July 2003

NWRC: Providing World Leadership in Science-Based Problem Management

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The National Wildlife Research Center (NWRC) functions as the research arm of the Wildlife Services (WS) program, an agency of the U.S. Department of Agriculture, Animal and Plant Health Inspection Service. Located on the Foothills campus of Colorado State University, WS-NWRC helps WS manage wildlife conflicts by providing scientific information on damage or threats to human health and safety, and by developing new tools and management techniques. WS-NWRC research activities emphasize economically, environmentally and socially acceptable methods that reduce or stop wildlife damage effectively without risk to humans, wildlife or the natural environment.

In existence since the 1920s, WS-NWRC has been the leader in wildlife damage research for 80 years. At the headquarters facility in Fort Collins, Colorado, and at field stations in Hawaii, Washington, North Dakota, Utah, Mississippi, Ohio, Florida and Pennsylvania, an interdisciplinary staff of 160 wildlife biologists, ethologists, economists, chemists, physiologists, statisticians, microbiologists, epidemiologists, veterinarians and others address the needs of the WS program and other stakeholder groups. In the near future, the WS-NWRC will add an Invasive Species Research Building to other outstanding facilities at headquarters. Current resources include 25 acres of outdoor research pens, an indoor wildlife testing building, and an office and laboratory complex. Headquarters' resources serve to complement the unique research and development capabilities of the field stations.

Investigations occur under the organizational auspices of the Mammal, Bird, Wildlife Disease, and Product Development Research Programs and in accordance with WS Research Needs Assessments (RNAs) that occur every five years. Needs identified by the RNAs are addressed using a multiyear, multidisciplinary project management system implemented by WS-NWRC since 1996. Projects are three to five years in duration, have clearly stated goals and objectives, and identify projected milestones and expected outputs that require mid-term and final project reviews, as well as annual project updates. Project planning, implementation and reviews routinely involve input from WS operational personnel, outside scientists and stakeholders. WS-NWRC uses the process not only to achieve specific research objectives within broader administrative directives, but also to develop new research projects to address important emerging wildlife-human conflict issues. As existing projects are completed, new projects that address different aspects of some of the same issues, or entirely new areas of research, are developed to address research needs. In addition to its own staff, NWRC relies on individuals with additional specialties through cooperative ties with universities, not-for-profit research facilities, and other public and private research entities. Many staff have affiliate or research faculty appointments at universities nationwide and abroad.

NWRC has achieved an integrated, multi-disciplinary research program that is uniquely suited to provide scientific information and solutions to wildlife damage problems. Specific activities include:

• Assessing damage and other problems caused by wildlife, not only in agricultural settings, but also at airports, in cities, on military installations, and within state and national parks.

• Investigating the biology and behavior of problem animals. For example, much of what is currently known about coyote biology and behavior is a result of research conducted over many years at the field station in Logan, Utah. This research has served as the

basis for developing and applying many strategies and techniques used today for protecting livestock from predators. Likewise, nearly all current data on the ecology and control of forest pest species such as the mountain beaver were developed by the staff of the field station in Olympia, Wash.

• Evaluating the impact of wildlife management practices on target species, non-target species and the environment. WS-NWRC designs studies to ensure that the methods developed to alleviate wildlife damage are biologically sound, effective, economical, and safe to the public and the environment.

• Developing and improving technology to reduce wildlife problems. A few examples of current projects include chemosensory repellents and attractants for birds and mammals; tactile repellents for aquatic rodents; management strategies to reduce bird hazards to aviation; toxicants for the control of invasive species such as brown tree snakes, Coqui frogs and nutria; barrier systems to manage disease transmission between wild and captive cervids; and techniques to reduce bird damage to fish hatcheries and cereal crops.

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• Conducting registration activities required by environmental protection agencies for the application of management chemicals and drugs. The center works closely with the Environmental Protection Agency, other regulatory agencies, chemical registrants and the private sector. Approved agents are manufactured, stored and distributed at a USDA supply depot at Pocatello, Idaho, or by the private sector. The WS program uses the latest chemicals and drugs in its field operations to improve its ability to manage wildlife problems.

• Transferring scientific and technical information. The center maintains a world-class scientific library of publications and research papers and makes its materials available to other researchers. Like all federal organizations, NWRC maintains an open-door policy and welcomes inquiries. ◆

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