Values and Guiding Principles

In its efforts to help America manage its wildlife resources wisely and effectively, NWRC is committed to the following values and principles:

- Conducting high-quality research
- Responding to stakeholder needs
- Maintaining excellent standards of animal welfare
- Providing information and technology transfer
- Collaborating with numerous and diverse partners
- Promoting personal and institutional integrity
- Valuing and investing in workforce diversity
- Providing for the welfare of the Center's workforce

Red-wing blackbirds cause significant damage to sunflower fields in the northern Great Plains. *(USDA, John Cummings)*

Barriers and other tools are being tested to prevent the spread of diseases between wild and domestic ungulates. *(USDA, Kurt Vercauteren)*

Introduction

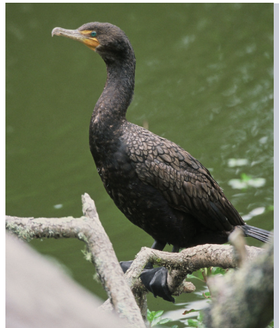
Wildlife Services—a program within the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS)—provides Federal leadership and expertise to resolve wildlife conflicts that threaten public health and safety, natural resources, and agriculture. The National Wildlife Research Center (NWRC), the research arm of APHIS Wildlife Services, is one of the world's only research facilities devoted entirely to the development of methods for effective wildlife damage management.

Through its headquarters in Fort Collins, CO, and several field stations across the country, the NWRC applies scientific expertise to resolve human-wildlife conflicts while maintaining the quality of the environment we share. NWRC scientists develop methods and information to address conflicts involving a range of issues, including agriculture, human health and safety, property damage, invasive species, and threatened and endangered species. The Center is committed to providing innovative solutions that create a balance between people and wildlife and better enable us to coexist.

Identifying Problems, Finding Solutions

Wildlife is an important public resource highly valued by the American people. By its very nature, however, wildlife is dynamic and mobile—and can damage agricultural and environmental resources and pose risks to human safety and health. Deer and smaller mammals can consume newly planted tree seedlings and other crops. Large flocks of birds can devastate grain and sunflower fields. Coyotes and other predators can attack livestock, domestic animals, pets, and sometimes people. Wild animals can also spread disease, such as rabies, West Nile virus, chronic wasting disease, and bovine tuberculosis. Invasive wildlife species often destroy native habitats and decimate endangered or threatened species. And birds and other animals can collide with aircraft at takeoff or landing, creating a serious threat for aviation safety.

NWRC evaluates wildlife damage situations and develops methods and tools to reduce or eliminate damage and resolve conflicts. NWRC scientists study birds, mammals, invasive species, and other wildlife that cause serious but localized damage problems. The Center's scientists conduct research to ensure that the methods developed are biologically sound, effective, safe, economical, and socially responsible. Approximately 75 percent of the Center's research budget is devoted to the development of nonlethal tools and techniques.



NWRC scientists are studying cormorant movements, breeding ecology, and damage to aquaculture. (*FWS, Lee Karney)*

The Center relies on the services of people with additional scientific specialties through extensive cooperative ties with universities, not-for-profit research organizations, and other public and private research entities. The NWRC has achieved an integrated, multidisciplinary research agenda that is uniquely suited to provide scientific information and solutions to wildlife damage problems. NWRC research is organized under four broad categories:

- **Agriculture and Resource Protection**—Focuses on reducing wildlife damage to crops, aquaculture, timber resources, natural resources, livestock, and property; examines the ecology, behavior, and management of birds and mammals; and develops methods to mitigate wildlife-aviation strike hazards.
- **Invasive Species**—Develops methods for reducing damage by invasive vertebrate species to native wildlife and ecosystems.
- **Wildlife Disease**—Explores ways to reduce the spread and transmission of disease agents from wildlife to humans and domestic animals; develops disease diagnostic methods; develops methods and strategies to monitor wildlife pathogens and prevent and control wildlife diseases; assesses risks to agriculture and human health and safety; and assists Wildlife Services operations with surveillance and monitoring.
- **Technology Development**—Promotes technological development in areas related to pesticide registration, formulation chemistry, chemical analysis, benefit-cost analysis, and wildlife contraceptives.

