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UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
ANIMAL DAMAGE CONTROL

ENVIRONMENTAL ASSESSMENT

Management of Wildlife Causing Damage at Argonne National Laboratory - East DuPage County, Illinois

April 1995

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Management of Wildlife Causing Damage at Argonne National Laboratory - East
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THE PROPOSED ACTION

The United States Department of Energy (DOE) requested the United States Department of Agriculture, Animal and Plant Health Inspection Service, Animal Damage Control (ADC) program's assistance to identify potential wildlife hazards at the Argonne National Laboratory - East (ANL-E), prepare a comprehensive Wildlife Damage Management Plan, and to implement control actions pursuant to this management plan. A Cooperative Service Agreement between the DOE and ADC was signed in 1993 to initiate this process.

The purpose of the proposed action is to manage wildlife at ANL-E to minimize safety hazards, environmental degradation, damage to laboratory facilities, and to maintain healthy wildlife populations.

Action is needed for the following reasons: (1) there are safety hazards at ANL-E due to increased deer population; (2) sick and emaciated deer have been observed at ANL-E; (3) deer have caused environmental degradation at ANL-E including vegetation browse lines and decreased vegetation near the ground; and (4) individual members of other wildlife species have damaged structures and foundations and created unsanitary conditions at ANL-E.

ISSUES

The issues used to evaluate the project were:

- Potential for adverse human-wildlife interactions (e.g., vehicle accidents, injury).
- Potential for continuation and/or escalation of damage caused by wildlife.
- Potential negative impacts upon wildlife and the environment.
- Effects of pesticides upon the environment.

DECISION

I have carefully reviewed the Environmental Assessment and the affected public's input and have found that the purpose and need for the action are adequately explained. I have selected Alternative 2, the Integrated Wildlife Damage Management program, as the management approach to be implemented to resolve the wildlife conflicts identified. This Alternative integrates available and effective wildlife damage management techniques to reduce the damage being caused by wildlife at ANL-E. The selection of any specific control technique will involve the ADC Decision Model process to consider all pertinent issues relating to the specific damage situations, such as the nature and magnitude of the damage, the ability of the resource to sustain further damage, biologic and economic factors, and others as appropriate. This strategy is flexible and allows for adequate response to wildlife damage at ANL-E. This provides a complete and safe course of action and is fully compatible with Federal, State, and local laws and regulations.

FINDING OF NO SIGNIFICANT IMPACT

I have determined that these actions are not a major Federal action, individually or cumulative, and will not significantly affect the quality of the human environment. Therefore, an environmental impact statement is not needed. This determination is based upon the following factors:

- The wildlife damage management actions and their effects would be confined and are not regional or national in scope.
- Based on the analysis documented in the EA, the impacts of the wildlife damage management actions would not be significant on the human environment.
- The proposed action's effects on public health and safety would be minimal.
- Potential impact on unique characteristics at ANL-E, such as wetlands and archaeological sites, has been mitigated to reduce or eliminate the possible effects of control actions.
- The effects on the quality of the human environment would not be highly controversial.
- Mitigation measures adopted as part of ADC's standard operating procedures minimize risks to users of the area and would prevent adverse effects on the human environment and reduce uncertainty and risks.
- This action will not set a precedent for any other action that may be implemented or planned within the area. Further assessment will be conducted prior to any other implementation programs.

- The number of animals affected by these actions is small in comparison to the total estimated populations. Effects on wildlife or wildlife habitats would be minimal.
- There would not be significant cumulative effects between this project and other actions implemented or planned within the area.
- Wildlife damage management would have no effect on cultural or historic resources.
- The proposed actions would have no effects upon threatened or endangered species.
- This action would be in compliance with Federal, State, and local laws or requirements for environmental protection.

Donald W. Hawthorne

/s/ Bobby R. Acord
Deputy Administrator
Animal Damage Control

Date: May 2 1995

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INTRODUCTION

The U.S. Department of Agriculture (USDA) is authorized by law to protect American agriculture and other resources from damage associated with wildlife. The primary authority for the Animal Damage Control (ADC) program is the Animal Damage Control Act of March 2, 1931, as amended (46 Stat. 1468; 7 U.S.C. 426-426b and 426c) and the Rural Development, Agriculture and Related Agencies Appropriations Act of 1988 (P.L. 100-202). ADC activities are conducted in cooperation with other federal, state, and local agencies, as well as private organizations and individuals.

Wildlife damage management, or control, is defined as the alleviation of damage or other problems caused by wildlife (Leopold 1933, The Wildlife Society 1990, Berryman 1991). The ADC program uses an Integrated Wildlife Damage Management (IWDM) approach (sometimes referred to as "Integrated Pest Management" or IPM) in which a variety of methods may be used or recommended to prevent or reduce damage caused by wildlife. IWDM is described in Volume 4, Chapter 1, pages 1-7 of the ADC Final Environmental Impact Statement (EIS) (USDA 1994a). These methods include the alteration of cultural practices as well as habitat and behavioral modification to prevent damage. The control of wildlife causing damage may also require that the offending animal(s) be removed or that populations of the offending species be reduced through lethal methods. Potential environmental impacts resulting from the application of various wildlife damage reduction techniques are evaluated in this Environmental Assessment (EA), which tiers off of the EIS.

PURPOSE AND NEED

The purpose of the proposed action is to manage wildlife at Argonne National Laboratory-East (ANL-E) to minimize safety hazards, environmental degradation, damage to laboratory facilities, and to maintain healthy wildlife populations.

Action is needed for the following reasons: (1) there are safety hazards at ANL-E due to increased deer population; (2) sick and emaciated deer have been observed at ANL-E; (3) deer have caused environmental degradation at ANL-E including vegetation browse lines and decreased vegetation near the ground; and (4) individual members of other wildlife species have damaged structures and foundations and created unsanitary conditions at ANL-E.

BACKGROUND

ANL-E is a multiprogram laboratory operated by the University of Chicago for the U.S. Department of Energy (DOE). There are approximately 5,800 employees on site. ANL-E is located in the Des Plaines River Valley of DuPage County, approximately 40km (25mi) southwest of downtown Chicago, Illinois. In implementing the laboratory's missions, ANL-E adheres to a policy that worker and public safety, including protection of the environment, be given the highest priority (Argonne National Laboratory 1992).

The ANL-E site contains a mixture of vegetative community types, ranging from short grass prairies to mature deciduous and coniferous woodlands. Facilities (including roadways and parking lots) incorporate approximately 81ha (200ac) of the total 688ha (1700ac) site. The amount of usable wildlife habitat at ANL-E is 607ha (1500ac) or 6.1km^2 (2.4mi^2). ANL-E is surrounded by Waterfall Glen Forest Preserve, a 1,000ha (2470ac) greenbelt managed by the Forest Preserve District of DuPage County (Appendix A). The Forest Preserve contains much of the same vegetation types as are present on ANL-E. A goal within the forest preserve is to increase the diversity of plant life within the preserves by providing an environment suitable for native plant growth.

DOE contacted the ADC program and entered into an Interagency Agreement in 1993 to identify potential wildlife hazards and prepare a comprehensive Wildlife Damage Management Plan. This plan identifies wildlife species which may cause damage and the control methods available to prevent and/or alleviate possible damage. There are two components to the Wildlife Damage Management Plan: reduction of the density of the deer population and the management of individual members of other species.

The Wildlife Damage Management Plan for ANL-E (USDA 1994b) identifies several wildlife species that are causing or have the potential to cause damage on the site. These include: white-tailed deer (Odocoileus virginianus); European fallow deer (Dama dama); coyotes (Canis latrans); woodchucks (Marmota monax); beaver (Castor canadensis); raccoons (Procyon lotor); striped skunks (Mephitis mephitis); opossums (Didelphis virginiana); European starlings (Sturnus vulgaris); red-winged blackbirds (Agelaius phoeniceus); common grackles (Quiscalus quiscula); brown-headed cowbirds (Molothrus ater); American crows (Corvus brachyrhynchos); Canada geese (Branta canadensis); rock doves or pigeons (Columba livia); and English sparrows (Passer domesticus).

The greatest wildlife concern at ANL-E is created by deer which pose a safety threat. Reported vehicle collisions at ANL-E with deer within a single year have increased 137%; from eight (8) during October 1992 - March 1993 to 19 during the same period in 1993 -1994 (as reported by AMPRO Security). DOE is concerned that a collision may cause personnel injury or death.

Witham and Jones (1992) reported that the estimated cost of repair per vehicle involved with a deer collision in neighboring Cook County between 1984 and 1988 ranged from $1,227 to $1,623. This included vehicle repair, towing, substitute vehicle, medical costs, lost wages, and other costs. A survey was distributed by ANL-E to the 5,800 employees at ANL-E asking if they have ever been involved in a deer/vehicle accident while on site. Of the 1,935 (33.4%) respondents, 103 (5.3%) indicated they have had a vehicle accident with a deer while on site. Damage costs may be conservatively estimated at $100,000 for these accidents. Of the 1,832 (94.7%) people reporting no accidents, 70 (3.8%) indicated near misses with deer on site.

Deer are also impacting the natural ecosystem at ANL-E. Grey (1983) observed a distinct browse line in a number of forested areas at ANL-E where the zone from the ground to 1.5 meters above ground was largely denuded of leafy vegetation and small twigs. Horizontal vegetation studies performed at ANL-E in 1993 show a dramatic browse line from the ground to 2 meters above the ground (USDA 1994b) (Appendix B) throughout ANL-E (Plate 1). Comparison of this information indicates that the deer have created a taller browse line. This browse line has been caused by the over-utilization of the vegetation by the deer. This has resulted in little or no regeneration of the forest areas and diminished vegetation for wildlife to feed upon.

DeCalesta (1994a) has shown a distinct impact on songbird richness (variation in bird species) and abundance (total number of birds) in high deer density locations. This study indicates that deer densities greater than 8/km^2 (20/mi^2) have a negative effect on intermediate canopy-nesting songbird richness and abundance. In deer densities between 3.7/km^2 (9.6/mi^2) and 24.9/km^2 (64.5/mi^2), intermediate canopy-nesting birds declined in richness by 27% and in abundance by 37%. This effect was due to the destruction of the bird habitat by browsing deer. Spotlight surveys conducted at ANL-E indicate minimum deer densities for white-tailed and European fallow deer to be 70.8/km^2 (183.5/mi^2) and 22.7/km^2 (58.9/mi^2), respectively.

Economic losses caused by deer at ANL-E due to the destruction of ornamental plants and man-hours involved in replacement are substantial. It is estimated that $25,000 for material and labor was spent repairing deer damage during fiscal years 1992 and 1993 at ANL-E.

Early censuses of white-tailed and European fallow deer densities at ANL-E were performed aerially from 1970 through 1972. The average annual population within the ANL-E fence during that period was 1 white-tailed deer (0.1/km^2 or 0.4/mi^2) and 140 European fallow deer (23.0/km^2 or 59.7/mi^2) (Argonne News 1972). European fallow deer densities have been recorded as high as 431 (71.0/km^2 or 183.9/mi^2) in 1976 (Grey 1983). Nighttime spotlight surveys show a minimum population of 430 white-tailed deer (70.8/km^2 or 183.5/mi^2) and 138 European fallow deer (22.7/km^2 or 58.9/mi^2) (USDA 1994b). The current population of European fallow deer originated from two females, one of which gave birth to a male in 1939 (Argonne News 1952). ANL-E's current population of European fallow deer is from the propagation of these three animals.

During February and March of 1994, USDA biologists responded to 20 incidents of dead or dying deer. Through field necropsies of these animals, they were found to be malnourished, having little fat stores and affected bone marrow. Evaluations of the utilization of bone marrow is widely used as an indices for nutritional status of wildlife (Kirkpatrick 1980). Field observations through the winter of 1993-1994 found visual evidence of poor nutritional conditions of deer. These observations are symptomatic of the poor environmental conditions found at ANL-E due to the browse line created by the deer. During May of 1994, a weak and recumbent European fallow deer was found on site and taken to the University of Illinois, Laboratories of Veterinary Diagnostic Medicine, to be necropsied. Final results (Appendix C) indicated a lack of fat stores and serious atrophy of fat and bone marrow caused by inadequate nutritional intake. Also, an unidentified type of encephalitis which was not characteristic for a particular disease was found. Serology for hemorrhagic disease was negative. However, "given the presence of subcutaneous hemorrhage and edema, combined with encephalitis, it still should be considered as a potential differential diagnosis." Hemorrhagic disease is the most important epizootic (not contagious to humans), infectious disease endemic to white-tailed deer in the Southeast and can infect a wide range of wild and domestic ruminants (Davidson and Nettles 1988). The USDA Veterinary Services was concerned when this European fallow deer showed clinical symptoms of this disease because mortality rates due to hemorrhagic disease in captive deer herds can be greater than 50% (Davidson and Nettles 1988). Based upon field necropsies of 20 deer, winter field observations of the herd, and diagnostic results of the deer taken to the University of Illinois, the general deer herd health at ANL-E is poor.

The Forest Preserve District of DuPage County (FPDDC) manages the Waterfall Glen Forest Preserve which completely surrounds ANL-E. The goals of the FPDDC through its plant and ecosystem programs are to increase the diversity of plants within the preserves and provide an environment suitable for native plant growth. Ludwig and Conklin (1992) have shown these goals are being threatened by increasing deer populations. Their studies have also shown that increasing concentrations of deer are adversely impacting native species of plants in the Forest Preserve. Deer populations have increased from a mean of 2.8/km^2 (7.2/mi^2) on surveyed Preserves in 1985 to 16.3/km^2 (42.3/mi^2) on the same Preserves in 1992 with a high of 39.1/km^2 (101.3/mi^2) on the Waterfall Glen Preserve (Ludwig and Conklin 1992). These increasing deer populations and their feeding behavior are posing a myriad of concerns for the species diversity within the Preserves. These include: damage to individual plant species; decreased plant populations; local extirpation of species; loss of genetic diversity; loss of native quality; and alteration of plant and animal communities and ecosystems. Vegetation data collected from deer exclosure studies over a four-year period indicate the deer have negatively impacted native plants, including threatened and endangered species in the Preserves (Ludwig and Conklin 1992). Since 1993, the FPDDC has implemented a deer management program to reduce the white-tailed deer population at Waterfall Glen Forest Preserve to a target density of 8/km^2 (20/mi^2).

Deer management activities currently being utilized at ANL-E are the use of barriers to protect ornamental vegetation and planting of vegetation species that are less palatable to deer. Repellants have been used in the past to alleviate deer browse without positive results. European fallow deer removal activities have were conducted in the past by ANL-E when fallow deer populations on ANL-E exceeded 200 (32.2/km^2 or 83.3/mi^2) (Merry 1978). European fallow deer in excess of this density were live captured and relocated to game farms, laboratories, parks, zoos, and private individuals within Illinois and neighboring States. This management practice did not reduce fallow deer numbers to a level suitable for a healthy population while minimizing damage. In the absence of some type of population control, the current high number of deer is expected to increase.

Individual members of wildlife species other than deer are causing various types of damage at ANL-E. These species are identified and discussed below.

Woodchuck burrows dug along building foundations on the ANL site are causing water and structural damage. Burrows that occur along sidewalks may cause hazards for pedestrians. Burrows located in mowed fields have damaged grounds maintenance equipment. A woodchuck was responsible for damaging electrical wiring to an automobile on site (USDA 1994b). Since March of 1994, the grounds maintenance staff have responded to nine woodchuck complaints resulting in seven woodchucks being relocated with cage traps and 22 burrows being treated with a rodenticide gas cartridge.

Damage by beaver has occurred due to their practice of damming waterways and drainage to construct ponds in which to live. Beavers have also girdled ornamental trees and undercut stream banks, creating holes and erosion problems. These holes and ruts can damage vehicles, tractors, and related equipment. Beaver dams have been removed at ANL-E in the past due to flooding of roadways and other areas. Since March of 1994, no beaver dams have been removed at ANL-E.

Raccoons have excavated dens in and around buildings causing damage. They have also caused damage to automobiles and construction equipment. These animals are routinely found in and around office buildings and trailers, tearing insulation and chewing on electrical and telephone lines. Raccoons are also vectors of zoonotic diseases (e.g.,rabies) which can be contracted by humans. Since March of 1994, the grounds maintenance staff have responded to 19 complaints related to raccoons. They have relocated 39 raccoons with cage traps.

Canada geese are creating a nuisance problem with the accumulation of their feces and their aggressive behavior towards humans during the nesting season. The front entrance to Building 201, the main administration building, must be washed on a regular schedule from May through August. This operation has been time consuming and costly. DOE is also concerned that the geese may attack humans during the nesting season.

Rock doves (feral pigeons) are currently roosting and nesting along buildings, structural ledges, and construction equipment. They are creating safety hazards and unsanitary conditions with the accumulation of their feces. The grounds maintenance staff periodically respond to complaints about feces accumulation and routinely wash down affected areas. Accumulation of several inches of pigeon droppings can harbor the histoplasmosis spore, which can effect the human respiratory system.

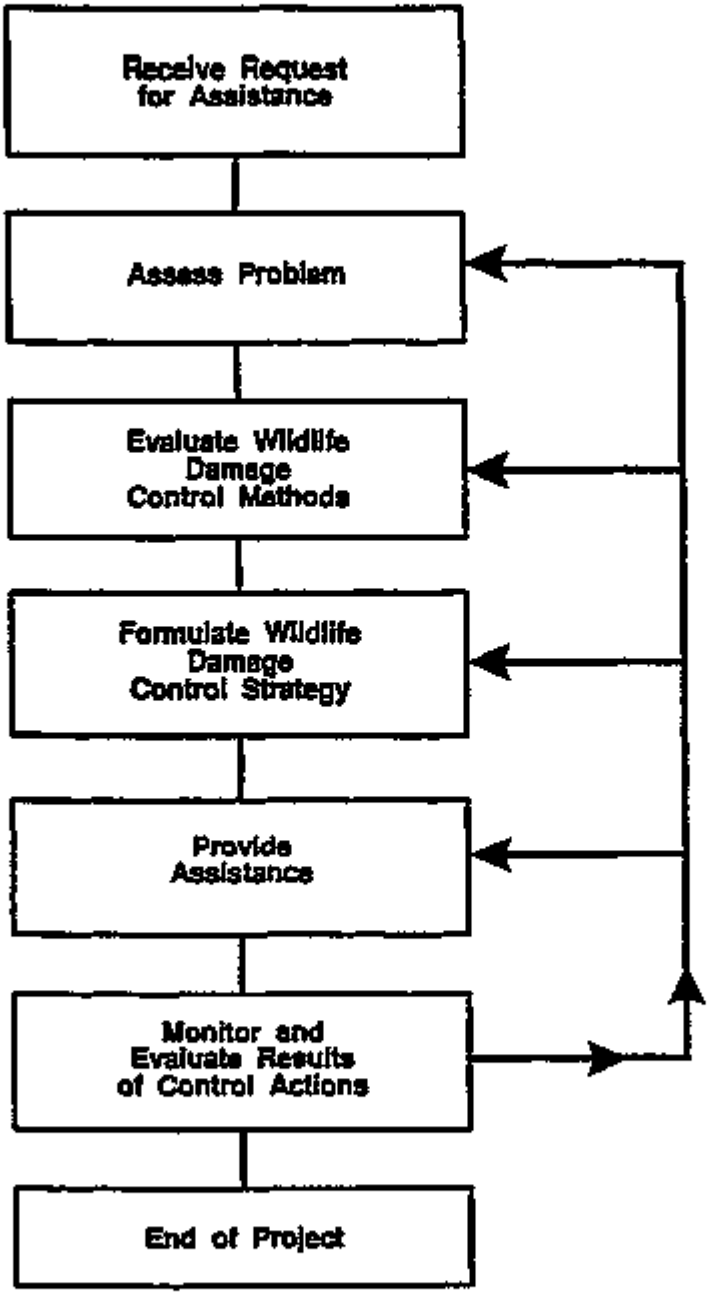
There are other species present at ANL-E that are not currently causing damage but have the potential to cause damage in the future. These species include: coyotes, striped skunks, opossums, English sparrows, European starlings, red-winged blackbirds, common grackles, brown-headed cowbirds, and American crows. These are included in the Wildlife Damage Management Plan to provide a means of addressing any problems that may arise due to these species in the future. No management measures involving these species would be taken until such time.

OBJECTIVES

White-tailed deer densities would be reduced to 8/km² (20/mi²) and European fallow deer densities would be reduced to 8/km² (20/mi²) and maintained annually at target densities. These target densities represent the local and regional ecological carrying capacity of the ecosystem for deer (FPDDC 1994, McAninch and Parker 1991, Girard et al 1993, DeCalesta 1994ab, Tilghman 1989, Witham and Jones 1992, Torgerson and Porath 1984, Madson et al 1985, Creed et at 1984). Deer populations would be re-evaluated annually. Future density goals may change depending upon the frequency of deer/vehicle collisions, yearly vegetation destruction, and ecosystem balance. The recommended density goal for white-tailed deer is identical to, and will complement the management plan (Appendix D) for Waterfall Glen Forest Preserve as established by the FPDDC (Ludwig and Conklin 1992). These densities will assure a healthy, balanced ecosystem between ANL-E and Waterfall Glen.

Individual members of the other wildlife species mentioned in this EA would be managed if and when they cause safety hazards, environmental degradation, or damage to laboratory facilities. An evaluation process would be used to decide when and how to address these other species. Individual animals, not species, would be managed on a case-by-case basis. This evaluation would be conducted in accordance with the ADC Decision Model (Figure 1) as described in the ADC EIS, Chapter 2, Section D.2.b. The evaluation process would consider the nature and magnitude of damage, the ability of the resource to sustain further damage, biologic and economic considerations, and other pertinent factors. Only the offending individuals would be targeted for the management alternative chosen if and when the need arises.

Figure 1. The U.S. Department of Agriculture, Animal Damage Control, Decision Model for determining responses to wildlife damage complaints.



METHODS AND ALTERNATIVES INCLUDING THE PROPOSED STRATEGY

The Methods Considered section summarizes the best technology that has evolved from continued development and refinement by research and other professional wildlife biologists. Examples of specific control technologies under each Method Considered are provided. The Alternatives Considered were developed from four different management strategies. The Proposed Alternative was selected based on the ability of that strategy to efficiently and effectively address and resolve the human/wildlife conflicts identified in this EA.

Federal, state, or local permits needed for the management of any wildlife species mentioned in this EA would be obtained prior to management actions being taken. ANL-E currently has a Nuisance Wildlife Control Permit issued by the Illinois Department of Conservation (IDOC) to capture and remove wildlife that are protected by State laws, such as raccoons, skunks, and groundhogs, but excludes white-tailed deer, that are causing damage (Appendix E). Other permits include the U.S. Fish and Wildlife Depredation Permit to destroy the eggs and/or nests of migratory waterfowl and the Illinois Deer Population Control Permit to take white-tailed deer.

Methods Considered:

1. Exclosure -
   Improved fencing design could limit the entry of deer and other mammals into sensitive areas. The installation of overhead wires across retention ponds could limit access of geese to these areas. Excluding wildlife from entry into buildings with the use of fences, netting, barriers, etc., might alleviate associated damages.

2. Altering Facility Operations -
   Lowering speed limits and strict enforcement could reduce wildlife/vehicle accidents. Improved sanitation receptacles might reduce raccoon activity in sensitive areas. Damage caused by wildlife could be prevented through public education. Implementing a formal "no feeding of wildlife" policy at ANL-E would help reduce concentrations of wildlife in specific areas.

