



Feral swine blood and tissue samples can be tested for diseases they are known to carry.

other countries. Such assistance includes building infrastructure and capacity to identify and respond to a variety of animal diseases. For example, the NWDP has collaborated with international partners to develop and conduct workshops and surveillance activities for avian influenza.

Emergency Response and Research

The NWDP's wildlife disease biologists are prepared to respond quickly not only to disease outbreaks, but also to other disasters that can benefit from Wildlife Services expertise. The program's emergency responders can mobilize immediately and arrive at an emergency site within 48 hours.

With degrees in the sciences and formal training in wildlife behavior and management, NWDP biologists maintain a versatile skill set that enables them to respond effectively to a range of situations. During an emergency response to the detection of bovine tuberculosis in white-tailed deer, the NWDP worked closely with State wildlife agency officials to increase surveillance, live-capture and test wildlife for infection, and implement strategies to reduce the likelihood of disease spread.

Focus of Surveillance

Some wildlife diseases are unique to animals. Others (e.g., bovine tuberculosis and highly pathogenic avian influenza [HPAI]) are zoonotic, affecting both animals and humans. Because disease risks are dynamic, the NWDP continually evaluates and alters its focus to address the most current challenges to wildlife, agriculture, and humans.

Other diseases (e.g., chronic wasting disease and foot-and-mouth disease) pose threats to domestic animals and livestock. If these diseases are detected in wildlife, livestock producers can quickly enhance biosecurity to protect their animals, and wildlife managers can begin reducing threats.

Highly Pathogenic Avian Influenza (HPAI H5N1)

Avian influenza has emerged as an animal disease of worldwide concern, in part due to its potential to mutate into a virus that could lead to a human pandemic. The highly pathogenic (H5N1) avian influenza virus has not yet been detected in North America. In the largest-ever surveillance for a wildlife disease in North America, the NWDP leads a multi-agency effort for the early detection of HPAI (H5N1) in wild, migratory birds.

Plague

Plague, a bacterial disease not native to North America, is passed through bites from infected fleas. In early spring 2005, a South Dakota Tribal Council asked Wildlife Services to determine whether reported die-offs of prairie dogs were the result of disease or poisoning. After APHIS wildlife biologists collected samples, tests from the U.S. Department of Health and Human Services' Centers for Disease Control and Prevention confirmed the first verified incidence of sylvatic plague in the State. The NWDP activated its Surveillance and Emergency Response System and individually treated burrows in nine prairie dog colonies, covering over 5,000 acres.

Feral Swine Disease Surveillance

Through a joint initiative, the NWDP collaborates with APHIS' Veterinary Services and others to sample more than 2,300 feral swine annually for 5 diseases of interest. These results are shared with local animal health authorities to better inform commercial swine producers in more than 30 States of potential risks from feral swine, or wild hogs. This non-native species is a known carrier of many diseases, including pseudorabies and swine brucellosis, both of which have been eradicated from U.S. commercial pork production.

Future Concerns

HPAI will remain an immediate focus of wildlife disease surveillance. The expanding range and population of feral swine make this species a continuing concern for animal health officials and wildlife managers. Where human health risks exist, the NWDP will continue plague and tularemia surveillance as sampling sources are available. The NWDP will also follow emerging diseases impacting wildlife, such as chronic wasting disease and bovine tuberculosis.

For More Information

- Toll-free (866) 4USDA-WS or (866) 487-3297
- A listing of WS State and Regional Offices is available on the Internet at http://www.aphis.usda.gov/wildlife_damage.

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Cover photo: APHIS wildlife biologists release a deer trapped and tested for bovine tuberculosis.

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On the Watch for Wildlife Disease

National Wildlife Disease Program



United States Department of Agriculture
Animal and Plant Health Inspection Service

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Wildlife Services (WS)—a program within the U.S. Department of Agriculture’s Animal and Plant Health Inspection Service—provides Federal leadership and expertise to resolve wildlife conflicts that threaten public health and safety, natural resources, and agriculture. APHIS’ Wildlife Services works in every State to administer a program of integrated wildlife damage management, including surveillance and monitoring for wildlife diseases.

Through its Wildlife Services office, APHIS established the National Wildlife Disease Program to develop and implement a nationwide system that surveys for wildlife diseases, parasites, and disease-causing agents and responds to emergencies. With its national scope, the program supports State and local agencies, tribes, and other Federal programs in addressing wildlife disease issues. The program’s international component assists foreign partners with capacity building and conducts wildlife disease surveillance.



Surveillance for highly pathogenic avian influenza spans every State and Territory, utilizing various management techniques and laboratory expertise.

