

United States Department of Agriculture  
Animal and Plant Health Inspection Service

# Wildlife Services Directive

WS 2.125  
January 2026

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## WS OPERATIONAL DECISION-MAKING PROCESS USING THE INTEGRATED WILDLIFE DAMAGE MANAGEMENT APPROACH

### 1. PURPOSE

To provide Wildlife Services (WS) personnel with a systematic approach to decision-making for Integrated Wildlife Damage Management (IWDM) activities.

### 2. REPLACEMENT HIGHLIGHTS

This Directive combines and replaces four WS Directives, including WS Decision Model 2.201 (July 21, 2008), The Integrated Wildlife Damage Management Program 2.105 (March 1, 2004), Selecting Wildlife Damage Management Methods 2.101 (July 20, 2009), and Lethal Control of Animals 2.505 (May 18, 2011).

### 3. AUTHORITY

7 U.S.C. 8351 to 8353 and 16 U.S.C. 667, authorizes officers, agents, and employees of the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), WS to conduct a program of wildlife services and to enter into agreements with states, local jurisdictions, individuals, and public and private agencies, organizations, and institutions for the purpose of conducting such activities.

### 4. BACKGROUND

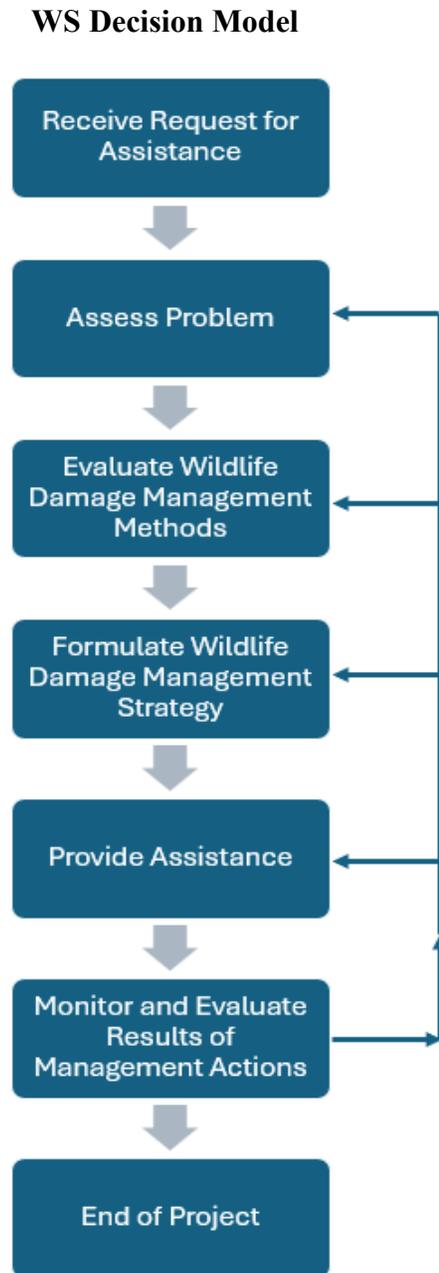
WS provides partnership-based federal leadership to help resolve wildlife conflicts through an IWDM approach. The goal of WS is to conduct a wildlife damage management program that is cost-effective, biologically and scientifically sound, environmentally safe, and recognizes the importance of animal welfare and our public trust and stewardship responsibilities. To achieve this goal, WS personnel assess wildlife damage problems prior to selecting the appropriate options that are consistent with these tenets and adhere to local, state, and federal laws and regulations (unless exempted or otherwise authorized).

### 5. PROCEDURE

The WS Operational Decision Model (Figure 1) and decision-making procedures will be followed when requests are received for assistance in resolving conflicts with wildlife.

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- a. Receive Request for Assistance**  
Wildlife damage management methods are recommended to individuals in response to requests for assistance.
- b. Assess Problem**  
WS personnel determine if the problem is within the authority of WS. If it is, damage information is gathered and analyzed to determine factors such as what species is causing the damage; the type, extent, and magnitude of damage; the economic, socioeconomic, and potential losses; the local history of damage; and what management methods, if any, were used to reduce past damage and the results of those actions. This step may also involve conducting formal research.
- c. Evaluate Wildlife Damage Management Methods**  
Once WS personnel complete an assessment of the damage, they evaluate the available and appropriate management methods. WS personnel evaluate methods in the context of their legality, humaneness, availability, practicality, cost, and acceptability based on biological, environmental, social, and cultural factors.
- d. Formulate Wildlife Damage Management Strategy**  
WS personnel incorporate appropriate IWDM methods into a management strategy. This approach encourages the use of several techniques in combination or sequence, rather than relying on a single method with consideration given to available expertise, legal constraints on methods used, costs, and effectiveness.
- e. Provide Assistance**  
Service is provided through technical assistance and/or direct management assistance. Technical assistance and direct management assistance are described further in section 6.d (1) and (2).



*Figure 1. WS operational decision-making process*

**f. Monitor and Evaluate Results of Management Actions**

When providing direct management assistance, it is necessary for WS personnel to evaluate and monitor the results and impact of the management action. Monitoring is important for determining whether further assistance is required or whether the problem has been resolved. Most IWDM efforts consist of a continuous feedback loop between receiving the request and monitoring the results, with the damage management strategy re-evaluated and revised periodically, as illustrated in Figure 1.

**g. End of Project**

WS personnel assess the effectiveness of the management strategy after completion of the project.