3. Habitat Management -
   Elimination or modification of habitats utilized by deer, rodents, small mammals, and/or birds could reduce damage. Influencing the type, quality, and quantity of habitat available might have a direct relationship on the diversity of wildlife utilizing treated areas. Beaver dams flooding non-wetland areas may be removed, but old beaver dams maintaining water levels in existing wetland areas would not be removed. Water level control pipes would be used to maintain existing water levels, not to drain or lower existing wetlands. Damage caused by wildlife may be prevented through the management of humans and their habitats.

4. Harassment -

   The use of harassment techniques such as sirens, pyrotechnics, vehicles, horns, propane exploders, and recorded distress calls could be used to temporarily move wildlife from specific areas.

5. Application of Chemical Repellents -

   This method would require the application of approved chemical repellents to reduce damage caused by birds and mammals. The application of these products would be limited to the availability of registered products for specific wildlife species.

6. Population Reduction (capture and translocation) -

   This method would allow for live capture and translocation of wildlife to other areas. The application of this method would be limited by Federal and State regulations pertaining to the importation of wildlife.

7. Population Reduction (lethal) -

   Lethal control methods would be used selectively to remove animals that are creating hazards to safety, causing damage to facilities or the environment, and to reinforce harassment techniques. Lethal population reduction techniques could include: pesticide treatment, trapping, snaring, shooting, nest destruction, and public archery hunting.

Alternatives Considered:

1. No Action -

   This Alternative would preclude any management activity by ADC at ANL-E directed at preventing or reducing safety hazards, property damage or environmental degradation. ANL-E would continue management activities under their Nuisance Wildlife Control Permit. This permit allows for ANL-E to trap and remove nuisance animals that are causing damage or are a risk to human health or safety. All protected species may be taken under this permit except migratory birds, threatened and endangered species, or white-tailed deer. Current methods used by ANL-E include the use of cage traps, catch poles, gas cartridges, barriers, and habitat modifications.

2. Integrated Wildlife Damage Management - (Proposed Strategy to Manage Wildlife Causing Damage at Argonne National Laboratory - East) -

   This Alternative would incorporate an integrated approach to address wildlife threats and damage at ANL-E. The Integrated Wildlife Damage Management (IWDM) plan is the integration and application of practical methods of prevention and control to reduce damage by wildlife while minimizing harmful effects of control measures on humans, other species, and the environment. This Alternative would utilize all the methods identified in the "Methods Considered" section to prevent or reduce safety hazards, property damage and environmental degradation. Nonlethal and lethal control methods would be used as appropriate. The IWDM Alternative recognizes nonlethal methods and gives them first consideration in the formulation of each control strategy and uses them, when practical, before using lethal methods. Coordinating control efforts in this way would provide the flexibility so as to have the least impact upon the environment by allowing nonlethal techniques to be utilized to their greatest potential. The steps involved in formulating this integrated management process are listed in detail in Volume 2, Chapter 2, pages 15-37 of the ADC programmatic EIS (USDA 1994a). The evaluation process would consider the nature and magnitude of damage, the ability of the resource to sustain further damage, biologic and economic considerations, and other pertinent factors. Lethal methods would be used to obtain the target densities of deer. Nonlethal methods alone would not be effective to reduce the damage caused by deer due to their high densities at ANL-E. For other wildlife species, only the offending individuals would be targeted for the management alternative if and when the need arises and on a case-by-case basis.

3. Nonlethal Management -

This Alternative would utilize methods 1, 2, 3, 4, 5, and 6 identified in the "Methods Considered" section above. No lethal wildlife damage control technique would be implemented to prevent or reduce public safety hazards, property damage or environmental degradation at ANL-E. If damage caused by wildlife continues despite use of nonlethal controls, management actions would be limited to continuing the same or a similar strategy or no action.

4. Nonlethal Management Attempted Prior to Lethal Management -

This Alternative would utilize the nonlethal methods 1, 2, 3, 4, 5, and 6 identified in the "Methods Considered" section above before lethal control measures would be utilized. If these nonlethal methods fail to provide acceptable reduction in the wildlife hazards or damage, options available within method 7 (population reduction - lethal) would then be utilized. The important distinction between this Alternative and Alternative #2 (Integrated Wildlife Damage Management) is that this Alternative would require that all nonlethal methods be used before any lethal methods are used.

ENVIRONMENTAL CONSEQUENCES AND CUMULATIVE IMPACTS

The ADC program evaluated the environmental consequences and cumulative impacts of these management alternatives in the ADC programmatic EIS (USDA 1994a). In the development of this EIS, issues concerning biological, economic, sociocultural, and physical impacts for these alternatives were identified and results are listed in Volume 2, Chapter 4, Table 4-42 of the EIS.

No Federal listed threatened or endangered species are known to occur on the ANL-E site. Habitat for the Federally endangered Indiana bat (Myotis sodalis) exists on site. However, the bat has not been seen on site. The Federally threatened Hine's emerald dragonfly (Somatochlora hineana) breed in the Waterfall Glen Forest Preserve area, but are not known to breed on site.

The State threatened Kirtland's snake (Clonophis kirtlandi) is known to occur on the site. Two State endangered species, the River otter (Lutra canadensis) and White lady's slipper (Cypripedium candidum), and one State threatened species, sedge (Carex crawei), reside in the general vicinity but are not known to occur at ANL-E.

Cumulative impacts, as defined by the Council on Environmental Quality (CEQ) (40 CFR 1508.7), are impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes such other actions (USDA 1994a).

All archaeological sites at ANL-E have been identified and surveyed. More detailed surveys are needed on some of these sites. These surveys will be conducted prior to any disturbance of these identified sites. No actions would be taken under any alternative that may effect these sites unless and until the State Historic Preservation Officer issues a determination of no effect or no adverse effect. The only proposed activity with the potential to impact archaeological sites would be installation of fences.

The ANL-E site has been delineated for wetland sites greater than 500m² (0.124 acre). Thirty-five individual wetlands were identified, totaling 180,604m² (44.6 acres) (Van Lonkhuyzen and LaGory 1994). However, no wildlife management activities would be conducted that may effect wetlands.

Alternative 1: No Action -

> This Alternative would preclude any management activity by ADC at ANL-E directed at preventing or reducing public safety hazards, property damage or environmental degradation. ANL-E would continue management activities under their Nuisance Wildlife Control Permit. This permit allows for ANL-E to trap and remove nuisance animals that are causing damage or are a risk to human health or safety. All protected

species may be taken under this permit except migratory birds, threatened or endangered species, or white-tailed deer. Current methods used by ANL-E include the use of cage traps, catch poles, gas cartridges, barriers, and habitat modifications. This No Action Alternative would not reduce the public safety hazards, environmental degradation, or damage to laboratory facilities at ANL-E. Adverse impacts caused by wildlife to human safety, environmental degradation, and laboratory facilities would continue. Wildlife species not addressed in this Environmental Assessment could be adversely impacted due to continued and potentially increased competition for limited food resources and poor habitat quality. This Alternative would preclude coordination of wildlife management goals between ANL-E and the Forest Preserve District of DuPage County.

This Alternative would not impact air, surface water, or groundwater.

No hazardous wastes would be generated by this Alternative.

Alternative 2: Integrated Wildlife Damage Management (Proposed Strategy to Manage Wildlife Causing Damage at Argonne National Laboratory - East) -

The proposed Alternative would allow the integration of all proven effective management methods and techniques, both lethal and nonlethal, for the reduction of damage caused by wildlife. ADC would not be restricted to any single form of management to address wildlife damage concerns, instead, an integrated management program would be available to respond to immediate and long-term public safety hazards, environmental degradation, and damage to laboratory facilities. Management techniques implemented would be species specific to reduce impacts on nontarget wildlife. This Alternative would insure maximum damage resolution with minimal adverse environmental impacts as identified in the ADC programmatic EIS, Volume 2, Chapter 4, Environmental Consequences.

Control methods which would be employed are approved by State and Federal regulatory agencies. The only pesticide that would be used at ANL-E is the gas cartridge for burrowing rodents (EPA No. 56228-02) (Appendix F). This pesticide is registered for use with the U.S. Environmental Protection Agency (EPA) and the Illinois Department of Agriculture. This pesticide is directed towards individual offending animals. Use of this product would be in accordance with label restrictions.

Any reductions in targeted local wildlife as a result of the proposed action would have no major adverse impacts to the species involved or to the species regional population. The continued existence of white-tailed deer in northeastern Illinois would not be jeopardized as a result of the Proposed Alternative of this EA due to the high density of white-tailed deer in the area (Jones 1995). ANL-E deer populations would be reduced to the recommended density for the local region. Other wildlife species would not be

managed to target densities, but on an individual, case-by-case basis. Accordingly, there would be no major or cumulative adverse environmental consequences resulting from methods used in this Alternative. While it is recognized that urban development in the surrounding area would effect wildlife species found in those areas, these actions, in addition to the Proposed Alternative for ANL-E would have minimal cumulative impacts due to the large numbers of the such animals in the region. Beneficial impacts are expected to include reduced human health hazards, reduced environmental degradation, and reduced damage to laboratory facilities.

Federal and local regulatory wildlife agencies were contacted concerning this proposal and its potential for adverse impacts to the environment including threatened and endangered species (Appendix G). Comments received indicate that there would be no effect on threatened or endangered species at ANL-E or in the local vicinity by using an Integrated Wildlife Damage Management approach. Additionally, as indicated in the U.S. Fish and Wildlife Service Section 7 Biological Opinion of the ADC program issues on July 28, 1992 (USDA 1994a), this proposed action would have no effect on threatened or endangered species or critical habitats.

The U.S. Fish and Wildlife Service showed concern that pesticides used might enter wetlands in Waterfall Glen Forest Preserve used by the Hine's emerald dragonfly (Somatochlora hineana), a federally endangered species. The only pesticide that would be used is the gas cartridge to control groundhogs. The application of this pesticide would have no adverse impacts upon this dragonfly. This is based upon the application procedure of this pesticide and no probable risks from secondary toxicity or off-site transport through water tables as identified in Appendix P of the ADC programmatic EIS.

The use of barriers in this Alternative would include the installation of fencing and poles. These barriers would not be placed in wetlands or on archeological sites that require additional survey work.

This Alternative would include the removal of beaver dams to control flooding. Dam removal actions that would affect existing wetlands would not be conducted under this Environmental Assessment. Water level control pipes would be used to maintain existing water levels, but would not be used to lower water levels at existing wetlands.

The risk assessment of wildlife damage control methods used by ADC are provided in Appendix P of the ADC programmatic EIS (USDA 1994a). This assessment includes potential risks to nontarget animals, ADC employees, and the public. The impacts associated with these methods have been identified as low. Measures that will be used by ADC to manage or mitigate these risks would be identified in a site specific safety plan.

This Alternative would not impact air, surface water, or groundwater.

No hazardous wastes would be generated by this Alternative.

Alternative 2 is the preferred Alternative because it provides a timely and effective response to damage caused by wildlife, thereby minimizing public safety hazards, reducing environmental degradation, and damage to laboratory facilities.

Executive Order on Environmental Justice:

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations requires Federal agencies to analyze disproportionately high and adverse environmental effects of proposed actions on minority and low-income populations. ADC has analyzed the effects of the proposed actions and determined that implementation of the Preferred Alternative would not have adverse human health or environmental impacts on low-income or minority populations. The area surrounding ANL-E is comprised of neither predominately low-income nor minority populations. Deer meat (venison) would be donated to charitable organizations for distribution to low-income populations. This would not result in adverse health effects. DOE has determined (Appendix H) that there is no credible mechanism for the venison to be a health hazard due to radioactivity or chemical contamination based on results of ongoing environmental monitoring programs (Golchert and Kolzow 1994) and knowledge of site activities. In addition, deer samples from Waterfall Glen Forest Preserve were analyzed by the Illinois Department of Nuclear Safety and the Illinois Department of Agriculture for radionuclides, organophosphates, and chlorinated hydrocarbons, including PCB's. All results were within acceptable limits for human consumption (Appendix I). Chances of diseases being transmitted to humans from consumption of the deer located at ANL-E are extremely low if proper preparation and through cooking of the venison is performed.

Alternative 3: Nonlethal Management -

The Nonlethal Management Alternative would moderately address safety hazards, environmental degradation, and damage to laboratory facilities at ANL-E by restricting management methods to only nonlethal techniques. Although many nonlethal techniques are applicable at ANL-E, they are not adequate to address all damage caused by wildlife (USDA 1994a) and would, therefore, allow the damage to continue and possibly increase. It has been shown that the exclusive use of nonlethal techniques provide, at best, only short-term damage reduction (Bomford and O'Brian 1990).

Adverse impacts to the deer would consist of continued malnutrition. No adverse impact are anticipated to the other named species as a result of this Alternative. Wildlife species not identified in this Environmental Assessment could be adversely

impacted due to continued and potentially increased competition for limited food resources and poor habitat quality.

The use of barriers in this Alternative would include the installation of fencing and poles. These barriers would not be placed in wetlands or on archeological sites that require additional survey work.

This Alternative would include the removal of beaver dams to control flooding. Dam removal actions that would affect existing wetlands would not be conducted under this Environmental Assessment. Water level control pipes would be used to maintain existing water levels, but would not be used to lower water levels at existing wetlands.

The risk assessment associated with the wildlife control methods used in this Alternative are identical to those found in Alternative 2 of this Environmental Assessment.

This Alternative would not impact air, surface water, or groundwater.

No hazardous wastes would be generated by this Alternative.

Alternative 3 does not adequately address hazards to public safety, environmental degradation, or damage to laboratory facilities and is, therefore, not the preferred Alternative.

Alternative 4: Nonlethal Management Attempted Prior to Lethal Management -

The Nonlethal Management Attempted Prior to Lethal Management Alternative is similar to Alternative 2 - Integrated Wildlife Damage Management (IWDM), but with the emphasis on attempting all nonlethal control techniques prior to lethal. The IWDM recognizes nonlethal methods as an important dimension of the ADC Decision Model (USDA 1994a). This Decision Model gives nonlethal methods first consideration in the formulation of each control strategy and uses them when practical before using lethal methods. The important distinction between this Alternative and Alternative 2 (IWDM) is that this Alternative would require that all nonlethal methods be used in all circumstances before any lethal methods are used. This would adversely effect ADC's ability to quickly address damage caused by wildlife. Appropriate actions to alleviate an immediate threat from wildlife would be delayed while all nonlethal techniques would be implemented under this Alternative. Continuation of damage could occur due to the restrictions placed on this management program.

Any reductions in targeted local wildlife as a result of this Alternative would have no major adverse impacts to the species involved or to the species regional population. The continued existence of white-tailed deer in this region would not be jeopardized as

a result of this Alternative due to the high density of white-tailed deer in the surrounding area. Other wildlife species would be managed on an individual, case-by-case basis, not entire species populations. While it is recognized that urban development in the surrounding area would effect wildlife species found in those areas, these actions would have minimal cumulative impacts relative to this Alternative for ANL-E.

The use of barriers in this Alternative would include the installation of fencing and poles. These barriers would not be placed in wetlands or on archeological sites that require additional survey work.

This Alternative would include the removal of beaver dams to control flooding. Dam removal actions that would affect existing wetlands would not be conducted under this Environmental Assessment. Water level control pipes would be used to maintain existing water levels, but would not be used to lower water levels at existing wetlands.

The risk assessment associated with the wildlife control methods used in this Alternative are identical to those found in Alternative 2 of this Environmental Assessment.

This Alternative would not impact air, surface water, or groundwater.

No hazardous wastes would be generated by this Alternative.

Alternative 4 does not adequately address safety hazards, environmental degradation, or damage to laboratory facilities and is, therefore, not the preferred Alternative.

PUBLIC INVOLVEMENT

Public comments were solicited during the development of this EA to allow involvement of interested parties to offer suggestions and recommendations concerning the implementation of the proposed wildlife management program at ANL-E. Announcements were distributed in Argonne Week (a weekly newsletter distributed to all DOE/ANL employees) and the Daily Herald (a newspaper with county-wide distribution) (Appendix J). The draft EA was distributed to local interest groups and copies were made available at local libraries. A public meeting was held to accept both oral and written comments concerning the draft EA. All pertinent comments concerning the draft EA were considered. The following is a summary of comments received, with corresponding responses.

1. **Argonne National Laboratory - East should be used as a contiguous greenbelt to allow for free migration of the deer and other wildlife.**

   Argonne National Laboratory - East is currently situated along the Des Plaines river corridor, which has not been declared a formal greenbelt by State or Local governments. Deer and other wildlife at ANL-E are able to pass through the perimeter fence due to areas where the fence height is low and wash-outs exist. However, this fence acts as a general barrier and deer movement in and out of ANL-E is limited. To facilitate this "migration", the perimeter fence would need to be removed in sections to allow the animals to freely move into the forest preserve. ANL-E programmatic operations requires a limited access to the site. This is accomplished by means of a security fence.

2. **Lower the speed limit at ANL-E to below the current 30 mph. Add speed bumps and stop signs and actively enforce the speed limit to reduce the human safety and health concerns due to deer/vehicle collisions.**

   These management options are included in the "Integrated Wildlife Damage Management" Alternative and may be implemented by DOE. These options may help minimize the human health and safety concerns but will not address the environmental degradation or damage to laboratory facilities caused by the deer and other wildlife. The site wide speed limit is currently enforced by means of citations and reprimand.

3. **Educate the employees about the wildlife hazards on site.**

   This management option is included in the "Integrated Wildlife Damage Management" Alternative and may be implemented by DOE. Public education is part of any wildlife management plan. Through education, people will be encouraged to limit their activities that may lead to wildlife conflicts. This option may help minimize the human health and safety concerns but will not address the environmental degradation caused by the deer.

4. **There are too many people at ANL-E. Close the laboratory.**

Closing the laboratory is not a reasonable alternative. There would be substantial costs associated with the closing, loss of jobs, and a dramatic impact to local economy. Furthermore, continuation of research and development activities ongoing at ANL-E is important to the nation's interests. This option may help minimize the human health and safety concerns but will not address the environmental degradation caused by the deer.

5. **Feed the wildlife that are starving.**

Supplemental feeding would not only fail to address the overpopulation of deer and the associated damage but would exacerbate it. In addition, it would enhance the likelihood of disease transmission between the deer by focusing larger concentrations of animals into smaller areas (Ellingwood and Caturano 1988).

6. **Do not use lethal means to manage the wildlife at ANL-E. Find alternative methods.**

Nonlethal methods would be implemented in many wildlife damage conflicts. Although many nonlethal techniques are applicable at ANL-E, they are not adequate to address all damage caused by wildlife. The ADC Decision Model as described in the ADC EIS, Chapter 2, Section D.2.b, evaluates all practical and effective management tools which will be used on a case-by-case basis. This decision model evaluates all available nonlethal techniques as well as lethal techniques.

7. **Let nature take its course.**

This comment is analogous to the "No Action" Alternative. This Alternative can be found in the "Alternatives Considered" section and "Environmental Consequences and Cumulative Impacts" section in this EA.

8. **All species listed in the Environmental Assessment are to be killed and eradicated.**

Goals of any wildlife damage management plan include the resolution of wildlife conflicts but not the "eradication" of any wildlife species. The species identified in the EA have caused or potentially could cause damage. The text of the EA has been modified to reemphasize that management plans will be developed to resolve the conflicts on a case-by-case basis using the ADC Decision Model as described in the ADC EIS, Chapter 2, Section D.2.b.

9. **ANL-E is contaminated with radionuclides and therefore the deer meat (venison) is also contaminated.**

Any program implemented at ANL-E which requires the donation of venison to food charities will insure the meat is safe for consumption by humans. DOE has determined that there is no credible mechanism for the venison to be a health hazard due to radioactivity or chemical contamination (Appendix H) based on results of ongoing environmental monitoring programs (Golchert and Kolzow 1994). ANL-E deer tissue and bone samples will be periodically analyzed by the Illinois Department of Nuclear Safety for radionuclides. Additional testing of deer samples from Waterfall Glen Forest Preserve were analyzed by the Illinois Department of Nuclear Safety and the Illinois Department of Agriculture for radionuclides, organophosphates, and chlorinated hydrocarbons, including PCB's. All results were within acceptable limits for human consumption (Appendix I).

10. **ANL-E is just an industrial park, therefore there is no need to manage the land. There is no relevance between Waterfall Glen Forest Preserve and ANL-E management goals.**

Wildlife are found at ANL-E and they are causing damage. Management plans need to be implemented to resolve these conflicts. Waterfall Glen Forest Preserve and ANL-E occupy the same tract of land that are separated by a security fence. Management goals for ANL-E should be consistent with Waterfall Glen Forest Preserve due to common concerns of ecosystem management between the two governing agencies.

11. **There is wildlife damage at ANL-E and something must be done.**

This idea is the basis of this EA and is discussed under the Background section. Wildlife management is defined as "the science and art of changing the characteristics and interactions of habitats, animal populations, and humans to achieve specific human goals" (USDA 1994a). Through effective and integrated application of wildlife damage management techniques, issues of damage caused by wildlife would be addressed.

12. **Use bowhunters to reduce the population of deer. Open the site to public hunting.**

This technique would only be applicable for deer management and could not address other wildlife species causing damage on site. However, this management option is included in the Proposed Alternative and the Methods Considered section under Population Reduction and may be implemented by DOE. The use of legal and controlled hunting seasons is an important management tool used by wildlife managers for regulating wildlife populations (Shaw 1985). Although the implementation of an archery hunt (the only legal form of public deer hunting allowed in DuPage County) at ANL-E would be an administrative decision of DOE, it could be an important tool for

the regulation of deer populations on site. DOE Order 4300.1C, Chapter 5, provides for hunting, fishing, and trapping by the public, where practicable. This management technique would be regulated to insure the safety of DOE/ANL-E employees and contractors, competence of the hunters, and by IDOC regulations. Such restrictions would render this technique inefficient in reducing the overpopulated deer herd at ANL-E. However, it would be considered as a long-term solution to population management once the target density for deer has been achieved.

13. Develop the use of immunocontraception.

Immunocontraception has been widely tested on captive deer herds with limited effectiveness and applicability. These techniques have been found to be unsuccessful for reducing deer populations and would at best be effective at slowing or stopping population growth following population reduction programs (Turner 1993). Immunocontraception would not resolve the damage caused by the overpopulation of deer at ANL-E. Current USDA (Appendix K) and Humane Society of the United States research has yet to produce a vaccine that is registered through the U.S. Food and Drug Administration to administer to deer populations. Surgical sterilization has been found to be ineffective in free ranging deer herds due to the high turnover in the male population (Frank et al. 1993). Problems associated with immunocontraceptive research include health related issues, harmful effects on target species and non-target species and humans who may consume the carcasses, direct physiological changes, changes in individual and group behavior, growth defects, injection site infections, abortions, and lactation failures (Guynn 1993, Gil and Miller 1993). Many of these questions need to be resolved before reproductive inhibition would be acceptable (McDowell 1993). Immunocontraception could be evaluated in the future as a potential research project at ANL-E for a long-term deer population maintenance program. However, this action is not part of this Environmental Assessment.

14. Venison should be inspected and stamped by the United States Department of Agriculture before distribution for human consumption.

The USDA does not inspect wild game meat that is distributed to the public. All deer carcasses will be handled as set forth in the Illinois Department of Conservation Deer Population Control Permit (Appendix L). This entails compliance with the Good Samaritan Food Donor Act (Appendix M) and a Memorandum of Understanding between the Illinois Departments of Conservation, Corrections, and Public Health (Appendix N). This includes the processing of the venison in State-licensed facilities.

