial lighting may deter female sea turtles (Witherington and Martin 1996) and shorebirds, discouraging them from nesting at historic nesting sites. In addition, newly hatched sea turtles are strongly attracted to light sources (Raymond 1984, Witherington 1995, Witherington 1991). This disorientation could lead to increased mortality due to predation, dehydration, and exhaustion. Lights could inhibit the foraging behavior of beach mice, since they forage during nighttime hours.

The impact of noise resulting from the use of electronic guards, pyrotechnics, and propane exploders in sea turtle and crocodile nesting areas is unknown. There are indications that the noise and harassment associated with increasing boat and jet ski traffic may stress sea turtles that are feeding, mating, or waiting to nest near popular beaches. Noise associated with the above devices, potentially could impact all animal species proposed for protection in this EA.

After consultation with the FPS and the USFWS, it was decided that this method was unacceptable for use during the sea turtle nesting season (May 1 to October 31), because of the potential impacts to adult nesting and hatchling sea turtles. This method could be used outside of the turtle nesting season from November 1 to April 30; however, the foraging activities of the beach mouse and wintering shorebirds would still be effected by the lights and noise from the frightening devices during this period. Also, using frightening devices during this time would not prevent predation of sea turtle and shorebird nests during nesting season.

Due to the public nature of the Florida coastal environs, and the presence of overnight campers, the use of electronic guards, pyrotechnics, and propane exploders would negatively impact the serene environment. The exclusive use of frightening devices in a manner compatible with park management and sea turtle nesting requirements would not reduce predation to an acceptable level.

3) Population Reduction (trap/translocate) Alternative - This alternative would allow the live capture of raccoons, foxes, coyotes, feral /free-ranging domestic cats and dogs, feral hogs, and armadillos using cage traps, leg snares, and/or leghold traps. Captured predators would be tranquilized and translocated to other areas.

The FWC, Title 39-4.005 (*Introduction of Foreign Wildlife or Freshwater Fish or Carriers of Disease*) does not allow the transportation of non-indigenous wildlife into or within the State of

Florida. For the scope of this EA, this includes feral hogs, cats, dogs, and coyotes. Additionally, relocation of live furbearers (i.e., raccoons, coyotes, foxes, opossums, skunks, nutria, beaver) or nonprotected wildlife (i.e., armadillos) is not permitted in Florida without a permit issued by the FFWCC (FWC, Title 39-24.002 and 39-6.002).

Relocation of wildlife is often viewed as inhumane and biologically unsound management, especially when the wildlife species being relocated is already abundant or common in an area. Relocated animals are forced into a new environment where they often have to compete for space and resources with already well established animals of the same species. Consequently, WS will not request a permit from the state in regards to relocating any of the species proposed for control work in this EA. If certain segments of the public demand relocation, then it will be up to that group(s) to acquire a permit from the state and relocate the animals (as outlined in the relocation permit).

4) Eradication and Long Term Population Suppression of Native Wildlife Alternative -

Eradication and long term population suppression of native wildlife is not an objective or option considered by the Wildlife Services Program in Florida. Eradication of native wildlife populations or species is considered ecologically unsound by the Wildlife Services Program, and is not and will not be conducted by WS. Within the scope of this EA, it is the objective of WS to reduce predator numbers within local populations that are directly impacting state and/or federally listed species. However, this reduction will be restricted to problem animals, species, or populations, and will only be conducted with non-native problem species and non-listed native carnivores/omnivores that have been identified as significant predators of listed species in this EA. Additionally, non-native species (i.e., feral hogs) that directly impact the habitats of the listed species will be managed to reduce habitat degradation in these areas and to reduce their impact on other sensitive native fauna, flora, and ecosystems.

5) Biological Control Alternative - Biological control is most commonly used to control select evasive plant and insect species. Very little effort has been devoted to the biological control of wildlife species listed in this EA for two reasons: 1) many of these species are native to the North American continent and biological control measures directed towards a wide spread species potential could have disastrous, uncontrollable effects on a species throughout its range and 2) any biological control measure directed towards a non-native or feral species could adversely affect some groups of animals presently in use for agriculture purposes, ranching, pets, etc. that are closely related to the target species.