To maintain individual health, a person typically establishes a strong relationship with a physician. APHIS’ National Wildlife Disease Program (NWDP) functions much like a physician for the health of the Nation’s wildlife populations. Through its Surveillance and Emergency Response System, the NWDP monitors for diseases that pose risks to the public, wildlife, the Nation’s livestock and poultry, and/or the U.S. economy. When a disease is detected, wildlife disease biologists and other animal health officials can provide the emergency treatment needed to eliminate or lessen its impact.

APHIS instituted the NWDP in response to increasing concerns over foot-and-mouth disease and other serious diseases involving wildlife. The APHIS mission includes strengthening the Nation’s safeguarding capabilities domestically and internationally while increasing emergency response capabilities. Because

APHIS’ Wildlife Services focuses on the management of wildlife damage, positioning the NWDP—with its focus on the early detection, prevention, and control of wildlife-borne diseases—within this program represents a natural specialty of Wildlife Services’ skills and experience.

Monitoring and Surveillance

Increasingly, people, pets, wildlife, and livestock are exposed to potentially devastating diseases (such as brucellosis, bovine tuberculosis, *E. coli*, and plague), which can move either direction between wildlife and domestic animals. When wild animals transmit diseases to livestock—a core of the Nation’s agriculture industry—the results can have profound economic effects. Diseases such as bovine tuberculosis or brucellosis can initiate trade restrictions across State and international borders and prompt the need for quarantines, depopulation, and indemnification,



The Surveillance and Emergency Response System includes emergency truck-and-trailer units for use by wildlife disease biologists equipped and trained for prompt response to a variety of emergencies involving wildlife.



In an emergency response, wildlife disease biologists treated thousands of prairie dog burrows with a flea-killing insecticide.

resulting in significant costs for producers and taxpayers. In addition to safeguarding the health of U.S. livestock, Wildlife Services also seeks to protect wildlife resources from livestock diseases and emerging diseases (i.e., plague) that can have disastrous impacts to wildlife populations.

In some cases, the spread of disease can only be controlled if response efforts are integrated with wildlife management. With its mission of wildlife damage management, APHIS’ Wildlife Services plays a crucial role in wildlife disease surveillance, prevention, and control.

As a part of Wildlife Services, the NWDP conducts surveillance and monitoring for wildlife diseases, assessing the health and disease status of wildlife populations, through ongoing or repeated sampling. The NWDP supports established programs in other Federal and State agencies by exchanging information; providing biological samples for various disease-related projects; supporting a national laboratory infrastructure; and conducting wildlife disease surveillance.

Collectively, monitoring and surveillance provides information on the distribution, incidence, and trends of diseases in populations. Based on this information, the NWDP and its partners develop predefined intervention strategies that will manage diseases when an unacceptable level of risk to agriculture, wildlife, or human health and safety occurs. The program can also use this information to respond to emergencies, including natural disasters and disease outbreaks.

The NWDP has wildlife disease biologists assigned throughout the country. While acting as local coordinators, wildlife disease biologists design sampling strategies, collect required biological samples from various wildlife species and the environment, submit specimens to laboratories for diagnostic testing, and analyze results. These efforts are critical in protecting our Nation’s agricultural and wildlife health. Surveillance helps detect disease introductions, which provides valuable information to help limit their spread and potential consequences. Monitoring increases the basic knowledge of wildlife-associated diseases, establishes baseline information, and provides data for detecting epidemics.

APHIS’ National Wildlife Research Center assists the NWDP by conducting research on wildlife diseases. In addition, APHIS-Wildlife Services works closely with other USDA programs and universities to address research needs that focus on domestic and international veterinary health issues.

Collaboration

To maximize efficiency, the NWDP often coordinates its sampling work closely with research studies, other wildlife programs, and other APHIS’ wildlife Services operational projects, such as the protection of livestock and natural resources. For example, the NWDP conducts testing for plague on coyotes that are taken during activities to protect livestock or threatened and endangered species. The NWDP also obtains samples for brucellosis from feral swine removed to protect natural resources and agriculture.

Because diseases do not respect borders or boundaries, interagency and international coordination is critical to facilitate trade while still protecting wildlife and agricultural resources. The NWDP works with other Government programs, nongovernmental organizations, and universities to identify health threats outside U.S. borders and reduce those threats at their sources. When possible, program personnel directly assist wildlife management authorities and agriculture specialists in

The NWDP directly supports the APHIS mission of strengthening the Nation’s safeguarding capabilities domestically and internationally while increasing emergency response capabilities.