15. **Replant endangered species of plants after birth control methods have taken effect.**

There have been no documented sightings of Federal or State threatened or endangered plant species at ANL-E. However, the continued existence of diverse plant species is necessary to maintain ecological balance. The replanting of plant species is a viable possibility for reestablishing plant communities.

16. **Reintroduce predators to control the wildlife populations.**

In general terms, predator/prey interactions are highly variable (Mech 1984). Coyotes and birds of prey are currently found on site. Introducing additional animals would be limited by IDOC and Federal regulations. There is no guarantee that these predators would remain on site. If they were to leave the site, they could create a public safety hazard. In addition, complications would arise from inter- and intra-species competition.

17. **Capture and relocate the wildlife to a suitable location.**

This management option is included in the Proposed Alternative and may be implemented by DOE. The capture and translocation of wildlife would have limited application. Captured animals, even when released great distances from the capture site, may return, reducing the success of this method (Harrison 1983). Additionally, translocation of certain wild mammals is not a recommended practice for some wildlife species. Considerable stress can be placed on animals during handling (Rongstad and McCabe 1984). Difficulty in adapting to new locations or habitats and intra- and inter-species competition may also reduce survival rates (Ozoga et al. 1982). White-tailed deer studies indicate that translocated deer have a high mortality rate and many continue to be a nuisance where released (Bryant 1992). The potential also exists that translocated animals may transmit diseases into the new population. The American Veterinary Medical Association, National Association of State Public Health Veterinarians, and Council of State and Territorial Epidemiologist oppose relocation of mammals because of the risk of disease transmission (USDA 1994c). Capture and translocation is also difficult, time consuming, and expensive (McAninch and Parker 1991). Surrounding State wildlife agencies were contacted regarding translocating deer into their States. All respondents would not allow the release of any deer into the wild within their respective States (Appendix O). Within Illinois, white-tailed deer may only be relocated to zoological institutions upon permission from the IDOC. Surrounding zoological institutions were contacted regarding the relocation of deer to their facilities. All respondents were not accepting deer at this time nor in the foreseen future (Appendix P).

18. Form an advisory committee to see if there really is a problem at ANL-E.

Wildlife problems at ANL-E have been well documented. Public input is valued and has been sought through the public comment period. The public and site employees have been asked to supply recommendations and/or comments on wildlife damage management at ANL-E (Appendix J). However, a Federal advisory committee is not a feasible option. The Federal Advisory Committee Act strictly regulates the formation of such committees and Executive Order 12838 has called for a steep reduction in their number.

19. Enforce a "No Feeding" policy at ANL-E.

This management option is included in the "Integrated Wildlife Damage Management" Alternative and may be implemented by DOE. Site employees have been advised not to feed the wildlife.

20. Address cumulative impacts other federal actions will have on this EA.

While it is recognized that urban development in the surrounding area will effect wildlife species found in those areas, these actions will have minimal cumulative impacts relative to the Proposed Alternative for ANL-E. The number of white-tailed deer in the region would decrease but the continued existence of the species would not be jeopardized as a result of the Proposed Alternative of this EA due to the high density of white-tailed deer in the surrounding region. The text of the EA has been modified to clarify this point. Additionally, the Proposed Alternative will complement the wildlife management actions of the Forest Preserve District of DuPage County (Appendix D) at Waterfall Glen Forest Preserve.

21. The deer herd at ANL-E should be managed between 50-70/mi².

Local and regional ecological carrying capacity of the ecosystem is less than 8 deer/km² (20/mi²) (FPDDC 1994, McAninch and Parker 1991, Girard et al 1993, DeCalesta 1994ab, Tilghman 1989, Witham and Jones 1992, Torgerson and Porath 1984, Madson et al 1985, Creed et at 1984). These recognized experts in deer management state that this is the maximum number of deer this ecosystem can support and remain healthy. The text of the EA has been modified to clarify this point.

22. Maintain the deer herd at a total of 20/mi² regardless of species.

White-tailed deer and European fallow deer utilize different habitats at ANL-E. The effects of deer on the ANL-E ecosystem will be monitored to determine if density goals are achieving the desired objectives.

23. **Necropsy results on one European fallow deer does not support the conclusion that the entire ANL-E deer herd is diseased and malnourished.**

The general deer herd health at ANL-E is poor. The USDA office performed gross necropsies on 20 dead deer during the winter of 1994. All animals showed evidence of malnutrition. The necropsy of the fallow deer conducted by the University of Illinois, Laboratories of Veterinary Diagnostic Medicine, in addition to the field necropsies conducted by USDA biologists, and field observations of deer at ANL-E supports the conclusion that the general condition of the deer herd is poor. The text of the EA has been modified to clarify this point. Periodic deer herd health checks will be conducted throughout the management program at ANL-E.

CONSULTATIONS

Federal, state, and county agencies, universities, interested organizations, and zoological institutions were contacted during field assessments and preparation of the Environmental Assessment.

Benjamin Tuggle	U.S. Fish & Wildlife Service
Jon M. Jones	Illinois Department of Conservation
James Herkert	Illinois Department of Conservation
Deanna Glosser	Illinois Department of Conservation
David Bromwell	Illinois Department of Agriculture
Lih-Ching Chu	Illinois Department of Nuclear Safety
Daniel Ludwig	Forest Preserve District of DuPage County
Christopher Anchor	Forest Preserve District of Cook County
Ed Langenau	Michigan Department of Natural Resources
Gene Kelly	Missouri Department of Conservation
Terry Little	Iowa Department of Natural Resources
Bill Mitten	Wisconsin Department of Natural Resources
Anthony Gallina	Laboratories of Veterinary Diagnostic Medicine, University of Illinois
Mark Rolsma	Laboratories of Veterinary Diagnostic Medicine, University of Illinois
Victor Knettles	Southeastern Cooperative Wildlife Disease Study Group, University of Georgia
Allen Rutberg	Humane Society of the United States

Dennis Merritt	Lincoln Park Zoo, Chicago, IL
Bruce Brewer	Brookfield Zoo, Chicago, IL
Jerry Jepson	Wildlife Prairie Park, Peoria, IL
Paul Clusen	City of Aurora, IL
David Allen	Blank Park Zoo, Des Moines, IA
Mike Blakley	Kansas City Zoological Gardens, MO
Debbie Olsen	Indianapolis Zoo, IN
Bruce Reed	St. Louis Zoo, MO
Bruce Beehler	Milwaukee County Zoo, WI
Ron Young	Mesker Park Zoo, Evansville, IN
Warren Pryor	Ft. Wayne Zoo, IN
John Dinon	Binder Park Zoo, Battle Creek, MI
Scott Carter	Detroit Zoo, MI

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LIST OF PLATES AND APPENDIXES

APPENDIX H: Memo from the United States Department of Energy disclaiming Argonne National Laboratory - East from posing health hazards to wild deer due to operations conducted on site.

APPENDIX I: Necropsy results from deer collected by the Forest Preserve District of DuPage County at Waterfall Glen for radionuclides, organophosphates, and chlorinated hydrocarbons including PCB's, 1994.

APPENDIX J: Copy of public announcements sent to local media soliciting involvement of interested parties to offer suggestions and recommendations concerning the management of wildlife causing damage at the U.S. Department of Energy's Argonne National Laboratory - East, DuPage County, Illinois.

APPENDIX K: Status of current research on immunocontraception from U.S. Department of Agriculture - Denver Wildlife Research Center.

APPENDIX L: Illinois Department of Conservation, Deer Population Control Permit procedures and guidelines.

APPENDIX M: State of Illinois Good Samaritan Food Donor Act.

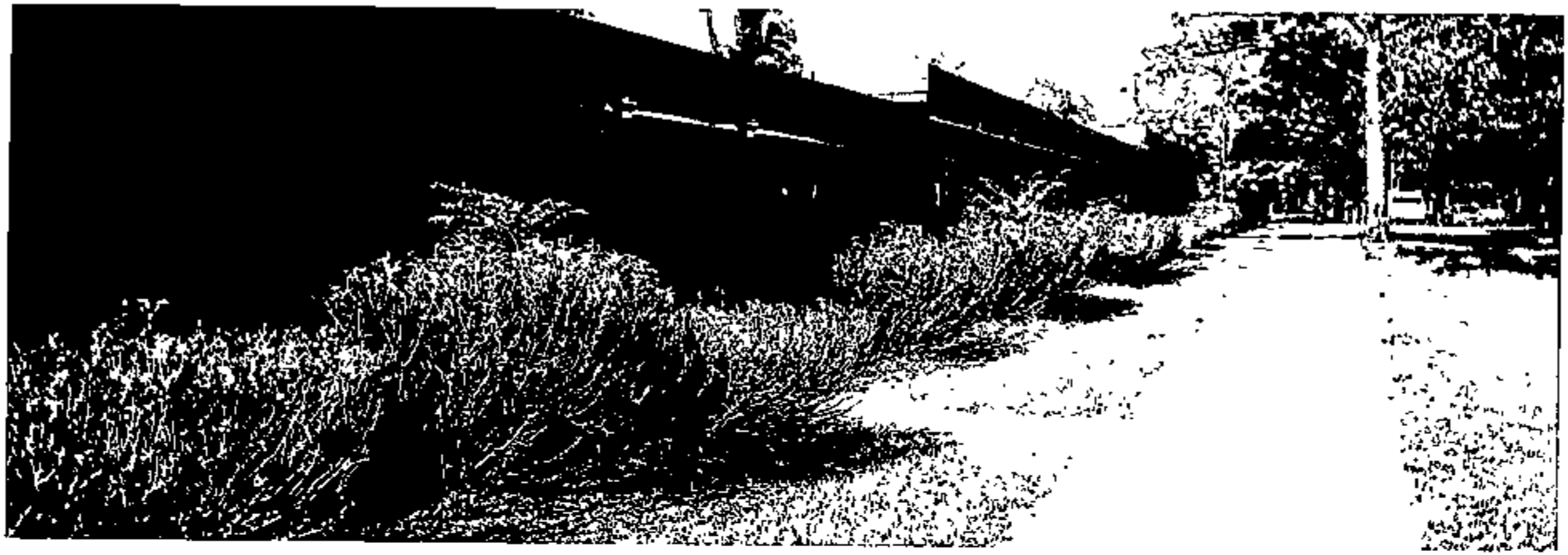
APPENDIX N: Memorandum of Understanding signed by the Illinois Departments of Conservation, Corrections, and Public Health.

APPENDIX O: Correspondence with surrounding State wildlife agencies concerning the relocation of white-tailed deer (Odocoileus virginianus) and European fallow deer (Dama dama) from the State of Illinois to their state.

APPENDIX P: Correspondence with zoological institutions concerning the relocation of white-tailed deer (Odocoileus virginianus) and European fallow deer (Dama dama) from the State of Illinois to their institution.

PLATE 1

Photographs showing horizontal vegetative browse lines caused by European fallow deer (Dama dama) and white-tailed deer (Odocoileus virginianus) at the U.S. Department of Energy's Argonne National Laboratory - East, DuPage County, Illinois, 1993.



APPENDIX A

Map showing the U.S. Department of Energy's Argonne National Laboratory - East surrounded by Waterfall Glen Forest Preserve, DuPage County, Illinois.

Appendix A. Map showing the U.S. Department of Energy's Argonne National Laboratory - East surrounded by Waterfall Glen Forest Preserve, DuPage County, Illinois.

APPENDIX B

Study performed by the U.S. Department of Agriculture, Animal Damage Control, to document vegetation damage caused by deer browsing at the U.S. Department of Energy's Argonne National Laboratory - East, DuPage County, Illinois.

EFFECTS OF BROWSING BY WHITE-TAILED DEER ON WOODY VEGETATION AT ARGONNE NATIONAL LABORATORY - EAST, DuPAGE COUNTY, ILLINOIS.

U. S. Department of Agriculture, Animal and Plant Health Inspection Service, Animal Damage Control, Columbia, Missouri.

INTRODUCTION

A study was conducted during August, 1993 to determine if browsing by white-tailed deer (Odocoileus virginianus) was affecting woody vegetation on Argonne National Laboratory - East (ANL-E), DuPage County, Illinois. In order to determine if deer were impacting vegetation on ANL-E, a similarly vegetated site within DuPage County, Herrick Lake Forest Preserve (HLP) was selected for comparison. Horizontal vegetation density was chosen to measure the percent vegetation occurring in woodlot understory (Nudds 1977). In the winter of 1992-93 a density of 101 deer/mi^2 was observed at ANL-E and a density of 19 deer/mi^2 was observed at HLP (Ludwig and Conklin 1992).

METHODS

Stratified random sampling was used to locate 20 circular plots on ANL-E and HLP. Plots were 20 meters in radius. Plot centers were at least 35 meters from the forest edge and at least 35 meters from a riparian zone. A random azimuth was chosen in each plot to visually estimate horizontal vegetation density (hvd) (as described by Nudds 1977) in 5, half meter strata (0 - 0.5, 0.5 - 1.0, 1.0 - 1.5, 1.5 - 2.0, and 2.0 -2.5m) at a distance of 20 meters. In addition, a 35mm camera with a 50mm lens was used to take a photograph of hvd at each stratum.

An overlay grid with 50 equal sized squares was placed over each photograph and the number of squares overlaying vegetation were summed and multiplied by 2 (each overlay square represented 2% of the stratum) to measure percent hvd within each stratum. Visual estimates of hvd were utilized if the corresponding photograph was of poor quality. Within each sample plot, a 15' X 15' microplot was established over the plot center. Within this microplot, the species of all trees $\geq$0.5m in height and $\leq$2.54cm in diameter were recorded.

A mean horizontal vegetation density was calculated for each strata on ANL-E and HLP. The Mann-Whitney Test (PROC NPAR1WAY; SAS Institute Inc. 1990) was used to compare hvd in each strata between ANL-E and HLP. Significance was inferred at $P \leq 0.05$. Observed differences of tree species composition between ANL-E and HLP are reported.

RESULTS and DISCUSSION

The hvd in strata ≤2.0m at ANL-E was 25-57% lower than HLP (Table 1). Only in the 2.0-2.5m stratum was hvd similar between ANL-E and HLP (Table 2). In addition, several trees species occurring on HLP, where the deer density is low, were not observed on ANL-E (Table 3).

Soukup et al. (1990) provided several general categories of white-tailed deer browsing affects upon vegetation in National Parks within the United States. Very heavy and extremely heavy foraging effects on vegetation were characterized by hardwood seedlings or preferred browse not regeneration, serious browse lines being evident, and forest understory being open and easy to walk through. The general site condition and specific data collected on hvd and tree species presence indicate that deer (potentially both white-tailed and European fallow deer) are inflicting very heavy or extremely heavy adverse affects upon the vegetation at ANL-E. Ludwig and Conklin (1992) reached similar conclusions about the affects white-tailed deer are inflicting upon native vegetation in Waterfall Glen Forest Preserve which surrounds ANL-E.

LITERATURE CITED

Ludwig, D. R., and B. Conklin. 1992. Status of white-tailed deer within the Forest Preserve District of DuPage County, Illinois. 104pp.

Nudds, T. D. 1977. Quantifying the vegetative structure of wildlife cover. Wildl. Soc. Bull. 5:113-117.

SAS Institute Inc. 1990. SAS user's guide: statistics, ver. 6.08 ed. SAS Institute, Cary, NC.

Soukup, M., N. Mitchell and A. O'Connell. 1990. White-tailed deer in eastern national parks - A management perspective. Summary report of a multi-regional workshop of the National Park Service, Atlantic, Georgia, May 15-19, 1989.

Table 1. Mean percent horizontal vegetation density on Argonne National Laboratory - East (ANL-E) (N = 20) and Herrick Lake Preserve (HLP) (N = 20), DuPage County, Illinois.

	SITE			
	ANL-E		HLP	
STRATA	$\bar{x}$	SD	$\bar{x}$	SD
0 - 0.5 m.	52.2	29.8	97.1	4.7
0.5 - 1.0 m.	35.6	31.5	91.9	10.2
1.0 - 1.5 m.	13.9	16.2	71.1	33.8
1.5 - 2.0 m.	50.1	31.8	75.1	34.5
2.0 - 2.5 m.	48.9	33.6	61.2	37.2

Table 2. Comparison of percent horizontal vegetation density on Argonne National Laboratory - East (ANL-E) (N = 20) and Herrick Lake Preserve (HLP) (N = 20), DuPage County, Illinois.

	SITE	
STRATA	ANL	HLP
0 - 0.5 m.	A[1]	B
0.5 - 1.0 m.	A	B
1.0 - 1.5 m.	A	B
1.5 - 2.0 m.	A	B
2.0 - 2.5 m.	A	A

[1] Rows with different letters are significantly different at the $P < 0.05$ level.

Table 3. Tree species ≥ 0.5 m in heigth and ≤ 2.54 cm in diameter observed in microplots randomly located on Argonne National Laboratory - East (ANL-E) and Herrick Lake Forest Preserve (HLP), DuPage County, Illinois.

Woody Tree Species	ANL-E	HLP
Prunus spp.	X	X
Crataegus spp.	X	X
Rhamnus cathartica	X	X
Fraxinus americana	X	X
Cornus spp.	X	X
Carya spp.	X	X
Ulmus americana	X	X
Viburnum rafinesquianum		X
Tilia americana		X
Quercus spp.		X

APPENDIX C

Final necropsy report from the University of Illinois, Laboratories of Veterinary Diagnostic Medicine of the weak and recumbent European fallow deer (Dama dama) found at the U.S. Department of Energy's Argonne National Laboratory - East, DuPage County, Illinois, on April 21, 1994.

University of Illinois
at Urbana-Champaign

College of Veterinary Medicine
2001 South Lincoln Avenue
Urbana, IL 61801

Department of Veterinary Pathobiology
217 333-2449
217 333-4628 *fax*

June 20, 1994

Mr. Andrew Montoney
9700 S. Cass Ave.
Argonne, IL 60439

Dear Mr. Montoney:

During our last telephone conversation you indicated that you would like to receive a letter summarizing the findings on a European fallow deer submitted for necropsy on April 21, 1994. Upon arrival, the animal was recumbent, weak, and exhibited labored respiration. It had a generalized lack of body fat stores. Some lesions, including encephalitis were compatible with Epizootic Hemorrhagic Disease (EHD), however viral cultures and serology were negative.

To briefly summarize this case, I believe that there are two major findings in this animal. The first is a lack of proper body condition, most likely caused by inadequate nutrition since disease processes that could account for body wasting were not found. The lack of adequate nutrition is probably due to the high animal load on this property. The second finding is encephalitis of unknown, but of probable viral etiology. It is possible that the encephalitis could have decreased this animal's ability to effectively forage and compete for food, however I don't believe that encephalitis was the primary cause for poor body condition.

The presence of encephalitis in this animal underscores a potential danger for this herd. If the majority of the animals in this herd are similarly undernourished because of overcrowding, their resistance to disease is probably reduced, increasing the herds' susceptibility to an outbreak of disease that could potentially be devastating. Documentation of the overall health of this herd would necessitate the examination of additional deer. If overcrowding is established, population control would certainly be indicated.

If I can be of additional assistance, please do not hesitate to call me.

Sincerely,

Mark D. Rolsma, DVM

LABORATORIES OF VETERINARY DIAGNOSTIC MEDICINE
UNIVERSITY OF ILLINOIS
2001 SOUTH LINCOLN AVE.
URBANA, IL 61801-6178
217-333-1620

ACCESSION: 94-05-02
CLINIC NUMBER:
DATE RECEIVED: APR 21,1994
DATE FINALED: MAY 12,1994

SPECIES: ELK
BREED:
SEX:
AGE:

US DEPT OF AGRICULTURE
ANIMAL PLANT HEALTH INSP SERV
9700S CASS AV BLDG 202 RME-118
ARGONNE IL 60439-4833

MONTONEY ANDREW
9700 S CASS AVE
ARGONNE IL 60439
708-252-9934

CASE DIAGNOSTICIAN: ROLSMA M

SAMPLE: ARGONNE LAB TYPE: LIVE
PATHOLOGY
TEST: NECROPSY
RESULTS: DATE REPORTED: MAY 12,1994
GROSS DESCRIPTION:

A young adult male European Fallow Deer is presented alive for necropsy in poor nutritional condition. The animal is recumbent, weak and exhibits labored respiration. The animal's coat is dry. The hair over the dorsal portion of the muzzle has been rubbed off. Numerous 1 to 2 cm wide linear areas of hair loss are noted over the corsolateral portions of the trunk. The exposed hairless skin is dark brown, thickened and leathery. Several areas of similar appearing skin ranging in size to 3 x 8 cm are noted on the distal limbs. Immediately following euthanasia, widespread crepitance is noted. It is especially prominent along the ventral thorax and abdomen and extends along the proximal portions of the limbs. Locally extensive subcutaneous edema, hemorrhage, and emphysema are present in these areas. Several oral ulcers are found. One measures 0.5 x 2 x 0.3 cm deep and is located on the right rostral (buccal) surface of the gingiva of the dental pad. The other consists of two 0.5 to 1 cm in diameter ulcers that communicate with a 2 to 3 cm in diameter subgingival cavity. The cavity is lined by brown, necrotic material. A single 0.5 cm in diameter depressed white focus is noted on the epicardial surface of the right and left ventricles. The epicardium is thickened at these locations, however the epicardial fibrosis does not appear to extend into the underlying myocardium. A solitary, 1 cm in diameter cysticercus is found in the liver. A wedge shaped pale cortical solar infarct is noted in the kidney. Numerous 1 to 1.5 cm in diameter nematodes are attached to the multifocally reddened and superficially eroded mucosal surface of the spiral colon. The abomasal folds are mildly edematous. The leptomeninges covering the sulci of the dorsal cerebral cortex have a white (opaque) appearance. The femoral bone marrow is diffusely gelatinous. Little to no body fat is present on this animal. The costochondral junctions are grossly normal.

COMMENTS:

Grossly, the major lesion in this animal is the lack of fat stores and serous atrophy of fat. In addition, some lesions (subcutaneous edema and oral ulceration) are compatible with those seen in cases of epidemic hemorrhagic disease.

GROSS DIAGNOSES:

1. SEVERE DIFFUSE SUBCUTANEOUS EMPHYSEMA WITH LOCALLY EXTENSIVE EDEMA AND HEMORRHAGE.
2. MODERATE SEROUS ATROPHY OF FAT, BONE MARROW.
3. MILD COLITIS WITH INTRALESIONAL NEMATODES.
4. HEPATIC CYSTICERCOSIS.
5. MILD MULTIFOCAL EPICARDIAL FIBROSIS.

VETERINARIAN CONTACTED: 4.22.94.

HISTOPATHOLOGY REPORT:

BRAIN: Within the brainstem and the white matter of the cerebral cortex are numerous poorly defined, ofter perivascular foci that contain increases numbers of glial cells, lymphocytes, and pigment laden macrophages. Inflammatory cells are frequently noted within the wall of involved vessels. Vacuolization, axonal swelling, spheroids neuronal mineralization and diffuse gliosis are present within the surrounding neuropil. The meninges contain mild diffuse to perivascular infiltrates of lymphocytes and lipofuscin laden macrophages mixed with smaller numbers of eosinophils. Meningeal infiltrates are most prominent deep within the sulci. Meninges covering the dorsal cerebrum are thickened by increased quantities of collagenous connective tissue.

FEMORAL BONE MARROW: Normal marrow adipose tissue is replaced by fibrillar basophilic to granular eosinophilic material (serous atrophy of fat).

SKIN: Severe coagulative necrosis of the epidermis and dermis is present. Areas of coagulative necrosis are sharply demarcated from the adjacent skin.

LIVER: Mild centrolobular congestion is present.