Finding of No Significant Impact (FONSI)

The analysis in the EA indicates that there will not be a significant impact, individually or cumulatively, on the quality of the human environment as a result of this proposed action. I agree with this conclusion and, therefore, find that an EIS need not be prepared. This determination is based on the following factors:

- 1) Predator damage management, as conducted by WS in the State of Florida, is not regional or national in scope.

- 2) Based on the analysis documented in the EA, the impacts of the proposed action will not significantly affect public health or safety. Risks to the public from WS methods were determined to be low in a formal risk assessment (USDA 1997, Appendix P).
- 3) The proposed action will not have a significant impact on unique characteristics such as park lands, wetlands, wild and scenic areas, or ecologically critical areas. Built-in mitigation measures that are part of WS's standard operating procedures and adherence to laws and regulations will 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 certain individuals may be opposed to managing predators, this action is not controversial in relation to size, nature, or effects.
- 5) Mitigation measures adopted and/or described as part of the proposed action minimize risks to the public, prevent adverse effects on the human environment, and reduce uncertainty and risks. Effects of methods and activities, as proposed, are known and do not involve uncertain or unique risks.
- 6) The proposed action does not establish a precedent for future actions, including future predator damage management that may be implemented or planned within the State.
- 7) The number of predators that will be taken by WS annually is very small in comparison to regional and statewide populations. Adverse effects on other wildlife species and on wildlife habitat would be minimal. The EA discussed cumulative effects of WS 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.
- 8) This action will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places and will not cause loss or destruction of significant scientific, cultural, or historic resources. Wildlife damage management would not disturb soils or any structures and, therefore, would not be considered a "Federal undertaking" as defined by the National Historic Preservation Act.
- 9) WS determined that the proposed project would not adversely affect Federally or State listed species in Florida.
- 10) The proposed action is consistent with local, state, and Federal laws that provide for or restrict WS wildlife damage management. Therefore, WS concludes that this project is in compliance with federal, state and local laws for environmental protection.

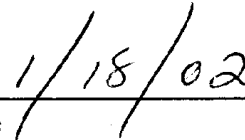
Decision and Rational

I have carefully reviewed the Environmental Assessment (EA) prepared for this proposal and the input from the public involvement process. I believe that the issues identified in the EA are best addressed by selecting Alternative 5 (*Integrated Wildlife Damage Management - Proposed Action*) and applying the associated mitigation measures discussed in Chapter 3 of the EA. Alternative 5 is selected because (1) it offers the greatest chance at 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; (2) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and, (3) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of these issues are considered. The comments identified from public involvement were minor and did not change the analysis. Therefore, it is my decision to implement the proposed action as described in the EA.

Copies of the EA are available upon request from the USDA, APHIS, WS, 2820 East University Avenue, Gainesville, FL 32641.



Acting Director, Eastern Region
USDA-APHIS-WS



Date

Literature Cited

- Raymond, P. W. 1984. Sea Turtle hatchling disorientation and beach front lighting. A review of the problem and potential solutions. The Center for Environmental Education. Sea Turtle Rescue Fund. Washington, D. C. 72 pp.
- Slate, D. A., R. Owens, G. Connolly, and G. Simmons. 1992. Decision making for wildlife damage management. Trans. North Am. Wildl. Nat. Resour. Conf. 57: 51-62.
- USDA. 1997. Final Environmental Impact Statement. U.S. Dept. Agric., Anim. Plant Health Inspection Serv., Animal Damage Control, Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD 20737.
- Witherington, B. E. 1991. Influences of artificial lighting on the seaward orientation of hatchling loggerhead turtles. (*Caretta caretta*). Biological Conservation 55:139-149.
- _____. 1995. Hatchling orientation. A Summary. Pages 577-578 in K. A. Bjorndal, ed., Biology and Conservation of sea turtles. Revised Edition. Smithsonian Institution Press. Washington D.C.
- _____ and R. E. Martin. 1996. Understanding, assessing, and resolving light-pollution problems on sea turtle nesting beaches. FMRI Tech. Rep. TR-2. Florida Marine Research Institute, St. Petersburg, Florida. 73p.