Forming Partnerships With Wildlife Services

Wildlife Services

Protecting People
Protecting Agriculture
Protecting Wildlife

Animal and Plant Health Inspection Service (APHIS) Wildlife Services (WS)

APHIS' WS program often partners with private-sector industries to develop new tools and techniques for resolving human-wildlife conflicts related to agriculture, human health and safety, property, invasive species, and threatened and endangered species. The research arm of WS—the National Wildlife Research Center (NWRC)—is based in Fort Collins, CO, and at several field stations around the United States. It employs more than 160 scientists, technicians, and support staff with expertise in a variety of disciplines, including animal behavior, chemical registration, chemistry, ecology, economics, epidemiology, immunology, information transfer, public health, reproductive physiology, toxicology,

The NWRC headquarters campus is located in Fort Collins, Colorado. The 43-acre campus houses several outdoor animal research facilities.

veterinary medicine, wildlife biology, wildlife disease, and wildlife genetics.

WS promotes the adoption of research outcomes by end users. Methods of technology transfer are varied and include publishing research findings, producing technical notes and factsheets, presenting at scientific meetings, hosting demonstrations and workshops, and protecting and licensing inventions for developing commercial products. The Federal Technology Transfer Act of 1986 changed how Federal Government research and development agencies do business, allowing Federal laboratories and industry to form commercial partnerships that enhance the development of new technologies and move them to marketplace. WS strives to transfer and market new technologies related to wildlife damage management from its research. It has formed numerous partnerships using Cooperative Research and Development Agreements. The USDA's Office of Technology Transfer (OTT), housed in the Agricultural Research Service (ARS), facilitates and coordinates these partnerships.

Fluorescent colored dyes are used to mark large flocks of birds temporarily.

Cooperative Research and Development Agreements

A Cooperative Research and Development Agreement (CRADA) is appropriate for a commercial firm seeking to further develop and commercialize a WS invention, merge WS technology with its own, or jointly discover and develop new technologies. These agreements provide the cooperator the right to negotiate an exclusive license to inventions made under the agreement, and also provide confidentiality for up to 5 years for information generated under the agreement.

The cooperator provides the resources needed to develop and commercialize a new product, process, or service. The firm may provide funds to WS for work done under the agreement, or may contribute personnel, equipment, or materials. WS provides research staff, laboratory facilities, materials, equipment, supplies, technical and intellectual knowledge and advice, and other in-kind contributions. Both parties bring their expertise to the partnership, and both conduct some portion of the work. As with its other agreements, WS enters into this type of agreement only when the objective relates to its mission.

NWRC scientists learn more about beaver biology and behavior.

Benefits of CRADAs to Commercial Firms

- The right to negotiate exclusive licenses on patented inventions
- Direct access to WS scientific expertise
- Potential to commercialize new WS technologies

Benefits of CRADAs to WS

- Wider opportunities for developing and transferring technologies
- Feedback from industry on research needs
- Increased familiarity with problems related to commercializing products or processes

Benefits of CRADAs to American Public

- Transfer of tools and information resulting from government-supported research for public use

Double-crested cormorant with satellite transmitter.

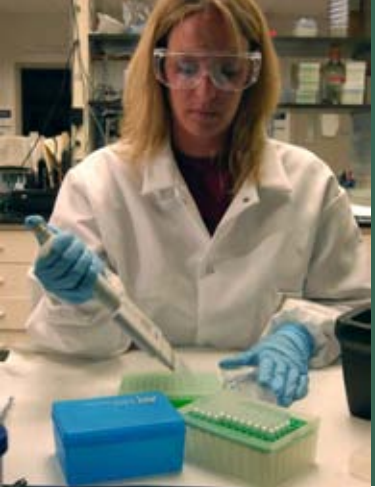
Night vision cameras are often used to monitor animal behaviors.

Steps for Initiating a CRADA

1. Search WS National Wildlife Research Center's Web page (www.aphis.usda.gov/wildlife_damage/nwrc) for information about NWRC's research programs
2. Contact WS scientists responsible for research projects of interest
3. Develop a brief proposal with the WS scientist and the OTT technology transfer coordinator
4. Obtain appropriate preliminary review and clearance for the proposal from your firm
5. Work with the WS scientist and the technology transfer coordinator to develop a Statement of Work for the agreement
6. Obtain approval from your firm for the CRADA and its proposed research plan

Other Types of Agreements

In addition to CRADAs, WS enters into other strategic partnerships with Federal, State, and private organizations to help deliver new technologies to the public. These partnerships include Cooperative Service Agreements (i.e., Trust Fund and Reimbursable), Grants, Cooperative Agreements, Interagency Agreements, Memoranda



NWRC expertise includes chemistry, veterinary medicine, epidemiology, genetics, physiology and wildlife biology.

of Understanding, Material Transfer Agreements, and Confidentiality Agreements.