SPLEEN: The red pulp is congested and contains abundant stored iron in the form of hemosiderin laden macrophages.

ADRENAL: Deep cortical sinusoids are mildly congested. Scattered cells within the zona fasciculata have hyperchromatic nuclei and finely granular hypereosinophilic cytoplasm.

HEART: A 0.3 cm in diameter depression is present on the surface of the left ventricle. Bordering the depression are numerous large bundles of pale staining myofibers and fibroblastic cells interspersed with thin walled blood vessels. This tissue is contiguous with the epicardium and extends into the myocardium. It is infiltrated by small numbers of hemosiderin and lipofuscin laden macrophages. SKELETAL MUSCLE, THYROID, LUNG, KIDNEY, INTESTINE, TRACHEA, AND LYMPH NODE: No significant lesions.

COMMENTS:

As noted in the gross report, the lack of fat stores and serous atrophy of fat indicate an inadequate nutritional intake by this animal. The brain lesions (encephalitis) are most compatible with a viral etiology but are not pathognomonic for a particular disease. Serology for epidemic hemorrhagic disease is negative, but given the presence of subcutaneous hemorrhage and edema, combined with encephalitis, it still should be considered as a potential differential diagnosis. Clinical signs were probably due to a combination of inadequate nutrition and encephalitis.

The skin specimens were taken from the distal limbs of the animal and were probably friction burns from ropes used for restraint. Myocardial fibrosis was probably not clinically significant. The presence of parasites in this animal is not unexpected.

Overpopulation, indicated to be a problem with this herd, not only results in competition for insufficient food resources but also predisposes the herd to outbreaks of disease that could lead to high mortality losses. Population control is indicated.

MORPHOLOGIC DIAGNOSES:

1. SEVERE SEROUS ATROPHY OF MARROW FAT.
2. MODERATE SUBACUTE MULTIFOCAL ENCEPHALITIS AND PERIVASCULITIS WITH NEURONAL DEGENERATION.
3. SEVERE ACUTE LOCALLY EXTENSIVE EPIDERMAL AND DERMAL NECROSIS.
4. SEVERE DIFFUSE SUBCUTANEOUS EMPHYSEMA WITH LOCALLY EXTENSIVE EDEMA AND HEMORRHAGE.
5. MULTIFOCAL GINGIVAL ULCERS.
6. MILD FOCAL EPICARDIAL AND MYOCARDIAL FIBROSIS.
7. HEPATIC CYSTICOSIS.
8. INTESTINAL TRICHOSTRONGYLOSIS.

VETERINARIAN CONTACTED: 4/22, 4/29 AND 5/10 94.

MPLE: FECES TYPE: FECES
ARASITOLOGY
EST: FECAL FLOTATION
RESULTS: DATE REPORTED: APR 22,1994
TRICHOSTRONGYLES.

SAMPLE: WORMS TYPE: WORMS
PARASITOLOGY
TEST: PARASITE IDENTIFICATION
RESULTS: DATE REPORTED: APR 22,1994
TRICHOSTRONGYLE TYPE NEMATODES.

SAMPLE: LIVER CYST TYPE: LIVER CYST
PARASITOLOGY
TEST: PARASITE IDENTIFICATION
RESULTS: DATE REPORTED: APR 22,1994
CYSTICERCUS TYPE METACESTODE, (LARVAL TAPEWORM). MORPHOLOGY AND LOCATION IN THE LIVER INDICATE THAT THIS TAPEWORM LARVA MAY BE TAENIA HYDATIGENA.
WILD RUMINANTS SERVE AS AN INTERMEDIATE HOST FOR THIS TYPE OF TAPEWORM.

SAMPLE: SERUM TYPE: SERUM
AMES(NVSL)
TEST: EHD
RESULTS: DATE REPORTED: MAY 6,1994
THE SAMPLES SUBMITTED WAS TESTED FOR EPIZOOTIC HEMORRHAGIC DISEASE (EHD) BY AGAR GEL IMMUNODIFFUSION (AGID). RESULTS WERE NEGATIVE.
DIAGNOSTIC LAB OFFICE
TEST: MAILING CHARGE
RESULTS: DATE REPORTED: MAY 6,1994

SAMPLE: SPLEEN TYPE: SPLEEN
AMES(NVSL)
TEST: VIRUS ISOLATION
RESULTS: DATE REPORTED: JUN 6,1994
THE SAMPLE SUBMITTED WAS TESTED FOR EPIZOOTIC HEMORRHAGIC DISEASE (EHD) BY AGAR GEL IMMUNODIFFUSION (AGID). RESULTS WERE NEGATIVE.

VIRUS ISOLATION: A SUSPENSION OF THE TISSUE SUBMITTED WAS INOCULATED INTO EMBRYONATING CHICKEN EGGS BY THE INTRAVENOUS ROUTE AND ONTO BABY HAMSTER KIDNEY (BHK-21) CELL CULTURES. AFTER ONE PASSAGE IN EMBRYONATING CHICKEN EGGS INOCULATED BY THE INTRAVENOUS ROUTE, SUSPENSIONS OF THE EMBRYOS WERE PASSED INTO EMBRYONATING CHICKEN EGGS BY THE YOLK SAC ROUTE AND ONTO BHK-21 CELL CULTURES. THREE PASSAGES WERE MADE IN BHK-21 CELL CULTURES.

RESULTS: NO EVIDENCE OF VIRAL INFECTION WAS OBSERVED IN THE CELL CULTURES OR EGGS INOCULATED. (REPORT ATTACHED).

SAMPLE: BRAIN TYPE: BRAIN SWAB
BACTERIOLOGY/MYCOLOGY
TEST: CULTURE ONLY/AEROBIC/ANAEROBIC
RESULTS: DATE REPORTED: APR 27,1994
SEE ATTACHED SHEET.

SAMPLE: SUB Q SWAB TYPE: SUB Q SWAB
BACTERIOLOGY/MYCOLOGY
TEST: CULTURE/SENSITIVITY
RESULTS: DATE REPORTED: APR 27,1994
SEE ATTACHED SHEET.
BACTERIOLOGY/MYCOLOGY
TEST: ANAEROBIC CULTURE WITH SENSITIVITY
RESULTS: DATE REPORTED: APR 27,1994
SEE ATTACHED SHEET.

DIAGNOSTICIAN: ROLSMA M D.V.M. DATE: 6/6/94

****

PLEASE INCLUDE OWNER CITY AND STATE ON ALL SUBMISSIONS. FEES MAY BE CHANGED WITHOUT NOTICE.

APPENDIX D

Letter from the Forest Preserve District of DuPage County requesting the U.S. Department of Energy's Argonne National Laboratory - East, DuPage County, IL, to conduct a deer management program to facilitate a healthy ecosystem at the Laboratory and the Preserve.

JUN 20 1994

June 14, 1994

Mr. Kirk E. Gustad
USDA - APHIS - ADC
2869 Via Verde Drive
Springfield, Illinois 62703

Dear Mr. Gustad:

I am writing in response to the public notice for comments on proposed actions to assist the Department of Energy and Argonne National Laboratory regarding wildlife concerns. One of the Forest Preserve District of DuPage County's largest preserve, Waterfall Glen, surrounds Argonne National Laboratory. The District has maintained liaison with Argonne National Laboratory for approximately 20 years. Several years ago District biologists began discussions with DOE and Argonne staff concerning Argonne/DOE's concerns regarding wildlife damage. District staff has monitored the white-tailed deer population at Waterfall Glen Forest Preserve and the lab since 1985. District staff has also cooperated with the lab regarding beaver/water level control issues and responded to vehicle/deer collisions in recent years.

The District initiated an ecosystem/white-tailed deer management program at Waterfall Glen Forest Preserve in 1993 after documenting ecosystem damage for three (3) years. Action on the part of DOE/Argonne would facilitate the District's plan to reduce deer numbers to a level compatible with healthy ecosystems and assure healthy functioning ecosystems at the Laboratory and in the preserve. It is the District's hope that a deer reduction program is initiated at Argonne in the very near future. The District hopes to cooperate with DOE/Argonne on such a project.

The District is also willing to continue to assist where it can with concerns regarding beaver and water level control.

District staff would be happy to discuss related issues with you in the future.

Sincerely,

R. Dan Gooch

R. Dan Gooch
Acting Executive Director

DRL/sjh

APPENDIX E

Nuisance Wildlife Control Permit issued by the Illinois Department of Conservation to the U.S. Department of Energy's Argonne National Laboratory - East, DuPage County, Illinois.

Illinois Department of Conservation
LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787 CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH • CHICAGO 60601
Brent Manning, Director John W. Comerio Deputy Director Bruce F. Clay, Assistant Director

NUISANCE WILDLIFE CONTROL PERMIT

Issued to:
U. S. DEPARTMENT OF
ENERGY
ARGONNE NATIONAL
LABORATORY
9800 SOUTH CASS AVENUE
ARGONNE, IL 60439
708-252-2436

Expiration Date: January 31, 1996
Type: Class C, Governmental
Approved By: Robert D. Bluett
Date of Approval: 7 Feb 1995

Conditions:

1. Bona fide employees of this governmental agency may take nuisance animals that are causing damage or a risk to human health or safety. This authorization applies to species that are protected by Par. 2.2, Ch. 61, Ill. Rev. Stat., except that the permittee may not take migratory birds or endangered or threatened species without authorization from the Department, and only after obtaining appropriate Federal permits if required. Permittee may take white-tailed deer only after obtaining specific authorization from the Department.

2. Only box traps, cage traps, or traps of similar design and unmodified cushion-hold traps may be used for land sets. Body-gripping traps, cushion-hold traps, leg-hold traps, Bailey beaver traps or traps of similar design, Snead colony traps or traps of similar design, and cage traps, box traps, or traps of similar design may be used for water sets. Snares may be used for water sets in accordance with 525.30 (2), Ill. Adm. Code. All devices must be tagged with the permittee's name and address. The use of firearms may be approved by the Department in accordance with 17 Ill. Adm. Code 525, but State and Municipal restrictions apply.

3. Permittee must check all traps at least once each calendar day. If the permittee rents, lends, or otherwise transfers traps to clients, citizens, or other parties who are not under their direct supervision and have not obtained a Nuisance Animal Removal Permit or a Nuisance Wildlife Control Permit, the permittee is responsible for damages or violations caused by the second party.

4. All species which are defined as game or fur-bearing mammals and are not listed in 17 Ill. Adm. Code 1010 or otherwise exempted from the conditions of this permit may be euthanized in accordance with 17 Ill. Adm. Code 525 and the Dead Animal Disposal Act. All striped skunks must be euthanized.

5. All animals released alive must be re-located into suitable habitat in the State of Illinois within 24 hours after capture. The release site must be located at least 10 but not more than 40 miles from the capture site unless this section would require one municipality to release animals on lands under the jurisdiction of another municipality. Animals released more than 40 miles from the capture site must be certified disease-free as provided for in 17 Ill. Adm. Code 630.

6. Temporary holding facilities must meet U.S. Department of Agriculture standards for animal welfare as provided for in 17 Ill. Adm Code 525 and described by Subpart F, Subchapter A, Ch. 1, Title 9 CFR, 1985.

7. The sale of animals or animal by-products taken under authority of this permit is prohibited.

10. The activities of Class C permittees are subject to all other applicable restrictions listed in 17 Ill. Adm. Code 525.

APPENDIX F

Specimen label of rodenticide that may be used to manage wildlife causing damage at the U.S. Department of Energy's Argonne National Laboratory - East, DuPage County, Illinois.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

After ignition, cartridge produces toxic gases. Fumes may be harmful if inhaled.

ENVIRONMENTAL HAZARDS

This product is highly toxic to wildlife. Check all burrows for signs of nontarget species. If present, do not treat burrows.

CHEMICAL HAZARDS

Once ignited by the fuse, the cartridge will burn vigorously until completely spent and is capable of causing severe burns to exposed skin and clothes, and of igniting dry grass, leaves and other combustible materials.

ENDANGERED SPECIES CONSIDERATIONS

NOTICE: It is a Federal offense to use any pesticide in a manner that results in the death of a member of an endangered species.

Black-Footed Ferret: Do not use this product in the range of the black-footed ferret. Contact the nearest U.S. Fish and Wildlife Service office (Endangered Species Specialist) before the product is used. They will arrange for a survey of the proposed use site.

Utah Prairie Dog: Do not use this product in the range of the Utah prairie dog (Utah).

San Joaquin Kit Fox: This pesticide should not be used within 1 mile of active dens of the San Joaquin kit fox in the following California counties: Kern, Kings, Fresno, San Luis, Obispo, Merced, Monterey, Santa Barbara, Ventura, Tulare, and San Benito. Prior to use, contact the California Department of Fish and Game for recommendations.

Blunt-Nosed Leopard Lizard: This pesticide should not be used in the range of the blunt-nosed leopard lizard in the following California counties: Kern, Fresno, Kings, Madera, Merced, and Tulare. Prior to use, contact the California Department of Fish and Game for recommendations.

Eastern Indigo Snake: Do not use this product in the range of the eastern indigo snake in the following states: Mississippi, Alabama, South Carolina, Georgia, and Florida.

Desert Tortoise: This pesticide should not be used in the critical habitat of the Beaver Dam slope population of the desert tortoise in Utah. This comprises an area extending from the southwest facing slope of the Beaver Dam Mountains, across Highway 91, west along the Arizona border and 10 miles to the Nevada border.

GAS CARTRIDGE

For control of woodchucks, ground squirrels, prairie dogs and pocket gophers.

NOT FOR SALE TO PERSONS UNDER 16 YEARS OLD

ACTIVE INGREDIENTS:	
Sulphur	10.84%
Charcoal	17.34%
Red Phosphorus	3.25%
Mineral Oil	14.09%
Sodium Nitrate	43.36%
Sawdust	3.52%
Total	92.40%
INERT INGREDIENTS:	
Borax	3.25%
Fullers Earth	4.35%
Total	7.60%
TOTAL	100.00%

KEEP OUT OF REACH OF CHILDREN

WARNING

STATEMENT OF PRACTICAL TREATMENT
CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY!

If inhaled and person has poisoning symptoms (headache, nausea, dizziness, weakness), transfer victim to fresh air. Have victim lie down and keep warm. If respiration is adequate, recovery will be rapid. If breathing has stopped, use artificial respiration. If available, pure oxygen should be given.

SEE LEFT SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
ANIMAL DAMAGE CONTROL
Hyattsville, MD 20782
EPA Est. No. 56228-ID-1
EPA Reg. No. 56228-2

Net Weight 65 grams

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

STORAGE: Store in cool, dry place away from fire, heat and direct sunlight.

PESTICIDE DISPOSAL: To dispose of unused cartridges, soak in water, crush and bury at least 8" in loose soil.

CONTAINER DISPOSAL: Place in trash collection.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS

For control of woodchucks, ground squirrels, prairie dogs, and pocket gophers in open fields, non-crop areas, rangelands, reforested areas, lawns, and golf courses. For use only inside of burrows. Do not use near flammable material or inside buildings.

APPLICATION DIRECTIONS

Select burrow for treatment and obtain material to plug the entrance. Then, with a nail at least 1/8" in diameter, puncture cap at end of cartridge at points marked. Insert fuse in one of center holes. Insure that there is a minimum of 3 inches of exposed fuse. Hold cartridge away from face and body, then light.

NOTE: The minimum burn time for these fuses is 5 seconds.

Place cartridge, fuse-end first, as far into the burrow as possible. Close entrance to burrow immediately.

REFER TO BACK PANEL FOR TARGET SPECIFIC DIRECTIONS FOR USE

6/89

APPENDIX G

Correspondence with Federal and State wildlife management agencies concerning environmental consequences to Threatened or Endangered Species in regards to the techniques considered to manage wildlife causing damage at the U.S. Department of Energy's Argonne National Laboratory - East, DuPage County, Illinois.

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 1, 1994

Benjamin N. Tuggle, Ph.D.
U. S. Fish and Wildlife Service
Chicago Metro Wetlands Office
1000 Hart Rd., Suite 180
Barrington, IL 60010

Dear Dr. Tuggle:

The Animal Damage Control program has entered into an Interagency Agreement with the U. S. Department of Energy at Argonne National Laboratory - East to prevent and/or alleviate wildlife damage caused at the facility. In response to that agreement, ADC is currently preparing an Environmental Assessment which discusses four potential management alternatives to manage wildlife that is causing human safety hazards, environmental degradation, and damage to laboratory facilities.

The proposed strategy utilizes an integrated wildlife damage management approach to address the problems. Specific actions included in this Alternative include:

1. Exclosure -
   Improved fencing designed may limit the entry of deer, coyote, and other mammals into sensitive areas. The installation of overhead wires across retention ponds may limit access of waterfowl to these areas. Excluding wildlife from entry into buildings may alleviate associated damages.

2. Altering Facility Operations -
   Lowering speed limits and strict enforcement may reduce wildlife/vehicle accidents. Improved sanitation receptacles may reduce raccoon activity in sensitive areas. Implementing a "no feeding of wildlife" policy at ANL-E may help reduce concentrations of wildlife in specific areas.

3. Habitat Management -
   Elimination or modification of habitats utilized by deer, rodents, small mammals, and/or birds may reduce damage. Influencing the type, quality, and quantity of habitat available may have a direct relationship on the diversity of wildlife utilizing treated areas.

4. Harassment -
The use of harassment techniques such as sirens, pyrotechnics, vehicles, horns, propane exploders, and recorded distress calls may be used to temporarily move wildlife from specific areas.

5. Application of Chemical Repellents -
This method would require the application of approved chemical repellents to reduce damage caused by birds and mammals. The application of these products would be limited to the availability of registered products for specific wildlife species.

6. Population Reduction (capture and translocation) -
This method would allow for live capture and translocation of wildlife to other areas. The application of this method would be limited by State and Federal regulations of the importation of wildlife.

7. Population Reduction (lethal) -
Lethal control methods would be used to selectively remove animals that are creating hazards to public safety, causing damage to facilities or the environment, and to reinforce harassment techniques. Lethal population reduction techniques could include: pesticide treatment [DRC-1339, Avitrol®, and Zinc Phosphide], trapping, snaring, shooting, and nest destruction.

Therefore, it is our opinion that the application of wildlife damage management techniques, including the identified pesticides, through the Integrated Management Alternative of the EA will not affect listed threaten or endangered species in Illinois. I would appreciate any comments regarding this conclusion. If you do not agree or would like to provide additional comments, please contact me by telephone or in writing by August 1, 1994.

Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc: K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chicago Metro Wetlands Office
1000 Hart Road - Suite 180
Barrington, Illinois 60010
(708)381-2253

IN REPLY REFER TO

FWS/AES-CIFO

July 18, 1994

Rec 7/22/94

Andrew J. Montoney
Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833

Dear Mr. Montoney:

This is in response to your letter of July 1, 1994 regarding documentation of any threatened or endangered species or critical habitat in the vicinity of Argonne National Laboratory (Argonne), DuPage County, IL. The U.S Department of Agriculture - Animal Damage Control and the U.S. Department of Energy are proposing a wildlife damage management program at Argonne.

Based on the information provided, we do not believe that any federally endangered or threatened species occur in the vicinity of the proposed action. However, a breeding population of the Hine's emerald dragonfly (*Somatochlora hineana*) is known to occur on Waterfall Glen Forest Preserve, approximately 700 meters from the southern boundary of Argonne. The Hine's emerald dragonfly has been proposed by the U.S. Fish and Wildlife Service to be added to the federal list as endangered.

We believe that specific actions 1 - 4 and 6, as described in your letter, are unlikely to adversely affect the Hine's emerald dragonfly as long as the actions are carried out within the confines of the Argonne property line. Actions 5 and 7 require the application of chemical repellents and pesticides. The likelihood of adverse effects to the Hine's emerald dragonfly through the use of these chemicals will depend upon the species specificity of the chemical, the area of application, the degree of application, the time of application, and the ability of such chemicals to enter the wetlands used by the Hine's emerald dragonfly. We recommend that application of chemicals be confined to within the Laboratory boundaries and that measures be taken to ensure that the chemicals will not enter wetlands used by the dragonfly (see attached map). We also recommend use of chemicals documented to be specific to the target avian and mammalian species.

Before providing specific comments as to whether the Integrated Management Alternative will or will not adversely affect the Hine's emerald dragonfly, we would appreciate

reviewing information and/or details of the proposed alternative that will address the above-mentioned concerns.

If you any questions, please contact Amelia Orton-Palmer at 708-381-2253.

Sincerely,

Benjamin N. Tuggle, Ph.D.
Field Supervisor

Attachment

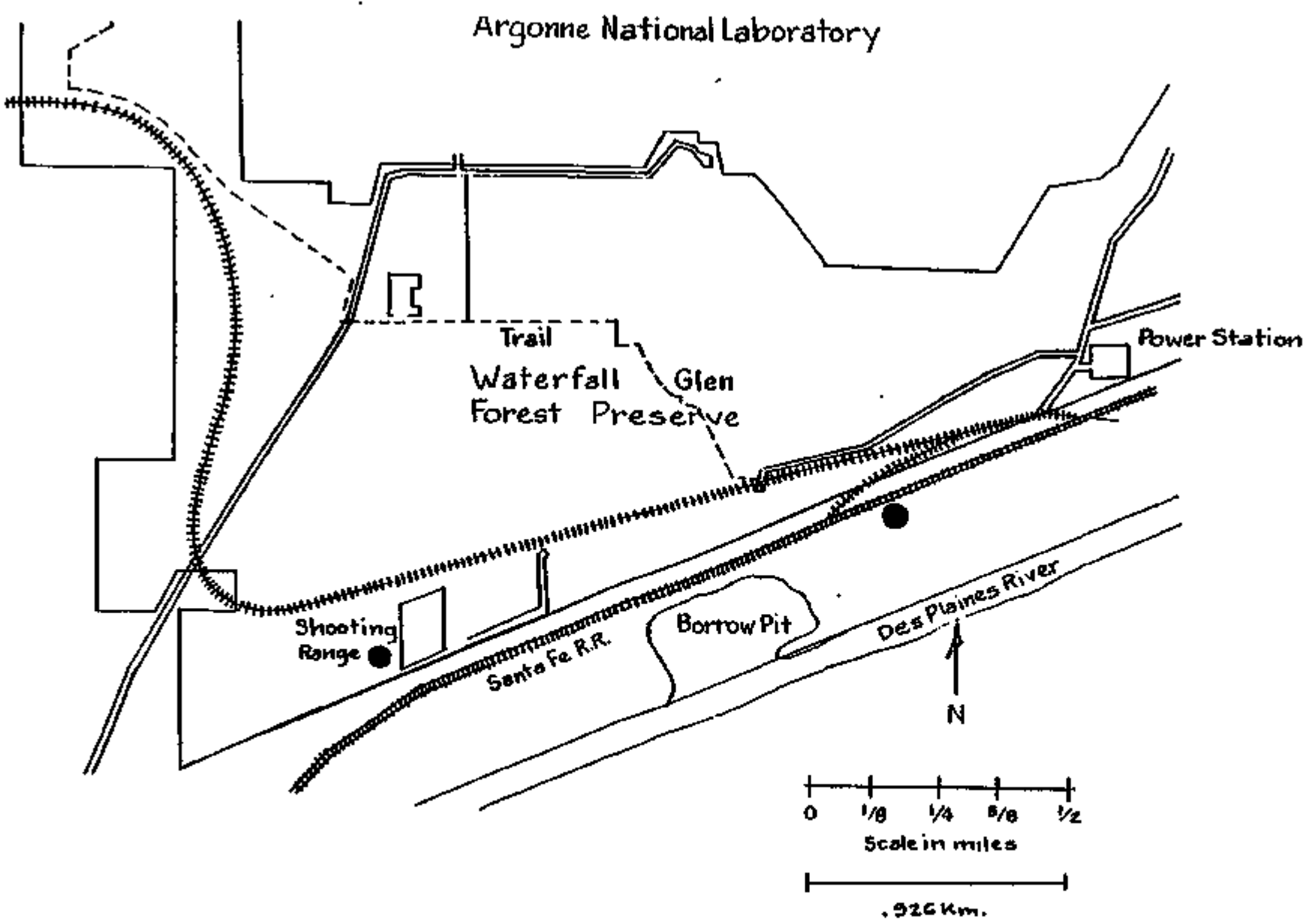


Fig. 9. Waterfall Glen Forest Preserve and environs; *Somatochlora hineana* observation sites. (closed circles)

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

November 28, 1994

Benjamin N. Tuggle, Ph.D.
U.S. Fish & Wildlife Service
Chicago Metro Wetlands Office
1000 Hart Rd., Suite 180
Barrington, IL 60010

Dear Dr. Tuggle:

This is in response to your letter dated 7/18/94 for information regarding a comments upon the Integrated Management Alternative of the Draft Environmental Assessment (EA) for wildlife damage management activities at Argonne National Laboratory-East (ANL-E). I regret the delayed response to your request, but significant revisions to the Draft EA were being made which will likely play a role in your decision process. Under the current draft, many of the species of concern have been removed from the document; therefore, many of the pesticides have been removed. The only remaining pesticide is the gas cartridge for burrowing rodents (EPA No. 56228-02).