**6. POLICY**

a. WS personnel will use the WS Decision Model (Figure 1) to determine the most appropriate course of action when responding to requests for assistance. Assistance may require an evaluation of a range of management approaches and alternatives, including incorporating any research efforts when selecting a course of action.

b. WS personnel will use an IWDM approach to resolve conflicts with wildlife by integrating practical methods of prevention and control. Management approaches should prevent probable future losses (preventative damage management) or stop losses from continuing (corrective damage management). WS personnel will consider three management approaches to reduce wildlife damage:

1. Resource Management

Techniques include habitat management, animal husbandry techniques (e.g., use of herders, night penning, and shifting breeding schedule), guardian animals, modification of agricultural practices (e.g., crop location and rotation, damage-resistant crops, timing of planting), and modification of human behavior (e.g., eliminate wildlife feeding and handling, covering trash cans).

2. Physical Exclusion

Exclusion methods restrict the access of wildlife to resources (e.g., fencing, wire grids, netting, etc.). Physical exclusion methods have the potential to entrap other wildlife species or restrict the movements of other animals. Therefore, installation of exclusionary devices must include periodic monitoring and maintenance.

3. Removal

The objectives of this approach are to non-lethally alter the behavior of or repel the target species, or to permanently remove specific individuals from the population (i.e., reduce or suppress local population densities or control invasive species populations)

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to eliminate or reduce the potential for loss or damage to resources. To non-lethally remove wildlife from a target area, wildlife damage management techniques could include visual, chemical, or auditory strategies to repel animals (e.g., electric fences, fladry, propane cannons, pyrotechnics, harassment shooting, lasers, bright lights, strobe lights, and a variety of chemical repellents), or involve mitigation translocation (e.g., live-capturing and moving problematic individuals away from the resource being protected). Lethal removal methods might involve trapping, snaring, shooting, the use of toxicants, or immobilization and euthanasia substances.

- c. Before choosing a management approach, personnel must evaluate the conservation status of target and potential nontarget species, local environmental conditions, relative costs of applying management techniques, environmental impacts, social concerns, and legal requirements. Consideration of these factors must be part of the management strategy and may include the application of one or more techniques.
- d. WS personnel may provide technical assistance, direct management assistance, and/or research assistance. From an IWDM approach, assistance may involve the use of either lethal or nonlethal methods, or a combination of both. Nonlethal methods are preferred when practical and effective.

### 1. Technical Assistance

Includes advice, recommendations, information, equipment loaning, literature, instructions, and materials provided to others for use in managing wildlife damage problems and understanding wildlife damage management principles and techniques. If technical assistance does not resolve the damage, direct management may be necessary.

### 2. Direct Management Assistance

Includes field activities conducted or supervised by WS personnel.

- a. Wildlife damage conflicts may require direct management assistance. In some cases, only WS personnel may have the skill set, authority, experience, and/or tools available to safely and effectively resolve the conflicts.
- b. Direct management assistance is often necessary when the wildlife damage involves several ownerships, sensitive species, application of WS restricted-use pesticides, or complex management problems requiring the direct supervision of a professional wildlife manager or biologist.
- c. Direct management operations are often conducted upon request and always require written authorization of the landowner, cooperator, or other authorized officials, or in accordance with another appropriate instrument such as a memorandum of understanding (MOU).

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### 3. Research Assistance

When implementation of an existing tool or technique does not or will not likely solve a wildlife damage management problem, National Wildlife Research Center (NWRC) staff may provide opportunities to reduce damage using experimental approaches. When experimental approaches are implemented, WS operational and NWRC staff should collaborate on evaluating their effectiveness.

- e. If lethal methods are necessary for conflict resolution, WS personnel will use the most humane approach possible for the circumstance and strive to minimize animal distress and pain and to induce death as rapidly as possible. Because of the variety of conditions under which free-ranging wildlife may be lethally removed, choice of the most humane method will vary by species, situation, and individual animal.
  - i. WS personnel will exhibit respect and professionalism when lethally removing an animal.
  - ii. WS personnel must be familiar with scientifically acceptable and humane methods of euthanasia (e.g., American Veterinary Medical Association (AVMA) Guidelines for Euthanasia of Animals, Guidelines of the American Society of Mammalogists for the Use of Wild Mammals in Research and Education, Guidelines to the Use of Wild Birds in Research and will use those approved methods to humanely kill captured or restrained animals, whenever practicable.
  - iii. When administering immobilization and euthanasia substances, WS personnel must comply with WS Directive 2.430, Controlled Chemical Immobilization and Euthanizing Agents.
  - iv. When lethal methods are used on a captured or restrained animal, personnel must confirm the death of the animal. This also applies to free-ranging wildlife when carcass recovery is possible. To confirm death, personnel will observe the absence of a blinking response when the cornea is touched and verify lack of a heartbeat and respiration.
  - v. Animal carcass handling and disposal must comply with WS Directive 2.515, Disposal of Animal Carcasses.

## 7. SCOPE

This Directive is applicable to all WS personnel.

## 8. REFERENCES

- a. American Veterinary Medical Association, AVMA Guidelines on Euthanasia of Animals, 2013.
- b. Guidelines of the American Society of Mammalogists for the Use of Wild Mammals in Research. 2016.
- c. Guidelines to the Use of Wild Birds in Research. Fourth edition. 2023.

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- d. WS Directive 2.430, Controlled Chemical Immobilization and Euthanizing Agents
- e. WS Directive 2.515, Disposal of Wildlife Carcasses

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