The NWRC also has a number of support units, including pesticide and drug registration, analytical chemistry, animal care, administration, information transfer, archives, quality assurance, facility development, and legislative and public affairs.

Research Activities

The NWRC is recognized nationally and internationally for its excellence and leadership in resolving human-wildlife conflicts. With the diverse scientific expertise of its staff and collaborators, NWRC assembles teams to find innovative, cutting-edge solutions to wildlife damage issues. The Center is currently researching a wide range of topics, including:

- Strategies to manage blackbird damage to agricultural crops in the United States,
- Immunocontraceptive vaccines for the management of locally overabundant wildlife,
- New techniques to manage predation by wild animals on endangered and threatened wildlife, as well as domestic animals,
- Techniques to reduce mammal damage to forest resources,
- Integrated pest management strategies to reduce rodent damage to crops and rangeland,
- Tools and strategies to reduce bird predation at aquaculture facilities,
- Registration of chemicals and drugs for use as wildlife damage management agents,
- Taste and olfaction in selected wildlife species and nonlethal chemical repellants for birds and mammals,
- Techniques to reduce wildlife hazards to aviation,
- Methods to manage invasive species that threaten native ecosystems and agricultural crops, and
- The role of wildlife in transmitting diseases to livestock, wildlife, and humans, along with techniques to prevent the spread of these diseases.

History and Organization

The NWRC was established in 1940 as part of the U.S. Bureau of Biological Survey, the forerunner of the U.S. Department of the Interior's Fish and Wildlife Service. In 1986, the Center was transferred to USDA and today is part of the APHIS Wildlife Services program.

NWRC employs more than 160 scientists, technicians, and support personnel at its 43-acre headquarters campus in Fort Collins, CO, and at field stations around the country. NWRC scientists have expertise in a wide range of fields, including:

- analytical chemistry
- animal behavior
- chemistry
- ecology
- economics
- epidemiology
- genetics
- immunology
- information transfer
- molecular biology
- pesticide registration
- reproductive physiology
- sensory biology
- statistics
- toxicology
- veterinary medicine
- virology
- wildlife biology
- wildlife diseases

State-of-the-Art Facilities

The NWRC headquarters and field stations include unique, state-of-the-art facilities for conducting wildlife research, including chemistry and disease laboratories, a wide range of outdoor animal holding pens, tropical- and temperate-simulated natural environments, and a biosafety-level 3 suite. These facilities give scientists a unique opportunity to study traditional laboratory animals and many wildlife species in both laboratory and semi-natural settings. Scientists can also test, evaluate, and modify new tools and techniques in-house before conducting field studies.

All animals housed at the NWRC and its field stations are cared for by the Center's specially trained team of wildlife veterinarians and animal care technicians. The NWRC complies with all Animal Welfare Act regulations and standards and is committed to the safe and humane treatment and handling of research animals.

Cooperative Activities

NWRC scientists work closely with APHIS Wildlife Services field personnel to develop and transfer methods for managing or mitigating wildlife damage. NWRC also works with a variety of collaborators, partners, and stakeholders, including other Federal, State, and local government entities; Tribal nations; foreign governments; industry groups; scientific and professional societies; environmental and animal welfare organizations; U.S. animal and public health laboratories; and the general public. To extend its capabilities for research and training, the Center also establishes a number of formal or informal cooperative programs with universities, State and Federal agencies, international organizations, and stakeholders.

Directions to NWRC.

NWRC researcher suited up in BSL-3 lab to test Nobuto® strips for detecting West Nile virus in red-winged blackbirds. *(USDA-APHIS-NWRC)*

NWRC develops methods for reducing damage b invasive species such as brown treesnake. *(USDA-APHIS-NWRC)*

For More Information

For additional information on the NWRC, contact:

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www.aphis.usda.gov/wildlife_damage/nwrc

NWRC field station locations

Revised February 2010

www.aphis.usda.gov/wildlife_damage/nwrc

USDA

United States Department of Agriculture
Animal and Plant Health Inspection Service
Miscellaneous Publication No. 1544

National Wildlife Research Center

Providing Innovative Solutions to Human-Wildlife Conflicts