In your letter, you had concerns of negative impacts caused by potential pesticide usage at ANL-E upon the Hine's emerald dragonfly (*Somatochlora hineana*), proposed by the U.S. Fish & Wildlife Service for addition to the federal endangered species list. It is our opinion that the application of the gas cartridge will have no adverse impacts upon this dragonfly. This opinion is based upon the application procedure of this pesticide and no probable risks from secondary toxicity or off-site transport through water tables as identified in Appendix P (Risk Assessment of Wildlife Damage Control Methods Used by the USDA Animal Damage Control Program) of the USDA-APHIS-ADC Final Environmental Impact Statement.

Possible application sites are not in the immediate vicinity of known environs used by the dragonfly and application procedures are not such that aerial drifting of toxicants is possible. If you do not concur with my conclusion, please contact me. I will be glad to discuss this with you. Thank you for your assistance with this matter.

Sincerely,

Kirk E. Gustad
District Supervisor
Illinois ADC

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 1, 1994

James R. Herkert
Illinois Department of Conservation
Endangered Species Protection Board
600 North Grand Avenue West
Springfield, IL 62706

Dear Mr. Herkert:

The Animal Damage Control program has entered into an Interagency Agreement with the U. S. Department of Energy at Argonne National Laboratory - East to prevent and/or alleviate wildlife damage caused at the facility. In response to that agreement, ADC is currently preparing an Environmental Assessment which discusses four potential management alternatives to manage wildlife that is causing human safety hazards, environmental degradation, and damage to laboratory facilities.

The proposed strategy utilizes an integrated wildlife damage management approach to address the problems. Specific actions included in this Alternative include:

1. Exclosure -
   Improved fencing designed may limit the entry of deer, coyote, and other mammals into sensitive areas. The installation of overhead wires across retention ponds may limit access of waterfowl to these areas. Excluding wildlife from entry into buildings may alleviate associated damages.

2. Altering Facility Operations -
   Lowering speed limits and strict enforcement may reduce wildlife/vehicle accidents. Improved sanitation receptacles may reduce raccoon activity in sensitive areas. Implementing a "no feeding of wildlife" policy at ANL-E may help reduce concentrations of wildlife in specific areas.

3. Habitat Management -
   Elimination or modification of habitats utilized by deer, rodents, small mammals, and/or birds may reduce damage. Influencing the type, quality, and quantity of habitat available may have a direct relationship on the diversity of wildlife utilizing treated areas.

4. Harassment -
The use of harassment techniques such as sirens, pyrotechnics, vehicles, horns, propane exploders, and recorded distress calls may be used to temporarily move wildlife from specific areas.

5. Application of Chemical Repellents -
This method would require the application of approved chemical repellents to reduce damage caused by birds and mammals. The application of these products would be limited to the availability of registered products for specific wildlife species.

6. Population Reduction (capture and translocation) -
This method would allow for live capture and translocation of wildlife to other areas. The application of this method would be limited by State and Federal regulations of the importation of wildlife.

7. Population Reduction (lethal) -
Lethal control methods would be used to selectively remove animals that are creating hazards to public safety, causing damage to facilities or the environment, and to reinforce harassment techniques. Lethal population reduction techniques could include: pesticide treatment [DRC-1339, Avitrol®, and Zinc Phosphide], trapping, snaring, shooting, and nest destruction.

Therefore, it is our opinion that the application of wildlife damage management techniques, including the identified pesticides, through the Integrated Management Alternative of the EA will not affect listed threaten or endangered species in Illinois. I would appreciate any comments regarding this conclusion. If you do not agree or would like to provide additional comments, please contact me by telephone or in writing by August 1, 1994.

Sincerely,

Andrew J. Montoney

Andrew J. Montoney
Wildlife Biologist

cc: K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 20, 1994

Ms. Deanna Glosser
Illinois Department of Conservation
Endangered Species Program Manager
524 South 2nd Street
Springfield, IL 62701

Dear Ms. Glosser;

As per our telephone conversation on Tuesday, July 19, 1994, enclosed you will find a copy of the "Wildlife Damage Management Plan for Argonne National Laboratory-East". It was prepared by the U.S. Department of Agriculture's Animal Damage Control program for the U.S. Department of Energy. This report identifies wildlife species causing damage (or having the potential to cause damage) at ANL-E and identifies possible methods to be used for the prevention and/or alleviation of the damage.

Hopefully this report will clarify the initial letter that was sent to Mr. Herkert on July 1, 1994 concerning the preparation of an Environmental Assessment for ANL-E. Please contact me if you have any additional questions. I look forward to hearing from you by August 1, 1994.

Sincerely,

Andrew J. Montoney

Andrew J. Montoney
Wildlife Biologist

cc: K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

USDA APHIS

CONVERSATION RECORD

TIME: 11:20am

DATE: 9/8/94

TYPE: ☐ VISIT ☐ CONFERENCE ☒ TELEPHONE ☒ Incoming ☐ Outgoing

TELEPHONE NUMBER:

☐ Routing ☐ CC

Name	Initials

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU: Deanna Glosser

ORGANIZATION (Office, Agency, Department, etc.): IL. Dept. of Conservation Natural Heritage Program

SUBJECT: Wildlife Damage Management Plan for Argonne Nat. Lab. effecting Threatened and Endangered Species

SUMMARY

Message received on answering machine.

After reviewing the Wildlife Damage Management Plan for Argonne National Laboratory, the Illinois Department of Conservation, Endangered Species Program does not see the methods used in the plan effecting any state listed threatened or endangered species on site.

ACTION REQUIRED

None

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Andrew J. Montoney	Andrew J. Montoney	9/8/94

ACTION TAKEN

SIGNATURE	TITLE	DATE

APHIS FORM 44
(MAY 92)

APPENDIX H

Memo from the United States Department of Energy disclaiming Argonne National Laboratory - East from posing health hazards to wild deer due to operations conducted on site.

ARGONNE NATIONAL LABORATORY ENVIRONMENTAL MONITORING PROGRAM

Argonne National Laboratory conducts an ongoing environmental monitoring program to determine the identity, magnitude, and origin of any radioactive and chemical substances in the environment. Argonne samples air, water, soil, and grass at the site boundary and compares the analytical results to similar samples collected away from the site. The annual "Argonne National Laboratory-East Site Environmental Report" documents the results of these programs. Copies of this report are available to the public.

Air monitors at the site perimeter operate year round. These monitors have indicated that there is no release of radioactive particles attributable to Argonne operations. Gaseous radioactive air releases are modeled by computers. Analysis indicates that the maximum exposed member of the public would receive less than 10 percent of the allowable limits permissible as safe by standards set by the U.S. Environmental Protection Agency. Our estimates, however, are very conservative, for example, they include the contribution from Radon-220 which is not included in the standard.

Surface waters at the site are monitored, and with the exception of Sawmill Creek, they are confirmed to be at natural background levels. Even at Sawmill Creek, where treated Argonne wastewaters are discharged, radionuclide concentrations are a small fraction of the allowable discharge limits. The incremental radiation dose from Argonne activities to an individual that would in theory get his water from this creek, would be less than 0.2 percent of the limit allowed by regulation.

The radiation levels in soil and grass around the site are similar to those from distant samples in Illinois; there is no detectable contribution resulting from Argonne operations.

With the known source terms, there is just no credible mechanism for the deer to be a health hazard.

A. L. Taboas, Manager
Argonne Area Office
U. S. Department of Energy

APPENDIX I

Necropsy results from deer collected by the Forest Preserve District of DuPage County at Waterfall Glen for radionuclides, organo phosphates, and chlorinated hydrocarbons including PCB's, 1994.

DATE: February 08, 1994

TO: Operations Committee

FROM: Daniel R. Ludwig, Ph.D., Animal Ecologist

SUBJECT: Safety of Consumption of Deer Carcasses

Following the request that deer carcasses be examined for radionuclides and pollutants (received on February 04, 1994), tissue samples were collected from ten animals on the evening of February 04, 1994. Samples were taken from three animals from West Chicago Prairie and seven animals from Waterfall Glen Forest Preserve. The animals were collected from West Chicago Prairie to serve as a baseline for comparisons of values of radionuclide, pesticides, insecticides, and heavy metals. The samples were sent for analysis during the week of February 07, 1994. Samples of meat will be assessed for radionuclides by the Illinois Department of Nuclear Safety in Springfield, Illinois. The Illinois Department of Agriculture's office in Centralia, Illinois will perform toxicology screening on samples of liver and fat for evidence of pesticides, insecticides, and heavy metals. Both of these agencies have been asked to provide safety standards and will advise the Forest Preserve District whether the venison is safe for human consumption.

Discussion with representatives of the Department of Energy and Argonne National Laboratory's annual site environmental reports indicate that unsafe levels of radionuclides have not been detected in ground water, air, or soil and vegetation. In short, if hazardous levels of radionuclides are not present in the air, water, or vegetation it is unlikely, if not impossible, that

radionuclides will be inhaled or ingested by the white-tailed deer at Waterfall Glen.

Analysis of each sample sent to each laboratory is anticipated in one to two weeks.

DRL/sjh

1993/1994 DEER MANAGEMENT PROGRAM
RADIATION AND TOXICOLOGY TESTING

Below is a breakdown identifying the deer that were chosen for sampling purposes by tag number, preserve, sex, and age. Samples were sent to the Illinois Department of Agriculture, Centralia, IL and the Illinois Department of Nuclear Safety, Springfield, IL during February 1994.

DEER TAG NUMBER	TESTING	PRESERVE	SEX	AGE
JHK 288524	RT	West Chicago Prairie	Female	2.5
JHK 288525	RT	West Chicago Prairie	Male	Fawn
JHK 288526	RT	West Chicago Prairie	Male	3.5
JHK 476799	RT	Waterfall Glen	Male	3.5
JHK 476800	RT	Waterfall Glen	Female	Fawn
JHK 564317	RT	Waterfall Glen	Female	3.5
JHK 564318	RT	Waterfall Glen	Male	1.5
JHK 564319	RT	Waterfall Glen	Female	2.5
JHK 564321	R	Waterfall Glen	Female	6.5
JHK 564322	R	Waterfall Glen	Male	4.5

R = RADIATION TESTING/MUSCLE
T = TOXICOLOGY TESTING/FAT AND LIVER

STATE OF ILLINOIS
DEPARTMENT OF NUCLEAR SAFETY
1035 OUTER PARK DRIVE
SPRINGFIELD, ILLINOIS 62704

Jim Edgar
Governor

Thomas W. Ortciger
Director

February 18, 1994

CONFIDENTIAL

Mr. John J. Case, President
DuPage County Forest Preserve District
P.O. Box 2339
Glen Ellyn, IL 60138

VIA FACSIMILE 708-355-1055

Dear Mr. Case:

The Illinois Department of Nuclear Safety radiochemistry laboratory has completed its analysis of the samples of white-tailed deer meat submitted February 14, 1994. The samples were analyzed for gamma ray emitting radionuclides by gamma spectroscopy. The following results were obtained.

Sample JK564319

Potassium-40	2400 ± 648 picoCuries per kilogram
Cobalt-60	less than 72 picoCuries per kilogram
Cesium-134	less than 55 picoCuries per kilogram
Cesium-137	less than 59 picoCuries per kilogram

No other radionuclides were identified.

Sample JK564321

Potassium-40	2300 ± 213 picoCuries per kilogram
Cobalt-60	less than 23 picoCuries per kilogram
Cesium-134	less than 18 picoCuries per kilogram
Cesium-137	less than 21 picoCuries per kilogram

No other radionuclides were identified.

Sample JNK476799

Potassium-40	2500 ± 475 picoCuries per kilogram
Cobalt-60	less than 54 picoCuries per kilogram
Cesium-134	less than 39 picoCuries per kilogram
Cesium-137	less than 43 picoCuries per kilogram

No other radionuclides were identified.

Sample JK564322

Potassium-40	2500 ± 400 picoCuries per kilogram
Cobalt-60	less than 40 picoCuries per kilogram
Cesium-134	less than 32 picoCuries per kilogram
Cesium-137	less than 39 picoCuries per kilogram

No other radionuclides were identified.

Sample JHK288524

Potassium-40	2300 ± 368 picoCuries per kilogram
Cobalt-60	less than 36 picoCuries per kilogram
Cesium-134	less than 30 picoCuries per kilogram
Cesium-137	less than 33 picoCuries per kilogram

No other radionuclides were identified.

Sample JHK288525

Potassium-40	2200 ± 198 picoCuries per kilogram
Cobalt-60	less than 19 picoCuries per kilogram
Cesium-134	less than 17 picoCuries per kilogram
Cesium-137	less than 19 picoCuries per kilogram

No other radionuclides were identified.

Sample JHK288526

Potassium-40	2500 ± 575 picoCuries per kilogram
Cobalt-60	less than 68 picoCuries per kilogram
Cesium-134	less than 50 picoCuries per kilogram
Cesium-137	less than 52 picoCuries per kilogram

No other radionuclides were identified.

Sample JHK476900

Potassium-40	2700 ± 227 picoCuries per kilogram
Cobalt-60	less than 22 picoCuries per kilogram
Cesium-134	less than 17 picoCuries per kilogram
Cesium-137	less than 20 picoCuries per kilogram

No other radionuclides were identified.

Sample JK564318

Potassium-40	2300 ± 483 picoCuries per kilogram
Cobalt-60	less than 50 picoCuries per kilogram
Cesium-134	less than 42 picoCuries per kilogram
Cesium-137	less than 47 picoCuries per kilogram

No other radionuclides were identified.

Sample JKS64317

Potassium-40	3000 ± 570 picoCuries per kilogram
Cobalt-60	less than 53 picoCuries per kilogram
Cesium-134	less than 40 picoCuries per kilogram
Cesium-137	less than 48 picoCuries per kilogram

No other radionuclides were identified.

Potassium-40 is a naturally occurring primordial radionuclide. It is present to an extent of about 0.01% in natural potassium. Potassium is of course found in fertilizer and in most soils on earth. Therefore potassium-40 moves through the food chain to animals and to humans as all other nutrients do. In animals and humans, most of this potassium will be in muscle. It is not considered to be contamination of any kind.

Cesium-137 is the most useful indicator of fission product contamination in animal muscle. The U.S. Food and Drug Administration has set standards for radionuclide contamination of meat. For imported meat, this standard is 10,000 picoCuries of Cs-137 per kilogram. For domestic meat, the standard is 1450 picoCuries of intake per day. In any case, your sample were considerably below these levels.

I hope you find this information useful to you. If you have any questions about the analysis, please call Dr. Lih-Ching Chu at 217-786-6363.

Sincerely,

Richard Allen

Richard Allen, Manager
Office of Environmental Safety

RA:jem

State of Illinois
DEPARTMENT OF AGRICULTURE

Division of Animal Industries
ANIMAL DISEASE LABORATORY
SHATTUC ROAD
CENTRALIA, ILLINOIS 62801

TOXICOLOGY DEPARTMENT REPORT

OWNER

FOREST PRESERVE OFDUPAGE CO
P O BOX 2339
GLEN ELLYN IL 60138

VETERINARIAN

NO VET

ACCESSION NUMBER: 9400014444

DATE REPORTED: 02/17/94

DATE RECEIVED: 02/09/94

SPECIMEN RECEIVED: DEER SAMPLES - 8 LIVERS AND 8 FATS

SPECIES: DEER

TEST REQUESTED: SCREEN

RESULTS:

SAMPLE ID:
A - JHK564319
B - JHK564317
C - JHK476800
D - JHK288524
E - JHK288526
F - JHK288525
G - JHK476799
H - JHK564318

PLEASE SEE ATTACHED FOR RESULTS.

CHEMIST Steve Kastens

APPROVED
STEPHEN C. ROSS

LABORATORY SUPERVISOR J. O. REYNOLDS

PLEASE NOTIFY OWNER OF THESE RESULTS WITHOUT DELAY

State of Illinois
DEPARTMENT OF AGRICULTURE

Division of Animal Industries

ACC. # 9400014444 - FOREST PRESERVE OF DUPAGE COUNTY

SAMPLE ID	IRON PPM	COPPER PPM	ZINC PPM	LEAD PPM	ARSENIC PPM
A	182	16.8	31.6	0.63	0.02
B	188	6.2	52.6	0.29	0.01
C	108	63.8	49.8	0.39	0.01
D	190	43.0	44.2	0.30	0.01
E	306	10.8	39.4	0.29	0.01
F	244	34.6	37.0	0.26	0.02
G	310	30.4	51.4	0.37	0.02
H	188	23.8	57.8	0.35	0.02

ALL OF THE ABOVE RESULTS REPRESENT NORMAL AMOUNTS.

ORGANO PHOSPHATES: NONE DETECTED FROM THE EIGHT LIVER SAMPLES.

CHLORINATED HYDROCARBONS, INCLUDING PCB: NONE DETECTED FROM THE EIGHT LIVER AND EIGHT FAT SAMPLES.

THE FOLLOWING PESTICIDES ARE INCLUDED IN THE PESTICIDE SCREEN

ORGANO PHOSPHATES

Amaze

Baytex

Counter

Cygon

DDVP

Diazinon

Disulfoton

Dursban

Dyfonate

Dylox

Ethyl Parathion

Malathion

Methidathion

Methyl Parathion

Mevinphos

MoCap

Phosdrin

Phosmet

Ronnel

Thimet

CHLORINATED HYDROCARBONS

Aldrin

BHC

Chlordane

DDD

DDE

DDT

Dieldrin

Endrin

Heptachlor

Heptachlor epoxide

Hexachlorobenzene

Lindane

Methoxychlor

Mirex

Thiodan

APPENDIX J

Copy of public announcements sent to local media soliciting involvement of interested parties to offer suggestions and recommendations concerning the management of wildlife causing damage at the U.S. Department of Energy's Argonne National Laboratory - East, DuPage County, Illinois.

Daily Herald
Monday, June 6, 1994

Public Notice

Of The Development Of An Environmental Assessment For The Control Of Wildlife Damage At Argonne National Laboratory - East DuPage County, Illinois

To all interested agencies, groups, and individuals:

The United States Department of Agriculture-Animal and Plant Health Inspection Service-Animal Damage Control is conducting an Environmental Assessment (EA) of proposed actions to assist the Department of Energy and Argonne National Laboratory-East (ANL-E) in DuPage County, Illinois. The management of public safety hazards, environmental degradation, and damage to laboratory facilities caused by wildlife is necessary because of the increasing number of adverse human/wildlife interactions, increasing damage to property and the environment, and to comply with ANL-E's mission of protecting the environment. Management alternatives will range from no action to resolve wildlife conflicts, through the integration of available environmentally safe and proven effective management techniques to manage wildlife damage at ANL-E.

Public involvement is being solicited to identify issues of concern and possible management alternatives to be considered in the EA. This comprehensive EA will involve the mammals and birds found at ANL-E. Comments will be accepted during a 14-day comment period beginning June 6, 1994. To insure comments are included in the development of the EA, they must be submitted in writing by June 20, 1994 to: USDA-APHIS-ADC, 2869 Via Verde Drive, Springfield, IL 62703.

Published in Wheaton-Glen Ellyn Herald June 6, 1994. D

ARGONNE
Week
Monday, June 6, 1994

Comments, suggestions sought for ANL-E environmental assessment

Argonne employees can register their concerns and suggest plans of action for dealing with wildlife problems at the Argonne-East site as an environmental assessment is written for the laboratory.

The document is being written by members of the U.S. Department of Agriculture studying wildlife on the site. It will evaluate management strategies for controlling wildlife damage.

The assessment is a response to safety hazards and damage to the environment and laboratory facilities caused by overpopulation of some animals, including deer.

Comments must be submitted in writing June 6 through June 20 to USDA-APHIS-ADC, 2869 Via Verde Drive, Springfield, IL 62703.

ARGONNE
Week

Monday, June 13, 1994

Wildlife plans, comments due by June 20

Argonne employees can register their concerns and suggest plans of action for dealing with wildlife problems at the Argonne-East site as an environmental assessment is written for the laboratory.

The document is being written by members of the U.S. Department of Agriculture studying wildlife on the site. It will evaluate management strategies for controlling wildlife damage.

Comments will be accepted through June 20. They should be sent to USDA-APHIS-ADC, 2869 Via Verde Drive, Springfield, IL 62703.

Daily Herald
NAPERVILLE/LISLE EDITION
PADDOCK PUBLICATIONS
Wednesday, December 21, 1994

Daily Herald
CLASSIFIED - 2
Wed., Dec. 21, 1994

Public Notice

of a Draft Environmental Assessment for the Management of Wildlife Causing Damage at Argonne National Laboratory-East DuPage County, Illinois

To all interested agencies, groups, and individuals:

The United States Department of Agriculture-Animal and Plant Health Inspection Service-Animal Damage Control (ADC) has prepared a Draft Environmental Assessment (EA) of proposed strategies to assist the Department of Energy's Argonne National Laboratory-East (ANL-E) in DuPage County, Illinois with the management of wildlife that cause damage. The management of wildlife that cause public safety hazards, environmental degredation, and damage to ANL-E is necessary because of the increasing number of adverse human/wildlife interactions, increasing damage to property and the environment, and to maintain healthy wildlife populations. Management alternatives range from no action by ADC to resolve wildlife conflicts, through the integration of available environmentally safe and proven effective management techniques to manage wildlife damage at ANL-E.

The Draft EA involves the mammals and birds found at ANL-E. Public comment is being solicited on the Draft EA. Comments will be accepted during a 21-day comment period beginning December 21, 1994 and ending January 11, 1994. Comments may be provided in writing to the address listed below, or voiced at a public meeting scheduled for January 11, 1995. The meeting will be held at 7:00 p.m. at the Willowbrook Holiday Inn, 7900 Kingery Highway, Willowbrook, Illinois.

The Draft Environmental Assessment may be reviewed at the Lemont and Westmont Public Libraries or copies may be obtained from: USDA-APHIS-ADC, 2869 Via Verde Drive, Springfield, IL 62703 (217) 492-4306.

