

## U.S. Department of Agriculture Wildlife Services: Providing Federal Leadership in Managing Conflicts with Wildlife

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**ABSTRACT** The Wildlife Services Program (WS) of the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, provides federal leadership in managing conflicts between wildlife and humans. The core vision of WS is to improve the coexistence of wildlife and people. The Animal Damage Control Act of 1931 and subsequent amendments provide broad authority for WS to conduct activities involving the control of nuisance mammals and birds and those mammal and bird species that are reservoirs for zoonotic diseases. Resources protected include agriculture and natural resources, human health and safety, property, and threatened and endangered species. WS strives to develop and use wildlife damage management strategies that are biologically sound, environmentally safe, and socially defensible to reduce damage caused by wildlife to the lowest possible levels while at the same time reducing wildlife mortality. WS employees are highly trained professionals who receive ongoing training in regulations and legal requirements (e.g., National Environmental Policy Act, Animal Welfare Act, Migratory Bird Treaty Act), the use of firearms and explosives, safety, immobilization and euthanasia techniques, and other areas. WS assistance may be technical (written or telephone consultations, site visits, instructions, media consultations) or operational (site-specific, hands-on wildlife management).

**KEY WORDS** Wildlife Services, wildlife human conflicts, wildlife damage management, Animal Damage Control Act.

The Animal Damage Control Act in 1931 gives Wildlife Services (WS) broad authority to investigate, demonstrate, and control mammalian predators and rodent and bird pests. In 1985, Congress transferred the Animal Damage Control Program (ADC) from the Department of the Interior to the USDA, and another amendment in 1987 gave WS authority to enter into agreements with public and private entities in the control of mammals and birds that are a nuisance or are reservoirs for zoonotic diseases.

In the early years of WS, most of its activities involved working with predators and mammalian and avian agricultural pests. However, over the past 3 decades the scope of WS's work expanded to include protecting human health and safety, natural resources, property, and threatened and endangered species. Today WS biologists respond to requests from a broad variety of stakeholders from agriculture, private industry, government, and nongovernmental organizations.

Biologists with WS use an adaptive decision-making model when responding to requests for assistance. After assessing the problem, they evaluate the control methods available and formulate a strategy before providing assistance. They then monitor and evaluate the results and, depending on the success of the project, reconsider their options and take additional action.

Assistance can be either technical or operational. Most technical assistance is provided via mailings and telephone consultations with the public but may include demonstrations on the proper identification of species, the damage they cause, and use of methods to manage the problem, as well as presentations about techniques and regulatory requirements. Operational assistance consists of actual hands-on management.

Biologists with WS consider 3 broad approaches when evaluating options for wildlife damage control: managing the resource, physical exclusion, and managing the wildlife. Managing the resource might consist of

1. habitat management to reduce the site's attractiveness to wildlife,
2. animal husbandry techniques such as employing herders, night penning, and shifting breeding schedules,
3. the use of guarding animals,
4. modification of agricultural practices such as crop location and rotation, the use of resistant varieties, and the timing of planting, or
5. modification of human behavior such as eliminating wildlife feeding and handling, and calming irrational fears.

Physical exclusion usually consists of the use of exclusionary devices such as fences or netting. Managing wildlife might include using visual or auditory deterrents, or capture, take, or relocation methods (trapping, snaring, shooting, immobilization and euthanasia drugs, or toxicants).

Human-wildlife interactions are complex, and no simple formula fits all situations. Biologists with WS are highly trained professionals with extensive knowledge of wildlife management principles and techniques, and of pertinent federal and state regulations. Employees receive ongoing training throughout their careers in regulations and legal requirements (e.g., National Environmental Policy Act, Migratory Bird Treaty Act), the use of firearms and explosives; safety; immobilization and euthanasia techniques; and other topics.

Satisfactory solutions to human-wildlife conflicts often are elusive. Many “problem” wildlife species are resistant to management efforts, and the American public increasingly demands that WS biologists use the best available, scientifically based, socially acceptable, and humane methods. The National Wildlife Research Center (NWRC), the research arm of WS, works to provide a basis for science-based management of human-wildlife conflicts. The NWRC applies scientific expertise to resolve human-wildlife conflicts while maintaining the quality of the environment shared with wildlife. Scientists with the NWRC conduct research in a broad variety of areas, including wildlife biology, reproductive physiology, toxicology, pharmacology, epidemiology, virology, chemistry, immunology, statistics, wildlife DNA forensics, and animal behavior. The NWRC also has support units in chemical and drug registration, animal care, quality assurance, information and technology transfer, and legislative and public affairs. Scientists with the NWRC have developed and evaluated a broad range of tools and information relevant to managing human-wildlife conflicts, including methods for surveillance of wildlife diseases, wildlife contraceptives, vaccines, repellents and frightening devices, toxicants, analytical chemistry for detecting and monitoring pesticides and other materials in wildlife and the environment, and basic biological, ecological, and economic information needed to understand and manage conflicts with wildlife.

As the human imprint on the earth continues to increase, conflicts with wildlife also will continue to increase, and it will be increasingly important for the broad range of people and groups with a stake in wildlife damage management to communicate and cooperate with each other. The USDA APHIS WS is committed to continue working with a broad array of stakeholders to find effective, scientifically based, and socially acceptable methods for managing conflicts with wildlife.