

**DECISION
AND
FINDING OF NO SIGNIFICANT IMPACT**

**An Integrated Wildlife Damage Management Approach
for the Management of White-tailed Deer Damage
In the State of Illinois**

The U.S. Department of Agriculture, Animal and Plant Health Inspection Service (USDA-APHIS), Wildlife Services (WS) program responds to requests for assistance from individuals, organizations and agencies experiencing damage caused by wildlife in Illinois. WS cooperates with land and wildlife management agencies to reduce wildlife damage effectively and efficiently according to applicable federal, State and local laws and Memorandums of Understanding (MOUs) between WS and other agencies. Ordinarily, according to APHIS procedures implementing the National Environmental Policy Act (NEPA), individual wildlife damage management actions may be categorically excluded (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). To evaluate and determine if any potentially significant impacts to the human environment from WS planned and proposed program would occur; to facilitate planning, interagency coordination, and the streamlining of program management; and to clearly communicate with the public the analysis of cumulative impacts an environmental assessment (EA) was prepared. The EA documents the need for a white-tailed deer (*Odocoileus virginians*) damage management program to alleviate damage to agriculture, property, natural resources, and human health and safety on public and private lands in Illinois and assessed potential impacts of various alternatives for responding to requests for assistance. 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 proposed action is to implement an Integrated Wildlife Damage Management (IWDM) program on all land classes in Illinois that would include lethal and nonlethal direct control and technical assistance to reduce damage to property, agricultural and natural resources, and human health and safety caused by white-tailed deer. Direct control assistance will only take place after a request for services has been received and where permission has been granted by the landowner or land 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.

Public Involvement

The pre-decisional EA was released to the public for a 30 day comment period with a legal notice

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, Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD 20737. Volume 1, 2 & 3.

being placed in two newspapers (Chicago Tribune [Chicago, IL] and The State Journal-Register [Springfield, IL]) encompassing the affected area. The pre-decisional EA was also mailed directly to agencies, organizations and individuals with probable interest in the proposed program. All comments were analyzed to identify substantial new issues, alternatives, or to redirect the program. Two comment letters and one phone call were received by WS within the 30 day comment period. The letters and phone call were from the IL Department of Natural Resources (IDNR), the US Fish and Wildlife Service, and the [REDACTED], respectively, providing their support of the proposed program.

The letters and record of phone conversation are maintained in the administrative file located at the Illinois WS State Office, 2869 Via Verde Drive, Springfield, IL 62703-4325.

Monitoring

The Illinois WS program will review the EA each year to ensure that it and the analysis are sufficient. This EA would remain valid until Illinois WS and other appropriate agencies determine that new needs for action, changed conditions or new alternatives having different environmental effects must be analyzed. At that time, this analysis and document would be supplemented pursuant to NEPA.

Major Issues

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

- Effects on white-tailed deer populations;
- Effects on plants and other wildlife species, including threatened and endangered species;
- Effects on human health and safety;
- Humaneness of methods to be used;
- Effects on aesthetic values; and
- Effects on regulated white-tailed deer hunting.

Alternatives Analyzed in Detail

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

Alternative 1. Integrated Deer Damage Management Program (Proposed Action/No Action).

Under this alternative, Wildlife Services would continue the current program that administers an Integrated Wildlife Damage Management (IWDM) approach to alleviate white-tailed deer damage to agriculture, property, natural resources, and human health and safety in Illinois. An IWDM approach would be implemented on all private and public lands of Illinois where a need exists, a request is received, and funding is available. An IWDM 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 humans, other species, and the environment. Under this action, WS would provide technical assistance and operational damage management, including non-lethal and lethal management methods by applying the WS Decision Model (Slate et al. 1992). When appropriate, habitat modifications, harassment, repellants, and physical exclusion could be recommended and utilized to reduce deer damage. In other situations, deer would be removed as humanely as possible by sharpshooting or live capture followed by euthanasia under permits issued by the IDNR. In determining the damage management strategy, preference would be given to practical and effective non-lethal methods. However, non-lethal methods may not always be applied as a first response to each damage problem. The most appropriate response could often be a combination of non-lethal and lethal methods, or there could be instances where application of lethal methods alone would be the most appropriate strategy. Appendix B of the EA describes the methods available for recommendation and use by WS under this alternative. Deer damage management would be conducted in the State, when requested, on private or public property after an *Agreement for Control* or other comparable document has been completed. All deer damage management would be consistent with other uses of the area and would comply with appropriate federal, State, and local laws.

Alternative 2. Non-lethal Deer Damage Management only by WS.

This alternative would require WS to use and recommend non-lethal methods only to resolve all deer damage problems. Requests for information regarding lethal management approaches would be referred to IDNR, local animal control agencies, or private businesses or organizations. Persons receiving deer damage could still resort to lethal methods or other methods not recommended by WS, use contractual services of private businesses that were available to them, or take no action. Appendix B of the EA describes a number of non-lethal methods available for recommendation and use by WS under this alternative.

Alternative 3. Lethal Deer Damage Management only by WS.

This alternative would require WS to use and recommend lethal methods only to resolve all deer damage problems. Requests for information regarding non-lethal management approaches would be referred to IDNR, local animal control agencies, or private businesses or organizations. Individuals might choose to implement WS lethal recommendations, implement non-lethal methods or other methods not recommended by WS, contract for WS lethal direct control services, use contractual services of private businesses, or take no action. Appendix B of the EA describes lethal methods available for recommendation and use by WS under this alternative.

Alternative 4. No Deer Damage Management by WS.