Published in Wheaton-Glen Ellyn Herald Dec. 21, 1994 D

Week

Monday, January 9, 1995

Public comment sought on wildlife plan

Members of nearby communities will have an opportunity to comment on a proposed wildlife management plan for Argonne at a public meeting on Wednesday, Jan. 11.

The meeting will begin at 7 p.m. at the Willowbrook Holiday Inn, 7800 Kingery Highway (Rt. 83), Willowbrook.

An environmental assessment of the proposed wildlife management plan, prepared by the U.S. Department of Agriculture for DOE, has been released in draft form for public comment. It recommends a strategy of "integrated wildlife damage management" at Argonne to reduce damage to the site's environment and safety hazards to employees

Part of the USDA's management strategy includes reducing the white-tailed and fallow deer population to 20 per square mile for each species.

USDA surveys of the site found at least 453 white-tailed deer on the site, about nine times the ideal level. The European fallow, or "white," deer number at least 139 per square mile. These numbers are conservative, according to the USDA; many deer are usually hidden during a census. Each population would be maintained at the recommended level to "assure a healthy, balanced ecosystem between Argonne-East and Waterfall Glen Forest Preserve," according to the assessment.

Proven management methods and techniques, both lethal and nonlethal, would be used to reduce deer populations. Exclusive use of nonlethal techniques would not eliminate environmental damage caused by wildlife, and would allow the damage to continue and possibly increase, according to the study. Management techniques would be species-specific to reduce the risk of harm to other kinds of animals.

Under the plan, other wildlife species would be managed as necessary when they cause public safety hazards, environmental degradation, or damage to laboratory facilities.

APPENDIX K

Status of current research on immunocontraception from U.S. Department of Agriculture - Denver Wildlife Research Center.

United States Department of Agriculture

Animal and Plant Health Inspection Service

Animal Damage Control

Denver Wildlife Research Center
Building 16, P.O. Box 25266
Denver Federal Center
Denver, CO 80225-0266
Telephone: 303/236-7878
FAX: 303/236-7863

WILDLIFE VACCINE DEVELOPMENT AT DWRC
(March, 1994)

Background

Recent advancements in immunology, molecular biology and related biotechnologies have made it possible to develop vaccine technology for wildlife management applications. Because of these advancements and the growing public support for more effective and socially acceptable technology to alleviate problems caused by nuisance and damaging species of wildlife, APHIS/DWRC initiated research in 1992 to explore development of vaccine technology to address these problems. Although the initial research focus was on genetically engineered immunocontraceptive vaccines for oral immunization of white-tailed deer and wild rats, current research includes exploring development of orally administered immunocontraceptive and immunometabolic vaccines for population reduction and crop aversion in pest birds (e.g., starlings and brown-headed cowbirds).

Vaccine Definition

Historically, the term vaccine has been used in the context of "inoculation with the virus of a disease as a means of producing immunity against that disease (e.g., cowpox)". For wildlife applications, vaccine terminology is being extended by analogy to denote "any protein or hormone made immunogenic and delivered to the host animal which results in antibody production that interferes with biological activity to cause contraception, lethality or aversion.

Vaccine Development Concepts Being Explored

1. Immunocontraception.

   Immunocontraceptive vaccines work to control fertility by causing the production of antibodies against a reproductive tract protein (eggs or sperm) or hormone associated with reproduction. Several approaches are potentially available for devising a vaccine development strategy, including production of antibodies against egg zona pellucida (ZP), sperm, chorionic gonadotrophin hormone, follicle stimulating hormone (FSH), luteinizing hormone (LH), and gonadotrophin releasing hormone (GnRH). Based on current technology, ZP and GnRH vaccines appear to be the most developmentally feasible and cost effective for application in target animal populations.

   The ZP is a noncellular glycoprotein layer between the egg and granulosa cells surrounding it. The ZP functions in the process of sperm/egg recognition and ensures that only a single sperm penetrates the egg at fertilization. To produce contraceptive antibodies, the ZP vaccine must be made foreign to the host by coupling it to an antigenic protein

(i.e., keyhole limpet hemocyanin, KLH). Antibodies produced to a ZP/protein carrier will immunize a female against the ZP of its own eggs, thereby blocking conception by preventing sperm penetration.

GnRH is a hormone from the hypothalamus in the brain that controls the release of pituitary reproductive hormones FSH and LH. To produce contraceptive antibodies, GnRH must also be made foreign to the host by coupling it to an antigenic protein carrier. Antibodies produced to GnRH/carrier proteins will interfere with the biological activity of circulating GnRH, thereby preventing release of FSH and LH which, in turn, will affect the ovaries and testes and cause temporary sterility in both sexes.

2. Immunometabolic

This approach involves vaccination to produce antibodies to a key hormone, enzyme, or food metabolite to cause mortality or nonlethal crop aversion. Current emphasis is on immunizing starlings (Sturnus vulgaris) with thyrotrophin releasing hormone (TRH) that has been made foreign to their own immune system to stimulate production of antibodies against endogenous TRH to reduce blood thyroid hormone concentration (T3 & T4), which is responsible for regulating essential metabolic functions. Based on current knowledge of avian physiology, small pest birds should be vulnerable to this vaccine approach. If effective, it would cause death and/or infertility in immunized birds.

Progress To Date:

* A study is underway to determine efficacy of recombinant ZP vaccine preparations for controlling reproduction in white-tailed deer. Results appear promising for developing recombinant vaccine technology for controlling fertility in white-tailed deer, and perhaps other ungulates.

* Conducted a study with white-tailed deer to assess the effectiveness of bacterium (BCG) as a model delivery vehicle for oral immunization. Results demonstrated that BCG can be effectively used as a live carrier vector to orally vaccinate animals to control reproduction.

* Conducted immunocontraception study to assess efficacy of two methods of rodent immunocontraception. One method involved GnRH coupled to KLH; the second method involved a synthetic mouse ZP made antigenic by coupling it to KLH. The GnRH vaccine proved 100% effective in wild Norway rats up to 12 months, during which time the gonads of both sexes were atrophied. The ZP vaccine proved marginally effective; only 50% of immunized females failed to produce offspring.

* A study is underway with wild Norway rats to determine the feasibility of using liposomes to orally deliver vaccines to the immune system of target species. If successful, liposomes could become an important means to administer vaccines to vertebrate pest species.

* A study is underway to determine the feasibility of using avian GnRH/KLH vaccine to control reproduction in starlings and brown-headed cowbirds

where these birds are causing crop depredations, human health hazards or affecting survival of threatened or endangered avian species.

Future Vaccine Development Studies

* Continue deer immunocontraceptive vaccine development. Efforts will be focused on identifying and producing 5 ZP peptides for white-tailed deer immunocontraceptive efficacy evaluation, beginning Fall 1994, and publishing key research findings to date. Studies will be conducted in cooperation with scientists at Baylor College of Medicine and Pennsylvania State University.

* Continue research to perfect immunocontraceptive vaccines for wild rats.

* Determine the feasibility of developing and using vaccines to reduce blackbird populations (starlings and brown-headed cowbirds) where these birds are causing crop depredations, human health hazards or affecting survival of threatened or endangered species.

* Continue efforts to identify and develop vaccine carriers for oral immunization of deer, rodents and birds. Emphasis will be on developing non-live vaccine carriers (e.g., liposomes and microspheres) in solid and liquid bait formats.

* Monitor published literature for the latest ideas and biotechnological innovations that may be useful for developing species-specific vaccines for wildlife management application (e.g., avian crop aversion and population reduction vaccines).

SUMMARY: As part of its alternative methods development program, APHIS/OWRC is currently conducting research to develop vaccine technology to alleviate problems caused by damaging and nuisance species of wildlife, which includes: (1) immunocontraceptive vaccines for white-tailed deer, rodents and pest species of avians and (2) avian immunometabolic vaccines (population reduction and sublethal crop aversion). Although there is widespread interest in developing and using vaccine technology to resolve wildlife damage problems, there are important biological and regulatory issues that need to be addressed if this new technology is to be applied.

APPENDIX L

Illinois Department of Conservation, Deer Population Control Permit procedures and guidelines.

APPENDIX B

Deer Population Control Permit

The Department strives to maintain deer densities at desirable levels or to adjust them in accordance with biological and/or social needs. Management alternatives to achieve this objective include: manipulation of the size and sex composition of the harvest, season type, season timing, season length and the number and/or types of permits issued. However, in areas where hunting is precluded due to concerns for human safety and/or precluded by federal, state, county or municipal statutes or ordinances deer population control permits may be issued under the following guidelines.

DPCP PROCEDURES/GUIDELINES

A) DPCPs are the only "non-hunting" deer permits issued for deer population/herd reduction and control.

B) These permits are issued to land-managing or landowner agencies, organizations, corporations, associations, etc. and are not to be issued to individual private landowners. Examples of land-managing/landowner organizations/agencies (hereafter referred to as "land-managers") include, but are not limited to:

county forest preserve districts
county conservation districts
county or municipal park districts
airport authorities
municipalities
golf courses/country clubs
cemeteries
homeowner associations
girl/boy scout camps (or other outdoor recreational/educational camps)
open space/open lands associations
Federal installations (military bases/facilities, Nat'l labs, etc.)
colleges, universities, or other schools
corporate and industrial developments

C) Upon initial contact by a representative of landowner, Division field staff (DWM's and PLB's) will follow procedures similar to those outlined for DRP requests by private landowners:

1) The Division "agent" should record pertinent information, and maintain this information on file, during the initial contact. Information to be recorded includes: land-manager's (agency/organization) name, address, phone number, the representative's name and phone number, size/acreage of property, description of deer-related "problem", whether the property in question is within city limits (i.e., whether it is incorporated or unincorporated property), and whether the property is statutorily (and currently, or potentially, huntable).

2) Set up an site-inspection/evaluation for the earliest, mutually agreed upon, convenient date.

3) Review, during the initial contact, later contact, or site-inspection, the steps the land-manager must follow in order to receive a DPCP. The agency, corporation or association requesting authority to remove deer must develop and submit a management proposal to the biologist before a removal permit will be granted. The minimum requirements for a DPCP proposal are:

   a. A TITLE PAGE - with the name, address and phone number of the organization submitting the proposal and date submitted.

   b. INTRODUCTION AND PROBLEM STATEMENT - which includes a brief description of the size, location and objective statement for the area to be managed.

   c. PROGRAM GOALS - which addresses the long term purpose of the management, i.e., the damage to be alleviated.

   d. PROGRAM OBJECTIVES - which provides specific descriptions of management tasks to be accomplished, i.e., desired deer densities to be achieved by what methods, etc.

   e. SITE DESCRIPTION - which includes a detailed description of the area, evaluation of deer numbers, and an outline of past deer management activities.

   f. DOCUMENTATION OF THE PROBLEM - which includes extent and distribution of native species, ornamental and/or agricultural plants that are being damaged or destroyed, along with replacement costs.

   g. PROPOSED METHODS AND PROCEDURES - which identifies the techniques to be used and the number of animals to be removed (The cost of deer removal program and carcass processing fees are the responsibility of the landowner that implements the management program and needs to be identified during the planning phase).

   h. EVALUATION OF MANAGEMENT PROGRAM - which lists the criteria that will be used to evaluate the effectiveness of the techniques in meeting the stated objectives.

   i. CHRONOLOGY OF MANAGEMENT ACTIVITIES - which includes date of the proposal, date of initiation, completion date, evaluation of results and the date the summary is to be returned to the Department.

   j. LITERATURE CITED

   k. TABLES, GRAPHS AND APPENDICES that support the proposal.

D) Deer management proposals/applications for DPCP will be required annually. Proposals must be submitted no later than 30 days prior to the proposed

starting date in order to allow ample time for review by PLB or DWB and Forest Wildlife staff, for sharpshooter certification, etc.

E) DPCP routing procedures:

1) Division field personnel (PLB or DWM) receive, and provide initial review of, the deer management proposal/DPCP application. This review process may entail returning the proposal to the land-manager for more information and/or clarification.

2) When satisfied, the PLB or DWM will forward the proposal and his/her recommendations/comments to the Forest Wildlife Program (Program Manager and both the Forest Wildlife Project in Petersburg and Urban Deer Project in Elgin). The PLB's or DWM's comments should contain approval (based on site-evaluation) of proposed bait/shooting sites and the charity(ies) to receive processed venison or field-dressed carcasses.

3) If approved, a DPCP will be issued by Forest Wildlife and copies will be distributed per instructions on the bottom of the permit with a copy (xerox) forwarded to the PLB or DWM.

4) Upon issuance of the DPCP and prior to any deer removals via sharpshooters, the Division field agent should schedule time and place for sharpshooter certification/shooting proficiency test.

F) Summaries required are:

1) Within 30 days of permit expiration, or collecting the total number of deer authorized, the land-manager must submit a complete deer removal record and carcass disposition report to the authorizing agent (along with any unused carcass tags) and the initial Division staff contact. This summary must contain the date collected, carcass tag number, sex and age, weight (not mandatory), condition index (not mandatory), presence of wounds, abnormalities, and/or parasites, and ultimate disposition for each deer. The summary should also contain either the number of deer carcasses or the amount of processed venison donated to charity.

If the permittee is issued another/successive DPCP in order to extend the time for removals or increase the number of deer to be removed (which requires additional written justification), the removal/carcass summary must be submitted within 30 days after expiration of the last permit issued. Deer removal activities are generally conducted during late fall-winter which means that no more than 2 - 90 day DPCP will be required. A DPCP can be issued for any number of deer, but like all nuisance wildlife removal permits is restricted by provisions in the Illinois Wildlife Code to be valid for no more than 90 days.

Until recently land-managers were required (by the legal interpretation of the Good Samaritan Food Donor Act and an agreement between IDOC, IDOPH and IDOA), to have deer carcasses inspected and then processed in a state-licensed facility before donation to charity. Since the Good Samaritan Food Donor Act was recently amended (effective 1 January 1993) to allow donation

of field-dressed carcasses, details on handling, transportation, processing and inspection of the carcasses will be per guidelines approved by the Departments of Conservation, Public Health and Agriculture during summer-fall 1992.

2) Within one year of DPCP expiration, or as part of a subsequent management proposal/DPCP application, the permittee must submit a summary/evaluation of the effects and/or effectiveness of the deer removal program, based upon stated program objectives and methods of evaluation.

Since white-tailed deer are considered to be State property, the Forest Wildlife Program will need to provide a summary of the number of deer removed via DPCP and donated to charities to Department of Central Management Services.

6) The role of Division personnel in deer herd reduction programs implemented by non-State land-managers is providing assistance and recommendations and overseeing/monitoring removal activities. Division personnel may provide assistance in the field (e.g., serving as an observer on aerial or spotlight counts, assisting with vegetation measurements, etc.) as possible, but this does not include making arrangements for, or conducting, aerial surveys for the land-manager. The land-manager is responsible for making all arrangements associated with proposal and summary preparation, deer removals, carcass disposition, and program evaluation and will be responsible for all costs incurred.

ADDITIONAL DPCP SPECIFICATIONS:

Only field-proven effective deer population control techniques will be approved and authorized.

Any chemical introduced by any means into free-ranging white-tailed deer for the purpose of population control must be approved by the United States Food and Drug Administration and United States Department of Agriculture for use on free-ranging and/or food producing animals. Additionally, any such drug must have been shown, through published scientific research, to have no harmful effects upon predators (including humans) and scavengers feeding upon the flesh of an animal treated with said drug.

Live capture, translocation and release of wild white-tailed deer into a free-ranging situation, as a method of population control, will not be permitted.

Live-trapping and relocation of deer will be permitted only to not-for-profit zoological institutions approved by the Department and subject to the following conditions:

1. Individual deer must be certified by a licensed veterinarian as "disease free" before translocation may occur. Specific tests required are based on current IDOC, IDOA and IDOPH guidelines;

2. Translocation and handling of deer must be conducted under the direct supervision of a professional wildlife biologist or licensed veterinarian;

3. Translocation of deer will only be allowed to zoological institutions having deer-proof enclosures to prevent escape into the wild.

4. If deer are to be moved across state lines, permits must be obtained from the natural resource agency in that state; copies must be provided to the Forest Wildlife Program;

5. All deer treated with drugs (e.g., immobilizing agents) and released into a free-ranging situation must be permanently marked in a highly visible manner; and

6. Individuals actively involved in live-trapping and translocation must carry a copy of the DPCP and carcass tags at all times when moving and handling deer. Should mortality occur during translocation, a carcass tag must be immediately affixed to the deer carcass through a rear leg.

Live-capture and translocation of free-ranging deer to privately-owned commercial game breeding facilities, as a method of controlling deer numbers, will not be permitted.

Live-capture and euthanasia will be permitted only if method of euthanasia is deemed acceptable and/or humane by the most recent American Veterinary Medical Association Panel on Humane Euthanasia and does not render carcasses unsuitable for human consumption.

Selective shooting by professional sharpshooters, tested and approved by the Department authorizing biologist, using techniques that maximize both human safety and humane treatment of animals will be permitted.

Deer collected by approved lethal means must be handled (i.e., field-dressed, cooled, processed and donated) per current IDOC, IDOA and IDOPH guidelines. Unless otherwise specified, any carcasses unsuited for human consumption must be disposed of via guidelines in the Illinois Dead Animal Disposal Act.

APPENDIX C

SHARPSHOOTER CERTIFICATION/TESTING PROCEDURES

In order to insure human safety and humane euthanasia, agencies implementing deer herd reduction/control programs using professional sharpshooters must make arrangements to have the individuals, proposed as sharpshooters, tested/certified annually by appropriate Illinois Department of Conservation (IDOC)-Division of Wildlife Resources (DWR) personnel. ALL other aspects of these programs (e.g., shooting/bait sites, meat processing facilities, carcass inspectors, charities to receive processed venison, etc.) must be approved by the IDOC-DWR authorizing biologist and the Forest Wildlife Project. The sharpshooter certification process entails essentially 3 steps, listed in detail below:

1) Application: proposed sharpshooters must complete pertinent sections (highlighted) of a standard "Marksmanship Certification" form (attached). Applicants are permitted to use the back of the form or an additional sheet of paper if they require additional space for listing experience. The latter section should be filled out as completely as possible by the applicant since experience is of great importance when evaluating the qualifications of the applicant. Experience that should be listed includes: firearm or hunter safety courses taken or taught by applicant, shooting clinics or competitions, training in use of firearms during military or police service, other marksmanship tests taken, type (and number of years) of hunting experience, etc. Applicant should indicate date, or age at the time, of completing hunter safety course, shooting competition, etc.

2) Shooting Proficiency Test: The proficiency test is designed to insure that the proposed sharpshooter can consistently, accurately, and precisely hit a target similar in size to the one he/she will see in the field. This test is administered at a 50 yard outdoor range. Applicants are allowed to use a bench rest since this simulates field conditions; unfortunately use of a public range for the test precludes shooting from an elevated position or at night with a spotlight which are also field conditions. The applicant must use the firearm and ammunition that he/she will be using in the field during the removal program. All firearms must have telescopic sights (i.e., scopes). The type of weapon to be used dictates the target size to be used for the test, number of shots to be taken, and acceptable score:

   a) For all rifles, the test target is the "National Rifle Association (NRA) official 50-yard small bore rifle target" with 5 bullseyes. On the official test target which the applicant has signed and dated prior to attaching to the target backstops/holders, the applicant will discharge one round at each bullseye for a total of 5 shots. For centerfire rifles ($\geq$.2188 cal.), the cutoff for certification is 45 out of a possible total of 50 points; the applicant must consistently place all shots within the "9-ring" which has a diameter of approximately 1.9 inches.

b) As of the winter of 1992-93, for rimfire rifles ≤.22 magnum caliber, all criteria in "a" above apply except the point cutoff for certification will be 46 out of 50 points possible.

c) For 12-20 gauge shotguns with slugs, the target used for proficiency testing is the "NRA official 50-yard slow fire pistol target" with one bullseye. The applicant will discharge 3 rounds at the single bullseye. Cutoff for certification is 27 out of a possible 30 points; the applicant must be able to group three shots within a circle of 5.5 inches in diameter.

There is no time limit on the shooting proficiency test but the applicant is allowed only one attempt to certify per winter/removal season. For example, the agency or organization implementing the deer management program must inform the IDOC of potential sharpshooters to be tested. Next the shooting proficiency test will be administered by the IDOC no greater than 45 days prior to the proposed date for initiation/ implementation of the management program. The potential sharpshooters are allowed one attempt to qualify, and if unable to do so, they cannot be retested until the following year.

Potential sharpshooters are expected to familiarize themselves with, and to follow, all rules of the firearm range used for the proficiency test. The applicant's knowledge of his/her firearm and ability to safely handle a firearm will be evaluated during the proficiency test.

3) Oral Interview: potential/proposed sharpshooters will participate in an oral interview before, at the time of, or after, the shooting proficiency test; the interview will conducted in person or via telephone. The number and types of questions are dictated by previous knowledge of, and familiarity with, the sharpshooter and his/her abilities, prior shooting and/or hunting (especially deer) experience, firearm training, previous participation in deer management programs as a sharpshooter, etc. The oral interview allows IDOC personnel to: clarify any unclear or vague information listed on Marksmanship Certification form (e.g., experience); assess the applicant's knowledge of deer anatomy, biology, and behavior; assess the individual's motivation for wanting to be a sharpshooter; evaluate the applicant's knowledge of the proposed deer management program and program priorities; develop an initial impression of the individual's attitude toward the program, cooperativeness, and commitment to insuring human safety and program success.

Additional Requirements:

1) Must be ≥ 18 years of age.

2) If a resident of Illinois, must possess a valid FOID card and hunting privileges must not have been revoked.

3) If not a resident of Illinois cannot have been convicted of any felony or Game Code violations.

NOTE: Although a sharpshooter candidate may initially be certified/approved by the IDOC after fulfilling the above requirements, tests, and interviews, his/her certification as a sharpshooter is tentative and is continually evaluated (by the IDOC and the agency implementing the deer management program) during the course of the program. Any disregard for human safety, incidence of a high deer wounding rate, uncooperativeness or poor attitude, and/or other problems will result in the immediate revocation of the individual's certification as a sharpshooter.

SHARPSHOOTER APPLICATION

Full Name:_____ Social Security #:_____

Address:_____ Home Phone #:_____

_____ Work Phone #:_____

Firearms Owner's Identification #:_____
FOID Expiration Date:_____

Specific Experience with Firearms (e.g., list types of firearms, number of years of experience, dates of any shooting competitions participated in, firearm or hunter safety courses passed or taught, training while in military or law enforcement agency, etc.):

Weapon and ammunition to be used for shooting proficiency test (**MUST** be the same as to be used in the field):_____

_____

Signature of Applicant:_____ Date:_____

TO BE FILLED OUT BY IDOC WITNESS

Date of shooting proficiency test:_____ Score:_____
Passed Failed

Applicant safely handled/used firearm? YES NO If "NO", explain:

Applicant followed all range rules? YES NO If "NO", explain:

Applicant's knowledge of deer behavior? GOOD FAIR POOR UNKNOWN

Impression of applicant's commitment to program (e.g., attitude, cooperativeness, patience, willingness to make required effort and take all precautions to insure human safety, etc.):

Witnessed by (IDOC):_____ Date:_____

APPENDIX M

State of Illinois Good Samaritan Food Donor Act.

ACT 50. GOOD SAMARITAN FOOD DONOR ACT
CIVIL IMMUNITIES
745 ILCS 50/1-4

Section
50/1. Short title.
50/2. Definitions.
50/2.01. Canned food.
50/2.02. Charitable organization.
50/2.03. Farm product.
50/2.04. Commercially processed.
50/2.05. Commercial processor.
50/2.06. Hermetically sealed container.
50/2.07. Not for profit corporation.
50/2.08. Perishable food.
50/2.09. Gleaner.
50/2.10. Prepared food.
50/2.11. Food producer.
50/3. Immunity from liability—Donors.
50/4. Immunity from liability—Receipt of food for distribution—Not for profit corporations or charitable organizations.