Cooperative Service Agreements are similar to CRADAs, but lack the provision for negotiating an exclusive license and complete assurances of confidentiality. The cooperator provides funds to WS under this type of agreement. Cooperative Service Agreements may be established on a one-time or continuing basis and provide for cost recovery in advance (trust fund) or on a reimbursable basis. Confidentiality provisions apply to the cooperator's proprietary material, but information developed by WS while either type of agreement is in place can be withheld from public disclosure for only a reasonable period of time to protect intellectual property rights until a patent application is filed.

Grants are entered into when WS anticipates no substantial involvement with a partner. The principal purpose of a grant is to accomplish public support or stimulation rather than to acquire services for the direct benefit or use of WS.

WS enters into **Cooperative Agreements** when it anticipates substantial involvement with a partner while the contemplated activity is being

NWRC facilities include a biosafety level 3 (BSL-3) suite for studying various wildlife disease agents.

performed. Agency collaboration, participation, or intervention constitutes substantial involvement. The principal purpose of the relationship is the transfer of money, property, services, or anything of value from the WS to the cooperating partner to accomplish public support or stimulation. Unless mandated by legislation or program regulations, there is no mandatory requirement for cost-sharing or matched funding by the partner under Grants and/or Cooperative Agreements. The principal purpose of a Cooperative Agreement is to create public support or stimulation rather than acquire services for the direct benefit or use of WS.

An **Interagency Agreement** is an acquisition arrangement developed between at least two Federal agencies in order for one agency (the requesting agency) to obtain needed goods and services from another agency (the performing agency). WS uses interagency agreements to transfer funds between APHIS and other Federal agencies in order to conduct activities needed to carry out its mission, goals, and objectives. WS will comply with applicable provisions of the Economy Act of 1932 (31 U.S.C. 1535-1537).

A **Memorandum of Understanding** (MOU) is a written plan between two or more parties cooperating to carry out a project of mutual interest. Each party to the MOU handles its own activities and uses its own resources, including its own funds. There is no transfer of funds between

White-tailed deer used in wildlife contraceptive study.

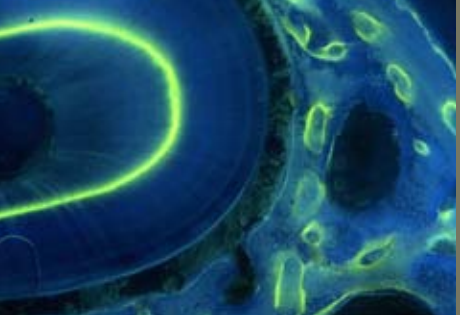
or among the parties. WS policy is to use a MOU as the instrument to define and formally document the nature, terms, and conditions of an agreement with other Federal agencies or non-Federal entities.

WS scientists use **Material Transfer Agreements**, or MTAs, when they want to provide material to someone outside WS, but also want to maintain control over the material and avoid public disclosure. These agreements can also be used to bring materials into WS from outside parties for research purposes from the technology licensing coordinator **(see page 15).** Generally, material transfer agreements specify what the material is and what it can be used for, restricts giving it to a third party without permission, prohibits commercial use, and specifies its disposition.

WS scientists enter into a **Confidentiality Agreement** with cooperators outside the agency when they want to discuss confidential information or data that may have patent potential. The agreement preserves patent options. Confidentiality agreements are also used when a company needs to discuss confidential information with WS scientists.

Patent License Program

Many important WS discoveries are transferred directly to the public without intellectual property



Tetracycline is used as a marker to determine the effectiveness of wildlife vaccines.

protection. Some WS inventions require significant financial investments and resources from the private sector before the public can benefit from a new, improved product or service. To provide an incentive for such investments, WS may patent new inventions and transfer technologies to the public through patent licenses.

ARS-OTT administers the USDA's technology licensing program. The technology licensing program grants licenses to qualified businesses and individuals who wish to commercialize WS technologies. Licenses may be exclusive, nonexclusive, or partially exclusive, and in some cases foreign patent rights are available.

How To Apply for a Patent License

Licensing federally owned inventions is done in accordance with Federal regulations (37 CFR 404). A copy of these regulations can be obtained from the technology licensing program coordinator.

Businesses or individuals who want to commercialize a WS invention must submit a patent license application. Information provided with the application is used to determine whether the applicant has a sufficient plan for developing and marketing the invention. All business plans are kept confidential. Patent license application forms are available by mail or may be downloaded from the USDA-ARS Partnering Web site (www.

WS has been instrumental in the development and testing of new oral rabies vaccines.

ars.usda.gov/Business/Business.htm). All patent license applications should be mailed to the technology licensing program coordinator.