This alternative would eliminate WS involvement in all deer damage management activities. WS would not provide direct operational or technical assistance. Persons requesting assistance from WS would have to conduct their own deer damage management without WS

input. All requests for white-tailed deer damage management would be referred to the IDNR, local animal control agencies or private individuals, businesses or organizations. Assistance may or may not be available from any of these entities.

Alternatives Considered but not Analyzed in Detail

Two alternatives were considered, but not analyzed in detail. These include the following.

Live Trap and Relocation.

Under this alternative WS would capture deer alive using cage-type live traps or capture drugs administered by dart gun and then relocate the captured deer to another area. Numerous studies have shown that live-capture and relocation of deer is relatively expensive, time-consuming, and inefficient (Ishmael and Rongstad 1984, O'Bryan and McCullough 1985, Diehl 1988, Jones and Witham 1990, Ishmael et al. 1995). Population reduction achieved through capture and relocation is labor intensive and would be costly (\$273-\$2,876/deer) (O'Bryan and McCullough 1985, Bryant and Ishmael 1991). Additionally, relocation frequently results in high mortality rates for deer (Cromwell et al. 1999, O'Bryan and McCullough 1985, Jones and Witham 1990, Ishmael et al. 1995). Deer frequently experience physiological trauma during capture and transportation, (capture myopathy) and deer mortality after relocation, from a wide range of causes within the first year, has ranged from 25-89% (Jones and Witham 1990, Mayer et al. 1993). O'Bryan and McCullough (1985) found that only 15% of radio-collared black-tailed deer that were live-captured and relocated from Angel Island, California, survived for one year after relocation. Although relocated deer usually do not return to their location of capture, some do settle in familiar suburban habitats and create nuisance problems for those communities (Bryant and Ishmael 1991). High mortality rates of relocated deer, combined with the manner in which many of these animals die, make it difficult to justify relocation as a humane alternative to lethal removal methods (Bryant and Ishmael 1991). Chemical capture methods require specialized training and skill. A primary limitation of darting, the limited range at which deer can be effectively hit, is generally less than 40 yards. With modern scoped rifles, however, a skilled sharpshooter can hit the head or neck of a deer for a quick kill out to 200 yards and beyond. Thus, chemical capture is far less efficient, more labor intensive, and much more costly than lethal removal with rifles. Translocation of wildlife is also discouraged by WS policy (WS Directive 2.501) because of stress to the relocated animal, poor survival rates, potential for disease transfer, and difficulties in adapting to new locations or habitats.

Population Stabilization Through Birth Control.

Deer would be sterilized or contraceptives administered to limit the ability of deer to produce offspring. Contraceptive measures for deer can be grouped into four categories: surgical sterilization, oral contraception, hormone implantation, and immunocontraception (the use of contraceptive vaccines). Sterilization could be accomplished through surgical sterilization (vasectomy, castration, and tubal ligation), chemosterilization, and gene therapy. Contraception could be accomplished through hormone implantation (synthetic steroids such

as progestins), immunocontraception (contraceptive vaccines), and oral contraception (progestin administered daily). These techniques would require that deer receive either single, multiple, or possibly daily treatment to successfully prevent conception.

Use and effectiveness of reproductive control as a wildlife population management tool is limited by population dynamic characteristics (longevity, age at onset of reproduction, population size and biological/cultural carrying capacity, etc.), habitat and environmental factors (isolation of target population, cover types, and access to target individuals, etc.), socioeconomic and other factors. Population modeling indicates that reproductive control is more efficient than lethal control only for some rodent and small bird species with high reproductive rates and low survival rates (Dolbeer 1998). Additionally, the need to treat a sufficiently large number of target animals, multiple treatments, and population dynamics of free-ranging populations place considerable logistic and economic constraints on the adoption of reproduction control technologies as a wildlife management tool for some species. Research into reproductive control technologies, however, has been ongoing, and the approach will probably be considered in an increasing variety of wildlife management situations.

The use of this method would be subject to approval by federal and State Agencies. This alternative was not considered in detail because:

- It would take a number of years of implementation before the deer population would decline and therefore, damage would continue at the present unacceptable level for a number of years.
- Surgical sterilization would have to be conducted by licensed veterinarians, and would therefore be extremely expensive.
- It is difficult, time-consuming, and expensive to effectively live trap, chemically capture, or remotely treat the number of deer necessary to effect an eventual decline in the population.
- State and federal regulatory authorities have approved no chemical or biological agents for deer contraception for use.

Finding of No Significant Impact

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. White-tailed deer damage management, as conducted by WS in Illinois, 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 (USDA1997, Appendix P).

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 by the proposed action. Built-in mitigation measures that are part of WS 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 there is some opposition to wildlife damage management, this action is not highly controversial in terms of size, nature or effect.
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. The effects of the proposed activities are known and are not highly uncertain and do not involve unique or unknown risks.
6. The proposed action does not establish a precedent for future actions with significant effects.
7. No significant cumulative effects were identified through this assessment. The number of white-tailed deer killed by WS, when added to the total known other take does not significantly effect white-tailed deer populations.
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. Deer 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 has determined that the proposed action would not adversely affect any federal or Illinois state listed threatened or endangered species.
10. The proposed action would be in compliance with all federal, State and local laws imposed for the protection of the environment.

Decision and Rationale

I have carefully reviewed the EA and the input from the public involvement process. I believe that the issues identified in the EA are best addressed by selecting Alternative 1- Integrated Deer Damage Management Program (Proposed Action/No Action) and applying the associated mitigation and monitoring measures discussed in Chapter 3 of the EA. Alternative 1 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. For additional information regarding this decision, please contact Kirk E. Gustad, State Director, Illinois WS State Office, 2869 Via Verde Drive, Springfield, IL 62703-4325, telephone (217) 241-6700.



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10/30/02

Date

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