50/1. Short title

§ 1. This Act shall be known and may be cited as the "Good Samaritan Food Donor Act".

P.A. 82-580, § 1, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2001.

Title of Act:

An Act to limit liability of persons and organizations in connection with the donation of food for free distribution to needy persons and in connection with the distribution of such food. P.A. 82-580, approved and eff. Sept. 24, 1981.

50/2. Definitions

§ 2. For the purposes of this Act, unless the context otherwise requires, the terms defined in this Act have the meanings ascribed to them herein.

P.A. 82-580, § 2, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.

50/2.01. Canned food

§ 2.01. "Canned food" means food that is commercially processed in hermetically sealed containers.

P.A. 82-580, § 2.01, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.01.

50/2.02. Charitable organization

§ 2.02. "Charitable organization" is defined as set forth in Section 1 of "An Act to regulate solicitation and collection of funds for charitable purposes, providing for violations thereof, and making an appropriation therefor", approved July 26, 1963, as amended.[1]

P.A. 82-580, § 2.02, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.02.

[1] 225 ILCS 460/1.

50/2.03. Farm product

§ 2.03. "Farm product" means any agricultural, dairy or horticultural product or any product designed or intended for human consumption or prepared principally from agricultural, dairy or horticultural products.

P.A. 82-580, § 2.03, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.03.

50/2.04. Commercially processed

§ 2.04. "Commercially processed" means processed in accordance with criteria of current good manufacturing practice to apply to facilities, methods, practices, and controls used by the commercial processor in the manufacture, processing or packing of low-acid foods in hermetically sealed containers in a manner adequate to protect the public health.

P.A. 82-580, § 2.04, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.04.

50/2.05. Commercial processor

§ 2.05. "Commercial processor" includes any person engaged in commercial, custom, or institutional (church, school, penal or other organizations) processing of food, including pet food.

P.A. 82-580, § 2.05, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.05.

50/2.06. Hermetically sealed container

§ 2.06. "Hermetically sealed container" means a container that is designed and intended to be secure against the entry of microorganisms and thereby to maintain the commercial sterility of its content after processing.

P.A. 82-580, § 2.06, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.06.

50/2.07. Not for profit corporation

§ 2.07. "Not for profit corporation" is defined as set forth in the "General Not for Profit Corporation Act",[1] except that the term does not include organizations which sell or offer to sell such donated items of food.

P.A. 82-580, § 2.07, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.07.

[1] Former Ill.Rev.Stat. Chapter 32, ¶ 163a et seq. (repealed).

50/2.08. Perishable food

§ 2.08. "Perishable food" means any food having a significant risk of spoilage, loss of value, or loss of palatability within 90 days of the date of packaging.

P.A. 82-580, § 2.08, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.08.

50/2.09. Gleaner

§ 2.09. "Gleaner" means a person that harvests for free distribution an agricultural crop that has been donated by the owners.

P.A. 82-580, § 2.09, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.09.

50/2.10. Prepared food

§ 2.10. "Prepared food" means any food prepared, designed or intended for human consumption including, without limitation, those foods prepared principally from agricultural, dairy or horticultural produce or with meat, fish, or poultry.

P.A. 82-580, § 2.10, added by P.A. 84-134, § 1, eff. Jan. 1, 1986.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.10.

50/2.11. Food producer

§ 2.11. "Food producer" includes, but is not limited to, restaurants, bakeries, cafeterias, caterers and delicatessens.

P.A. 82-580, § 2.11, added by P.A. 84-134, § 1, eff. Jan. 1, 1986.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2002.11.

50/3. Immunity from liability—Donors

§ 3. (a) Except as provided in subsection (b), no farmer, food producer, processor, distributor, wholesaler, retailer, gleaner of food, or any other person (if that other person donates food that has been inspected by either State or federal authority and has not been altered after that inspection), who in good faith donates perishable, canned or farm food items or prepared food to a not for profit corporation or charitable organization for distribution to needy or poor persons shall be liable in any civil action based on the theory of warranty, negligence, or strict liability in tort, for damages incurred resulting from any illness or disease contracted by the ultimate users or recipients of the food due to the nature, age, condition, or packaging of the food.

(b) The immunity provided in subsection (a) shall not apply where the following is shown:

(1) that the illness or disease resulted from the willful, wanton, or reckless acts of the donor; or

(2) that the donor had actual or constructive knowledge that the food was tainted, contaminated, or harmful to the health or well-being of the recipient of such donated food; or

(3) where the food was in the form of canned goods that the containers were rusted, leaky, swollen, or otherwise defective to the extent that they could not be sold to members of the general public; provided, however, that the fact that the cans were simply dented does not, itself, constitute such a defect so as to preclude the grant of immunity provided by subsection (a).

P.A. 82-580, § 3, eff. Sept. 24, 1981. Amended by P.A. 84-134, § 1, eff. Jan. 1, 1986; P.A. 88-704, § 3, eff. Jan. 1, 1995.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2003.

50/4. Immunity from liability—Receipt of food for distribution—Not for profit corporations or charitable organizations

§ 4. (a) Except as provided in subsection (b), a not for profit corporation or charitable organization which in good faith receives food for free distribution and which reasonably inspects the food at the time of donation and finds the food apparently fit for human consumption shall not be liable in any civil action based on the theory of warranty, negligence, or strict liability in tort, for damages incurred resulting from any illness or disease contracted by the ultimate users or recipients of the food due to the condition of the food.

(b) The immunity provided in subsection (a) shall not apply where the following is shown:

(1) that the illness or disease resulted from the willful, wanton, or reckless acts of the not for profit corporation or charitable organization; or

(2) that the corporation or organization had actual or constructive knowledge that the food was tainted, contaminated, or harmful to the health or well-being of the recipient of such donated food; or

(3) where the food was in the form of canned goods that the containers were rusted, leaky, swollen, or otherwise defective to the extent that they could not be sold to the members of the general public; provided, however, that the fact that the cans were simply dented do not, in itself, constitute such a defect so as to preclude the grant of immunity provided by subsection (a).

P.A. 82-580, § 4, eff. Sept. 24, 1981.

Formerly Ill.Rev.Stat.1991, ch. 56 ½, ¶ 2004.

APPENDIX N

Memorandum of Understanding signed by the Illinois Departments of Conservation, Corrections, and Public Health.

Memorandum of Understanding

Donation of Wild Game for Human Consumption

The Illinois Departments of Public Health, Conservation and Corrections set forth this agreement to provide guidance for donation of wild game for human consumption to charitable organizations. Wild game is defined as any species identified as game birds or mammals in Section 5/2.2 of the Illinois Wildlife Code (520 ILCS 5/2.2). This agreement is among the above mentioned Departments and has no standing with regard to the use of protected wild game taken by hunters for their own use.

Justification:

A recent amendment (P.A. 87-1036, effective January 1, 1993) to the Good Samaritan Food Donor Act (745 ILCS 50/1 et seq.) allows the donation of wild game to charitable or not-for-profit organizations without liability if done in good faith. The protection of public health, as well as the utilization of safe and wholesome wild game, are the overriding principles governing the use of these natural resources for human consumption. Within this framework, the intent of this agreement is to provide criteria for wild game donors and charitable organizations to maximize the use of this natural resource yet ensure wholesomeness and safety.

General Principles:

1. Wild game, when properly assessed, cleaned, stored and prepared, is a wholesome and safe source of food for human consumption. Ill or diseased animals and animals from unknown sources should be condemned as unfit for human consumption and disposed of properly. See Attachment A for guidance in evaluating a carcass.
2. Only wild game collected by legal means, (i.e., hunter harvest or under authority of a special Illinois Department of Conservation removal permit), may be donated to charities. In the case of white-tailed deer, each carcass will be tagged while being field dressed and the tag will remain attached until the carcass is processed or donated.

3. Wild game which has been field dressed, transported and stored according to good sanitation practices will help ensure a wholesome and safe final product. See Attachment B for guidelines in the care and handling of wild game before processing and packaging.

4. Wild game carcasses must be assessed or inspected, prior to donation, by a person familiar with the diseases and conditions of the species to be donated.

a) All wild game meats being processed prior to donation must be processed and packaged in establishments that are State or Federally licensed by Agriculture or licensed by Public Health (State or Local). The processor must be informed of the intended use of the meat and must agree to carefully assess each carcass. Any carcasses, or portions thereof, that are questionable must be disposed of properly.

b) Wild game meats that are to be donated as field-dressed carcasses resulting from nuisances or population control permits must be inspected during field-dressing by a licensed veterinarian, professional biologist or other person familiar with the conditions, parasites, and diseases of the species. The latter is subject to the approval of all three aforementioned departments.

Guidelines:

The following potential sources of wild game may be considered for donation to charitable or not-for-profit organizations, but only if the criteria in Attachments A and B are met.

1. Population Control Programs - All white-tailed deer collected by land management agencies (e.g., county forest preserves districts, arboretae/botanic gardens, park districts, municipalities, etc.) under authority of an Illinois Department of Conservation (IDOC) Deer Population Control Permit must be donated if suitable. Animals must receive minimal processing and be assessed (as to suitability for donation), while being field-dressed, as quickly as possible after collection.

2. Removal Permits - Individual landowners collecting "nuisance" animals under authority of an IDOC removal permit (i.e., Deer Removal Permit or Nuisance Animal Permit) may donate the meat, provided the criteria in Attachments A and B are met.

3. Individual Confiscations - Wild game which is confiscated from individuals in the field may be used for donation to charitable and not-for-profit organizations provided processing is done in a licensed facility. Proof of the meat having been processed and stored by an inspected licensed establishment is necessary to allow the wild game to be utilized for human consumption.

4. Undercover Purchases or Commercial Seizures - Generally, wild game resulting from this type of confiscation is not acceptable for donation. Since the cleaning and storage procedures cannot be established with any degree of certainty, the products must be considered unsuitable for these purposes. Individual situations where Conservation Police Officers, acting in an undercover capacity, have first hand knowledge of cleaning and storage procedures can be evaluated on an individual case-by-case basis.

5. Unclaimed Wild Game Left at Processing Facilities - Wild game left unclaimed at the processing plant which has been processed, packaged, and stored by an inspected/licensed establishment may be donated provided the hunter receives prior notification.

6. Collection By Hunting Organizations - Wild game carcasses, collected by individuals but subsequently stockpiled by a hunting organization, may be donated to charitable and not-for-profit organizations if criteria in Attachment A and B are met. In addition, the carcasses while being stockpiled must be eviscerated, skinned as soon as possible, frozen, stored no longer than 2 weeks and delivered to a licensed establishment for processing and packaging in the frozen state.

7. Road Killed Wild Game - Wild game killed as a result of a collision with a motor vehicle

may not be donated for human consumption based on the inability to determine time of death.

8. Other Sources and Situations - Wild game originating from other sources or in situations not covered by the Guidelines or General Principles must be evaluated on an individual basis. The Illinois Departments of Public Health will assist with any special evaluation.

Review:

This agreement is subject to review and/or modification at the request of any of the signatory agencies at any time.

Effective Date:

The effective date of this Memorandum of Understanding is January 1, 1995.

John R. Lumpkin, M.D.
Director, Illinois Department of Public Health
December 16, 1994
(date)

Brent Manning
Director, Illinois Department of Conservation
27 Dec 94
(date)

Director, Illinois Department of Corrections
2/24/95
(date)

Attachment A

Evaluation Criteria for Rejection of Wild Game Carcasses

Easily observable conditions or situations which would make wild game unfit for human consumption are listed below. Whenever an animal exhibits unusual physical behavior or exhibits any of the following disease indicators or chemical treatments, the carcass should not be considered healthy or wholesome. All wild game carcasses that are determined to be unsuitable for human (or captive animal) consumption should be disposed of via provisions in the Illinois Dead Animal Disposal Act (225 ILCS 610).

EMACIATED ANIMALS - Wild game which is emaciated, dehydrated or generally in an unhealthy state should be rejected for human consumption.

CHEMICAL EUTHANASIA - Animals euthanized by chemical means must be disposed of via provisions in the Illinois Dead Animal Disposal Act.

PNEUMONIA - Animals with pneumonia should be rejected where the lungs, instead of being a normal light pink color and light and spongy feeling, will be darkly discolored (either dark red or purple) and will feel heavy and water-logged. The lymph nodes in the chest will be greatly enlarged and probably reddened in color.

SWOLLEN LYMPH NODES THROUGHOUT THE BODY - Lymph nodes become enlarged when there is infection in the part of the body where the lymph node is located. Enlarged lymph nodes throughout the body indicate septicemia or infection througnout the body and mean the carcass should be discarded.

TUMORS - Although some tumors are not cancerous, it is not possible to tell cancerous ones from noncancerous ones without laboratory examination. Animals with any tumors, other than skin fibromas commonly found on deer, should be rejected for human consumption.

ABSCESSES - A single abscess, for example in the liver, means that organ or body part where the abscess was found should be discarded. However, multiple abscesses found in different parts of the body indicate septicemia. Abscess-forming bacteria have been carried through the body in the blood stream and the entire carcass should be discarded.

PERITONITIS OR PLEURITIS - The membranes lining the body cavity and the chest cavity are normally very thin, almost transparent membranes. The membranes of animals with peritonitis or pleuritis will be thickened, discolored a dark red or purple; will usually be oozing fluid; and have areas with moist, dark, red growths appearing on the surface of the membranes, all indications that the carcass should be rejected.

VESICULAR DISEASE - Water blisters or eroded areas where water blisters have broken, located around the mouth area (lip, tongue, muzzle, nostrils) or around the hoof area (in the cleft of the cloven hoof or on the band where the hoof and the skin meet) mean the carcass should be discarded.

INFECTED WOUNDS - Other injuries (not the injury which killed the animal), inflicted at an earlier date, which are now infected mean it should be rejected. Infection is indicated by swelling of the wounded area, by a bad odor to the wound or by the discharging of pus or other fluids.

Attachment B

Handling of Wild Game Carcasses Before Processing and Packaging

The following guidelines are to be used for the care and handling of wild game carcasses from the time the animal is killed until it is processed or donated.

FIELD DRESSING CARCASSES

1. Eviscerate and field dress the carcass as soon as possible after the death of the animal.
2. Perforation of the intestinal or digestive tract is cause for condemnation due to the potential for fecal contamination of the meat.
3. Once the carcass has been eviscerated and cleaned, allow air to circulate in the body cavity.
4. Cool the carcass to ≤ 40°F as quickly as possible. If the ambient air temperature is above 40°F, pack the cavity with ice and refrigerate as soon as possible.
5. Keep the carcass cold, below 40°F or frozen, until it is processed or cooked.

EVALUATION OF CARCASSES

1. Inspect carcass and viscera for gross abnormalities. See Attachment A - Evaluation Criteria for Rejection of Wild Game Carcasses.
2. Only healthy animals which are handled in a safe and sanitary manner may be donated as wholesome food products.

TRANSPORTATION OF FIELD DRESSED CARCASSES

1. Do not skin the animal in the field. The skin acts as a natural protection of the meat as it is transported.
2. When moving the carcass in the field, place the carcass on its back and keep the exposed cavity clean.
3. At camp, home or meat processing plant, rinse out the cavity with clean, potable water.

4. Keep the carcass protected from contamination and dehydration while transporting on a clean, protected surface.
5. Take precautions to avoid contamination by chemicals such as gasoline, oil, farm chemicals, or road splash or spray.

HOLDING TIMES AND TEMPERATURES

1. Carcasses may be hung, prior to delivery to the processing facility or charity, for no longer than 72 hours at 34 - 40°F. The least possible hanging time is recommended to prevent potential contamination or temperature abuse.
2. It is important to remember that in an uninsulated building, even with an outside ambient air temperature of 40°F or less, the sun can cause the interior temperatures of the building to rise to 50-60°F. This can result in the microbiological deterioration (spoilage) of the meat and the growth of foodborne illness bacteria. Such organisms may contaminate the carcass due to broken intestines or careless field dressing.
3. Aged wild game carcasses are not acceptable.

PROCESSING THE CARCASS

1. Any wild game, collected by individual hunters, trappers, landowners, or sportsmens organization must be processed in a state or federally licensed and inspected facility prior to distribution for human consumption. Agencies or organizations, conducting population control programs under authority of an IDOC permit, may apply (in writing) to the three aforementioned departments for permission to donate field-dressed wild game carcasses directly to charities with processing capabilities. Such application must be accompanied by written verification from the recipient charity(ies) that the latter is willing to accept field-dressed carcasses. Direct donation of field-dressed carcasses must follow General Principle #4 for persons who perform inspections.

2 When wild game carcasses are transported with amenable product or other food products, they will be bagged and held in a tightly covered rigid container at temperatures less than 40°F.

3. If the carcass is processed "as a service," the packaged meat must be marked with the owner's name and marked "not for sale."

APPENDIX O

Correspondence with surrounding State wildlife agencies concerning the relocation of white-tailed deer (Odocoileus virginianus) and European fallow deer (Dama dama) from the State of Illinois to their state.

United States Department of Agriculture

Animal and Plant Health Inspection Service

Animal Damage Control

2869 Via Verde Dr.
Springfield, IL 62703
Phone (217)492-4308
FAX (217)492-4777

August 5, 1993

Mr. Ed Langenau
Big Game Specialist
Michigan Dept of Natural Resources
5th Floor Mason Building
P.O. Box 30028
Lansing, MI 48909

Dear Mr. Langenau:

The Animal Damage Control program is part of the U.S. Dept. of Agriculture and has the responsibility of addressing concerns where wildlife are causing damage to property or pose a threat to human health and safety. In Illinois, we are currently assisting the Chicago O'Hare International Airport in dealing with safety hazards to aircraft posed by deer on the airport grounds. Recently, this concern became very evident when a DC-10 while taking off struck a deer. The potential of disaster is apparent and very significant. The airport has a population slightly less that 100 white-tailed deer and currently no known fallow deer, but they are known to be present in the area. In our Environmental Assessment, we are looking at several means of controlling this situation, including both lethal and non-lethal methods. One particular non-lethal method we are currently exploring is the possibility of translocation of the deer off the airport. Current IL Dept. of Conservation policies addressing the relocation of wildlife prohibits this except to zoological societies with complete enclosures. They will allow the export to other states providing all necessary permits from the receiving state are received.

In order to completely explore all possible alternatives, we will consider the translocation of the deer outside Illinois if the possibility exists. Please provide me your current policies regarding the translocation/importation of wildlife in your state. We are primarily concerned with white-tailed and fallow deer, but any general policies or guidelines would be appreciated.

As this is a direct human health and safety concern, I would greatly appreciate a response as quickly as possible. A copy of your policies or written statement may be mailed or faxed to the address or number listed above. Thank you for your attention to this matter. Please call me if you have any questions.

Sincerely,

Kirk E. Gustad
District Supervisor

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

Stevens T. Mason Building, P.O. Box 30028, Lansing, MI 48909

ROLAND HARMES, Director

AUG 30 1993

August 24, 1993

Mr. Kirk E. Gustad, District Supervisor
United States Department of Agriculture
Animal Damage Control
2869 Via Verde Drive
Springfield, Illinois 62703-4325

Dear Mr. Gustad:

Thank you for your inquiry about the State of Michigan's policy on relocation of deer from other states.

Michigan does have the legal authority to release deer on public land that have been live-trapped from urban or suburban sites within Michigan. This may be authorized by a Department of Natural Resources district conservation officer through issuance of a nuisance animal damage control permit. In general, this procedure is rare and reserved for special situations. It would be against policy to release deer, being a public resource, on private land. It would also be against policy to issue a permit to release deer into the wild that were live-trapped in a state other than Michigan.

Deer that were live-trapped from airports in Illinois could be given or sold to Michigan game breeders for private use. The procedure for white-tailed deer or fallow deer would be the same. The deer would need to be given a tuberculosis test in Illinois. That would involve holding live-trapped deer at some facility for a month or so while test results were completed. The certificate would then be required to indicate that each deer was tuberculosis-free. The deer could then be imported to a licensed game breeder in Michigan. After that, the deer would have to be isolated for 90 to 120 days, during which time they would be tested for tuberculosis again. Then, the deer could be slaughtered, hunted, sold to other game breeders, or used however the private owner sees fit.

If you desire more information about the importation of game farm deer, please contact Dr. Larry Sullivan, Michigan Department of Agriculture, P. O. Box 30017, Lansing, Michigan 48909. If you desire information on licensed game breeders in Michigan that might be interested in obtaining deer from Illinois sources, please contact Mr. Chris Chose, 6861 160th Avenue, Stanwood, Michigan 49346. Mr. Chose is the Michigan Branch Chairman of the North American Deer Farmers Association.

Thank you again for your inquiry.

Sincerely,

Ed Langenau

Ed Langenau
Big Game Specialist
Wildlife Division
(517) 373-1263

EEL:ack

United States Department of Agriculture

Animal and Plant Health Inspection Service

Animal Damage Control

2869 Via Verde Dr.
Springfield, IL 62703
Phone (217)492-4308
FAX (217)492-4777

August 5, 1993

Mr. Ron Glover
Chief of Protection Division
MO Dept. of Conservation
P.O. Box 180
Jefferson City, MO 65102

Dear Mr. Glover:

The Animal Damage Control program is part of the U.S. Dept. of Agriculture and has the responsibility of addressing concerns where wildlife are causing damage to property or pose a threat to human health and safety. In Illinois, we are currently assisting the Chicago O'Hare International Airport in dealing with safety hazards to aircraft posed by deer on the airport grounds. Recently, this concern became very evident when a DC-10 while taking off struck a deer. The potential of disaster is apparent and very significant. The airport has a population slightly less that 100 white-tailed deer and currently no known fallow deer, but they are known to be present in the area. In our Environmental Assessment, we are looking at several means of controlling this situation, including both lethal and non-lethal methods. One particular non-lethal method we are currently exploring is the possibility of translocation of the deer off the airport. Current IL Dept. of Conservation policies addressing the relocation of wildlife prohibits this except to zoological societies with complete enclosures. They will allow the export to other states providing all necessary permits from the receiving state are received.

In order to completely explore all possible alternatives, we will consider the translocation of the deer outside Illinois if the possibility exists. Please provide me your current policies regarding the translocation/importation of wildlife in your state. We are primarily concerned with white-tailed and fallow deer, but any general policies or guidelines would be appreciated.

As this is a direct human health and safety concern, I would greatly appreciate a response as quickly as possible. A copy of your policies or written statement may be mailed or faxed to the address or number listed above. Thank you for your attention to this matter. Please call me if you have any questions.

Sincerely,

Kirk E. Gustad
District Supervisor

United States Department of Agriculture

Animal and Plant Health Inspection Service

Animal Damage Control

2869 Via Verde Dr.
Springfield, IL 62703
Phone (217)492-4308
FAX (217)492-4777

August 5, 1993

Dr. John Hunt
State Veterinarian
MO Dept. of Conservation
Animal Health Division
P.O. Box 630
Jefferson City, MO 65102

Dear Dr. Hunt:

The Animal Damage Control program is part of the U.S. Dept. of Agriculture and has the responsibility of addressing concerns where wildlife are causing damage to property or pose a threat to human health and safety. In Illinois, we are currently assisting the Chicago O'Hare International Airport in dealing with safety hazards to aircraft posed by deer on the airport grounds. Recently, this concern became very evident when a DC-10 while taking off struck a deer. The potential of disaster is apparent and very significant. The airport has a population slightly less that 100 white-tailed deer and currently no known fallow deer, but they are known to be present in the area. In our Environmental Assessment, we are looking at several means of controlling this situation, including both lethal and non-lethal methods. One particular non-lethal method we are currently exploring is the possibility of translocation of the deer off the airport. Current IL Dept. of Conservation policies addressing the relocation of wildlife prohibits this except to zoological societies with complete enclosures. They will allow the export to other states providing all necessary permits from the receiving state are received.