License Provisions

USDA patent licenses are royalty-bearing and include provisions for license execution fees, annual license maintenance fees, and patent cost reimbursements. License fees and royalty rates are negotiable. Information submitted by the applicant—including estimates of potential market size, market share, and profitability—is used to help determine fair and reasonable terms. Other factors are also considered, such as scope of the licensed patent, scope of rights granted, and financial and resource investments required for commercialization.

Licensees are required to submit periodic reports detailing the progress made to commercialize licensed patents. After the first sale of royalty-bearing products, licensees are required to submit royalty reports, including information on the quantity of products made, used, and sold, and the royalties due USDA. This information is confidential and not publicly disclosed.

Special Considerations

Exclusive or partially exclusive patent licenses—including licenses that are co-exclusive (limited number of licensees), exclusive territory (limited to

WS partnered with Innolytics, LLC, to develop a new oral contraceptive bait for use on resident Canada geese.

a specific country), and exclusive field (limited to a specific use)—may be granted for non-CRADA inventions, but only after public notice has been made.

Successful Commercial Partnerships

WS continues to foster relationships with many businesses throughout the United States and, in so doing, creates new jobs and economic opportunities.

WS partnered with Innolytics, LLC, to develop and register an oral contraceptive bait—OvoControl® G for resident Canada geese and ducks and OvoControl® P for pigeons. The products reduce the hatchability of eggs and help decrease pest bird populations. Innolytics markets OvoControl products to private pest control operators, wildlife management agencies, and city governments that are seeking non-lethal, humane methods to manage geese, ducks, and pigeons in their communities.

WS helped launch a new product line for private partner Martin Engineering—together, they designed and developed a new air cannon net system for capturing wild birds. The new design eliminates the need for explosives. Instead, it relies on compressed air to launch four 5-pound

OvoControl® bait.

Air net cannon manufactured by Martin Engineering.

projectiles attached to a 40-by-60 foot net. Martin Engineering is currently manufacturing and marketing the system under the name "Martin Net Blaster."

WS and SEA Tech filed joint patents to develop the Avian Dissuader®, a handheld, low-power, long-wavelength laser used to disperse birds from roosts. WS conducted studies of birds both in captivity and in the wild to determine the effectiveness of the laser in dispersing problem roosts, as well as to verify that no physical harm occurred to the birds or their vision.

These are just a few examples of successful partnerships between WS and private industry. Through such partnerships, WS helps deliver innovative wildlife damage management tools and technologies to wildlife managers and others.

Additional Information

You can learn more about WS research and partnering opportunities from the resources listed below:

The ***WS National Wildlife Research Center (NWRC) Web site*** **(www.aphis.usda.gov/wildlife_damage/nwrc)** is the electronic gateway to APHIS research related to wildlife damage management. NWRC

conducts research of national and international scope affecting the management of wild mammals, birds, reptiles, and amphibians.

The ***APHIS Web site*** **(www.aphis.usda.gov)** describes APHIS' national programs. APHIS is a multi-faceted agency with a broad mission area that includes protecting and promoting U.S. agricultural health, regulating genetically engineered organisms, administering the Animal Welfare Act, and carrying out wildlife damage management activities. These efforts support the overall mission of USDA, which is to protect and promote food, agriculture, natural resources, and related issues.

ARS-OTT **(www.ars.usda.gov/partnering, e-mail: npa-spattc@npa.ars.usda.gov)** can provide information about technologies available for licensing and partnering opportunities, as well as success stories and information on WS.

The ***Technology Transfer Information Center*** **(www.nal.usda.gov/ttic)** is part of USDA's National Agricultural Library. The Center assists users in finding information by searching national and international databases and other resources.

Contact Information

USDA-APHIS-WS
National Wildlife Research Center
4101 LaPorte Avenue
Fort Collins, CO 80521
Phone: (970) 266-6000
Fax: (970) 266-6032
Web site: www.aphis.usda.gov/wildlife_damage/nwrc

Technology Transfer Coordinator
Northern Plains Area and Southern Plains Area
USDA, ARS, OTT
2150 Centre Avenue, Building D
Fort Collins, CO 80526
Phone: (970) 492-7028
Fax: (970) 492-7023
E-mail: npa-spattc@npa.ars.usda.gov

Technology Licensing Program Coordinator
USDA, ARS, OTT
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Beltsville, MD 20705-5131
Phone: (301) 504-5989
Fax: (301) 504-5060
E-mail: license@ars.usda.gov

APHIS Mission

To protect the health and value of U.S. agricultural, natural, and other resources.

WS Mission

To provide Federal leadership in managing problems caused by wildlife.

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USDA APHIS

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