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As this is a direct human health and safety concern, I would greatly appreciate a response as quickly as possible. A copy of your policies or written statement may be mailed or faxed to the address or number listed above. Thank you for your attention to this matter. Please call me if you have any questions.

Sincerely,

Kirk E. Gustad
District Supervisor

AUG 13 1993

MISSOURI DEPARTMENT OF CONSERVATION

MAILING ADDRESS
P.O. Box 180
Jefferson City, Missouri 65102-0180

STREET LOCATION
2901 West Truman Boulevard
Jefferson City, Missouri

Telephone: 314/751-4115
Missouri Relay Center 1-800-735-2966 (TDD)
JERRY J. PRESLEY, Director

August 11, 1993

Mr. Kirk E. Gustad
District Supervisor
USDA - APHIS
2869 Via Verde Dr.
Springfield, IL 62703

Dear Mr. Gustad:

Your letter to the Department of Conservation requesting our interest in receiving relocated white-tailed or fallow deer from Illinois has been forwarded to me and I am pleased to reply. We fully understand the problems associated with high populations of white-tailed deer. In fact, we will make you the same offer if you are interested in relocating deer into Illinois.

Currently, it is our policy not to trap and relocate deer in Missouri. We attempt to control the statewide deer population by regulating the annual doe harvest. The current system has served us very well through the years but sometimes high deer populations develop because of locally unique situations. When extreme situations develop Rule 3CSR10-4.130 Owner May Protect Property (copy enclosed) provides for property owners to capture or kill the offending wildlife within certain limitations. Specifically, deer may be killed only with the permission of the Conservation Agent and by the methods he/she prescribes. This method of population control works reasonably well because it deals specifically with the problem.

Thank you for our interest in our programs, Mr. Gustad. If I can provide additional information please let me know.

Sincerely,

Gene Kelly

Gene Kelly
Wildlife Programs Supervisor

GK:ga

Enc.

STATE OF IOWA

SEP 15 1993

TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
LARRY J. WILSON, DIRECTOR

September 7, 1993

Mr. Kirk E. Gustad
USDA/APHIS/Animal Damage Control
2800 Via Verde Drive
Springfield, Illinois 62703

Dear Mr. Gustad:

The Iowa Department of Natural Resources does not have a single all-encompassing policy dealing with the importation or translocation of white-tailed deer. Our policy can best be summarized as follows (taken from several individual statutes or provisions of the Iowa Code):

In order to bring white-tailed deer into the state, a citizen would have to purchase it from a licensed game breeder. Under this provision, the citizen could have no more than two white-tailed deer and they would have to be held permanently in confinement. A licensed shooting preserve may import deer from outside of Iowa, but those deer have to be accompanied by a veterinarian's health certificate certifying that they are disease free. It is the responsibility of the seller to provide that information before the deer are actually imported. A shooting preserve operator could then release the certified animals into the area for which the shooting preserve is licensed for purposes of hunting. The procedures for doing so are spelled out in our shooting preserve regulations. If you would like more information on how this might be accomplished, please contact Steve Dermand in our Des Moines office (515/281-4515).

There are no other provisions by which white-tailed deer could be translocated or imported into Iowa. At this time, the Department of Natural Resources is not interested in receiving deer from out-of-state or in translocating deer within the state because our deer herd is at relatively high levels everywhere.

Sincerely,

TERRY W. LITTLE
WILDLIFE RESEARCH SUPERVISOR

(TL250b.sp)

WALLACE STATE OFFICE BUILDING · DES MOINES, IOWA 50319 · TELEPHONE 515-281-5145 · TDD 515-242-5967 · FAX 515-281-6805

USDA APHIS

CONVERSATION RECORD

TIME: 2:30 pm

DATE: 8/13/93

TYPE: [ ] VISIT [ ] CONFERENCE [X] TELEPHONE [X] Incoming [ ] Outgoing

TELEPHONE NUMBER:

[ ] Routing [ ] CC

Name	Initials

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU: Bill Mitten

ORGANIZATION (Office, Agency, Department, etc.): Wisconsin Dept. of Nat. Resources

SUBJECT: Translocation of deer (white-tailed and/or fallow) into Wisconsin.

SUMMARY

The Wisconsin DNR will not allow the translocation of any deer into the State that will be released into the wild. They will, on the other hand, permit deer to be released at certified game/hunting farms. At these locations, the operators may, at their discression, kill, butcher, hunt or sell the deer to another game farm. The WI DNR has conducted deer translocation projects in the past where the deer were relocated to game farms. Bill recommended that we not consider this as they had experienced high mortalities when they translocated deer.

ACTION REQUIRED

none

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Kirk E. Gustad, District Supervisor	Kirk E. Gustad	8/13/93

ACTION TAKEN

none

SIGNATURE	TITLE	DATE
Kirk E. Gustad	District Supervisor	8/13/93

APHIS FORM 44
(MAY 92)

APPENDIX P

Correspondence with zoological institutions concerning the relocation of white-tailed deer (Odocoileus virginianus) and European fallow deer (Dama dama) from the State of Illinois to their institution.

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Dr. Dennis A. Merritt
Assistant Director
Lincoln Park Zoo
2200 N. Cannon Drive
Chicago, IL 60614

Dear Dr. Merritt;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

It should be noted that wild deer recipients must follow their state regulations concerning importation of white-tailed deer and exotic cervidae stock. This could include, but is not limited to, tuberculosis and brucellosis testing and certification of escape proof fencing.

USDA-ADC is surveying potential institutions that have appropriate facilities, and are willing, to receive these deer. If your organization would be interested in receiving relocated wild deer, please respond as soon as possible with quantities desired. A negative response would also be appreciated.

Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

LINCOLN PARK ZOOLOGICAL GARDENS
2200 North Cannon Drive Chicago Illinois 60614-3895 312 294 4662 FAX 312 935 2249

July 27, 1994

Andrew J. Montoney
Wildlife Biologist
Argonne National Laboratory
9700 S. Cass Avenue
Building 202, Room E-118
Argonne, IL 60439-4833

Dear Dr. Montoney

Thank you for your informative letter and inquiry dated 22 July 94, received here today. We appreciate being contacted and informed about the USDA deer management scheme.

At this time, we are unable to accept animals that may be part of the live-capture and relocation program. We currently maintain a small non-reproductive group of white-tail deer, animals that came to us as part of our cooperative rehabilitation work at the city, county and state level.

I am unaware of other facilities in our region that may have an interest in assisting the USDA-ADC in your relocation efforts.

I remain on behalf of the Zoological Gardens,

Sincerely,

Dennis A. Meritt, Jr., Ph.D.
Director of Collections

DAM/ls

cc: Kevin Bell
Dr. Robyn Barbiers
K. Gustard, USDA/APHIS/ADC

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Dr. Bruce Brewer
Chairman Animal Collection
Brookfield Zoo
Brookfield, IL 60513

Dear Dr. Brewer;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

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USDA-ADC is surveying potential institutions that have appropriate facilities, and are willing, to receive these deer. If your organization would be interested in receiving relocated wild deer, please respond as soon as possible with quantities desired. A negative response would also be appreciated.

Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

Brookfield Zoo Chicago Zoological Society

09 August 1994

Andrew J. Montoney
Wildlife Biologist
Argonne National Laboratory
9700 So. Cass Avenue
Bldg. 202, Rm. E-118
Argonne, IL 60439-9934

Dear Mr. Montoney:

Brookfield Zoo has no interest in receiving any white-tailed deer which may be captured in an effort to reduce the total wild populations.

Though we may expand our native animal exhibits in the future, we do not currently have appropriate facilities nor interest in maintaining white-tails at this time.

We are very much aware of the skyrocketing deer population. Though I know of no other institution who may have an interest in deer, I will pass their names on to you if the case presents itself.

Sincerely,

Ann Petric

Ann Petric
Mammal Curator

AP:dds

Brookfield, Illinois 60513
708.485.0263 312.242.2630

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. Jerry Jepson
Curator of Animals
Wildlife Prairie Park
3826 N. Taylor Rd.
RR#2, Box 50
Peoria, IL 61615-9617

Dear Mr. Carter;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

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USDA-ADC is surveying potential institutions that have appropriate facilities, and are willing, to receive these deer. If your organization would be interested in receiving relocated wild deer, please respond as soon as possible with quantities desired. A negative response would also be appreciated.

Sincerely,

Andrew J. Montoney

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

USDA APHIS

CONVERSATION RECORD

TIME: 9:17am

DATE: 07-26-94

TYPE: [ ] VISIT [ ] CONFERENCE [X] TELEPHONE [X] Incoming [ ] Outgoing

TELEPHONE NUMBER: 309-676-0998

[ ] Routine [ ] CC

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU: Mr. Jerry Jepson

ORGANIZATION (Office, Agency, Department, etc.): Curator of Animals, Wildlife Prairie Park

SUBJECT: Response to inquiry about accepting relocated white-tailed and European fallow deer.

SUMMARY

Mr. Jepson informed the USDA/ADC that the Wildlife Prairie Park located in Peoria, IL, is not interested in receiving relocated white-tailed or European fallow deer. The park has all of the deer they can support and the surrounding habitat can not handle any more. He informed the USDA/ADC that deer/vehicle collisions have increased in the adjacent area next to the park. The Wildlife Prairie Park receives most of their deer from local rehabilitation centers.

ACTION REQUIRED

None

NAME OF PERSON DOCUMENTING CONVERSATION: Andrew J. Montoney

SIGNATURE: Andrew J. Montoney

DATE: 7-26-94

ACTION TAKEN

SIGNATURE

TITLE

DATE

APHIS FORM 44
(MAY 92)

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. Paul Clusen
Superintendent
City of Aurora, Park Department
44 E. Downer Place
Aurora, IL 60507-2067

Dear Mr. Clusen;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

It should be noted that wild deer recipients must follow their state regulations concerning importation of white-tailed deer and exotic cervidae stock. This could include, but is not limited to, tuberculosis and brucellosis testing and certification of escape proof fencing.

USDA-ADC is surveying potential institutions that have appropriate facilities, and are willing, to receive these deer. If your organization would be interested in receiving relocated wild deer, please respond as soon as possible with quantities desired. A negative response would also be appreciated.

Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

City of Aurora

Park Department • 44 E. Downer Place • Aurora, Illinois 60507-2067 • (708) 898-7228

Paul Clusen
Superintendent

July 26, 1994

Mr. Andrew J. Montoney
Wildlife Biologist
USDA APHIS

Dear Mr. Montoney;

Please be advised that the City of Aurora is not presently able to accomodate any more deer at this time.

If we can be of any assistance in the future, please advise us.

Sincerely,

Paul Clusen
Superintendent
Park Department

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. Mike Blakley
Curator
Kansas City Zoological Gardens
6700 Zoo Dr.
Kansas City, MO 64132

Dear Mr. Blakley;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

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Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

CITY OF FOUNTAINS
HEART OF THE NATION
KANSAS CITY
MISSOURI

Board of Parks and Recreation Commissioners
Emanuel Cleaver II, Mayor
Ollie W. Gates, President
Sheila Kemper Dietrich, Commissioner
Anne Garney, Commissioner
Terry Dopson, Director
Kansas City Zoological Gardens
6700 Zoo Drive
Kansas City, Missouri 64132-4200
Dr. Mark K. Wourms, Zoo Director
(816) 871-5700
Fax: (816) 822-8903

10 August 1994

Andrew J. Montoney
U.S. Department of Agriculture
Animal Damage Control
Argonne National Laboratory
9700 S. Cass Avenue
Building 202, Room E-118
Argonne, IL 60439-4833

Dear Mr. Montoney:

At this time, we are unable to receive and facilitate any White-tailed Deer or Exotic Cervidae Stock.

Sincerely,

Susan Loomis
Animal Records Keeper

United States Department of Agriculture
Animal and Plant Health Inspection Service
ANIMAL DAMAGE CONTROL
Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Ms. Debbie Olsen
Curator
Indianapolis Zoo
1200 West Washington Street
Indianapolis, IN 46222

Dear Ms. Olsen;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

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USDA-ADC is surveying potential institutions that have appropriate facilities, and are willing, to receive these deer. If your organization would be interested in receiving relocated wild deer, please respond as soon as possible with quantities desired. A negative response would also be appreciated.

Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

Indianapolis Zoo
White River State Park

1200 W. Washington Street • Indianapolis, IN 46222 • (317) 630-2001

July 29, 1994

Mr. Andrew J. Montoney
Wildlife Biologist - USDA
Argonne National Laboratory
7900 S. Cass Avenue
Bldg. 202, Room B-118
Argonne, IL 60439-4833

Dear Mr. Montoney:

The Indianapolis Zoo will not be able to assist you in relocating white-tailed deer at this time. Thank you for the notification, but we currently do not have the appropriate exhibitry to hold these deer.

Sincerely,

Debbie Olson

Debbie Olson
Curator, Plains Biome

jkr

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. Bruce Reed
Curator
St. Louis Zoo
Forrest Park
St. Louis, MO 63110

Dear Mr. Reed;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

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Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

Saint Louis ZOO

Forest Park
Saint Louis, Missouri 63110
314 781-0900
Fax: 314, 647-7569

Charles H. Hoessle
Director

Lowell J. Perkins, Jr.
Chairman, Zoological Commission

16 August 1994

Andrew J. Montoney
Wildlife Biologist
Argonne National Laboratory
9700 S. Cass Avenue
Bldg. 202, Rm E-118
Argonne, IL 60439-4833

Dear Mr. Montoney:

I apologize for my delay in answering your letter of 22 July. There were a number of people here with whom I had to discuss your offer of European fallow deer.

As much as we would like to participate in this USDA-ADC program, the exhibit space in our Antelope/Cervid area is all ready committed to long-range programs for a number of species.

We appreciate your contacting us, and hope you will continue to do so. Programs of this type will always receive our thoughtful consideration.

Sincerely,

Bruce Read

BRUCE READ
Curator of Mammals

BR:ks

cc: C. H. Hoessle
W. J. Boever, DVM

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. Ron Young
Head Curator
Mesker Park Zoo
2421 Bement Ave.
Evansville, IN 47720

Dear Mr. Young;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

It should be noted that wild deer recipients must follow their state regulations concerning importation of white-tailed deer and exotic cervidae stock. This could include, but is not limited to, tuberculosis and brucellosis testing and certification of escape proof fencing.

USDA-ADC is surveying potential institutions that have appropriate facilities, and are willing, to receive these deer. If your organization would be interested in receiving relocated wild deer, please respond as soon as possible with quantities desired. A negative response would also be appreciated.

Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

MESKER PARK ZOO
FRIENDS OF MESKER PARK ZOO
MESKER PARK ZOO FOUNDATION

2421 Bement Avenue
Evansville, Indiana 47720-5500
812-428-0715

2 August 1994

Andrew J Montoney
USDA/APHIS/ADC
Argonne National Laboratory-East
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL. 60439-4833

Dear Mr. Montoney;

Mesker Park Zoo will not be able to accept relocated wild deer from the State of Illinois. We have a large population of deer in Indiana that needs to be brought under control also.

There is an animal hauler near Winchester Illinois that we have had many dealings with over the years that might be of benefit to you. . His name is Bob Brackett at Little Ponderosa Animal Farm. He is quite talented at capturing and moving exotic wildlife. I have known Bob for 20 years or more and utilize his expertise on many occassions.

Good luck to you in your efforts to relocate these animals.

Sincerely yours,

Ronald A. Young
Director,
Mesker Park Zoo

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. Warren Pryor
Central Curator
Ft. Wayne Zoo
3411 Sherman Blvd.
Ft. Wayne, IN 46808

Dear Mr. Pryor;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

It should be noted that wild deer recipients must follow their state regulations concerning importation of white-tailed deer and exotic cervidae stock. This could include, but is not limited to, tuberculosis and brucellosis testing and certification of escape proof fencing.

USDA-ADC is surveying potential institutions that have appropriate facilities, and are willing, to receive these deer. If your organization would be interested in receiving relocated wild deer, please respond as soon as possible with quantities desired. A negative response would also be appreciated.

Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

FORT WAYNE CHILDREN'S ZOO

2 August 1994

Andrew J. Montoney
Wildlife Biologist
USDA-APHIS
Argonne National Laboratory
9700 South Cass Avenue
Bldg. 202, Rm. E-118
Argonne, IL 60439

Greetings!

Pursuant to your letter of 22 July 1994, I discussed your question regarding relocation of white tail deer and European fallow deer to the Fort Wayne Children's Zoo at a recent meeting with the assistant director and the other animal curator. Unfortunately, we will not be able to accept speciemens of either species at this time.

Thank you for considering our zoo as a possible site of relocation however.

Supporting wildlife,

Warren W. Pryor
Animal Curator
FWCZ

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202. Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. John Dinon
Curator
Binder Park Zoo
7400 Division Dr.
Battle Creek, MI 49017

Dear Mr. Dinon;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

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Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

USDA APHIS

CONVERSATION RECORD

TIME: Unknown

DATE: 07-28-94

TYPE: [ ] VISIT [ ] CONFERENCE [X] TELEPHONE [X] Incoming [ ] Outgoing

TELEPHONE NUMBER: 616-979-1351

[ ] Routing [ ] CC

Name | Initials

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU: Mr. John Dinon

ORGANIZATION (Office, Agency, Department, etc.): Binder Park Zoo

SUBJECT: Response to inquiry about accepting relocated white-tailed and European fallow deer.

SUMMARY

The following message was left on the office answering machine:

"In response to the lette from Andrew Montoney reguarding surplus white-tailed and European fallow deer, Binder Park Zoo won't be in a position to receive any of those deer. We appriciate the offer. If you have any questions, please call me."

ACTION REQUIRED

None

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Andrew J. Montoney	Andrew J. Montoney	7/28/94

ACTION TAKEN

SIGNATURE	TITLE	DATE

APHIS FORM 44
(MAY 92)

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. Scott Carter
Mammal Curator
Detroit Zoo
P.O. Box 39
Royal Oak, MI 48068-0039

Dear Mr. Carter;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

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USDA-ADC is surveying potential institutions that have appropriate facilities, and are willing, to receive these deer. If your organization would be interested in receiving relocated wild deer, please respond as soon as possible with quantities desired. A negative response would also be appreciated.

Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

City of Detroit
Zoological Parks Department

8450 W. Ten Mile Road
P.O. Box 39
Royal Oak, Michigan 48068
Phone 810•398•0903
Fax 810•398•0504

Andrew J. Montoney
Wildlife Biologist
Argonne National Laboratory
Bldg. 202, Rm E-118
Argonne, IL 60439-4833

28 July 94

Dear Mr. Montoney:

The Detroit Zoological Park will not be able to accept white-tailed or European fallow deer from the Illinois Department of Conservation. I wish you luck in placing the animals in your live-capture and relocation project.

Sincerely,

Scott Carter
Curator of Mammals

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. Bruce Beehler
Head Curator
Milwaukee County Zoo
10,001 West Bluemound Rd.
Milwaukee, WI 53226

Dear Mr. Beehler;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

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Sincerely,

Andrew J. Montoney
Wildlife Biologist

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL

Milwaukee County Zoo

August 1, 1994

Mr. Andrew J. Montoney
USDA/APHIS/ADC
Argonne National Laboratory - East
9700 S.Cass Avenue
Bldg. 202, Rm. E - 118
Argonne, IL. 60439-4833

Dear Mr. Montoney:

Dr. Beehler referred your letter to me. The Milwaukee County Zoo does not have either white - tailed deer or European fallow deer in our collection. We would not be interested in receiving relocated wild deer.

The Milwaukee County Zoo has been surgically sterilizing wild white - tailed deer on the zoo grounds. Enclosed is a copy of our Conservation Bulletin that gives a brief description of our program.

Sincerely,

Elizabeth S. Frank

Elizabeth S. Frank
Curator/Large Mammals

ESF/mb

cc: Bruce Beehler

10001 West Bluemound Road • Milwaukee, WI 53226 • (414) 771-3040

Milwaukee County Zoo

CONSERVATION BULLETIN

Zoo Explores Alternative for Deer Control

The Milwaukee County Zoo is experimenting with a non-traditional method of controlling free-ranging deer populations in urban surroundings. This project was initiated by the Zoo in 1990 with funding from the Zoological Society of Milwaukee County. The study includes a long-term assessment of the population of deer that roam on the Zoo grounds and the effectiveness of surgical sterilization as a deer population control method. This is in contrast with traditional control methods such as killing the excess deer or capturing and transporting the deer.

The white-tailed deer is a remarkably adaptable animal. The species has thrived with the clearing of the original forests of the eastern U.S. These deer are found in large numbers in suburban and urban environments with adequate cover and forage. Unchecked population expansion often results in destruction of vegetation, an increased number of collisions with cars, and deaths of deer from starvation.

By the late 1980s the effect of increasing free-ranging deer populations on Zoo grounds had progressed to significant damage of vegetation. Beginning in 1990, deer were anesthetized and tagged for identification. Radio-tracking collars were placed on several of the deer. Long-term tracking revealed that the female deer return to the Zoo every Spring to have their fawns. They stay from March through December, and then winter in Bishop's Woods in Brookfield. Transient male deer visit the Zoo in the fall for breeding.

Since 1990, 14 deer found on Zoo grounds have been surgically sterilized. Vasectomy and tubal ligation were selected to prevent reproduction without altering normal hormonal functions. Vasectomies were quick and easy to perform under field conditions. However, males are too numerous to make vasectomy a viable option. Efforts at the Zoo now concentrate on sterilizing the resident females. Sterilizations must be done yearly as new animals appear. However, only one or two procedures need to be done each fall.

White-tailed deer population control has been successful at the Zoo. This method offers wildlife managers another option for urban deer control. With this method of population control, each animal needs to be handled only once. However, the tracking, immobilization and surgical veterinary procedures necessary may make this method impractical in many situations. ***For more information, please contact Elizabeth Frank, Curator of Large Mammals, at 771-3040.***

AZA

Come visit the Zoo!

Accredited Member

United States Department of Agriculture

Animal and Plant Health Inspection Service

ANIMAL DAMAGE CONTROL

Argonne National Laboratory
9700 S. Cass Ave.
Bldg. 202, Rm. E-118
Argonne, IL 60439-4833
(708) 252-9934

July 22, 1994

Mr. David Allen
Director
Blank Park Zoo
7401 Southwest 9th Street
Des Monies, IA 50315

Dear Mr. Allen;

Currently the U.S. Department of Agriculture's Animal Damage Control program in Illinois is working on over-population density problems associated with white-tailed and European fallow deer. One of the population management techniques currently being proposed is a live-capture and relocation program. According to guidelines set forth by the Illinois Department of Conservation (IDOC), white-tailed deer may only be relocated to IDOC approved zoological societies. European fallow deer may only be released into IDOC approved captive settings.

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USDA-ADC is surveying potential institutions that have appropriate facilities, and are willing, to receive these deer. If your organization would be interested in receiving relocated wild deer, please respond as soon as possible with quantities desired. A negative response would also be appreciated.

Sincerely,

Andrew J. Montoney
Wildlife Biologist

No Response as of 10/13/94.

cc:
K. Gustad, District Supervisor, USDA/APHIS/ADC-IL