

**Testimony of Mr. Bill Clay
Acting Associate Administrator
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Senate Environment and Public Works
Subcommittees on Oversight and on Water and Wildlife
July 8, 2009**

Good morning and thank you for the opportunity to testify before your Subcommittees. My name is Mr. Bill Clay, and I am the Acting Associate Administrator for the Animal and Plant Health Inspection Service (APHIS). I am joined by Dr. Jere Dick, Associate Deputy Administrator for APHIS' Veterinary Services program. I'll be speaking to you about APHIS' role in relation to wildlife disease issues and invasive species.

The mission of APHIS is to protect the health and value of American agriculture and natural resources. APHIS helps to defend the environment from invasive species; ensure commodities traded internationally are free of animal and plant pests and diseases; protect agricultural resources, natural resources, property, and public health and safety from damage caused by wildlife; and protect natural resources while contributing to efforts to ensure public health and safety. Our primary authorities for these activities come from the Plant Protection Act, the Animal Health Protection Act, and the National Animal Damage Control Act of March 2, 1931, as amended.

Wildlife populations have become reservoirs for a number of serious diseases, including chronic wasting disease, rabies, tularemia, bovine tuberculosis (TB), and viral hemorrhagic septicemia, among others. Some of these diseases, such as bovine TB, rabies, and influenza viruses, are zoonotic, meaning they can affect both animals and humans. Many pose a risk of disease spread to agricultural animals, particularly as the interaction between wildlife and livestock continues to increase. And some present risks to the health and viability of our native wildlife populations.

The transmission of diseases from wild animals to livestock can have profound economic effects. Diseases such as bovine TB can trigger trade restrictions across State and international borders and prompt the need for quarantines, depopulation, and indemnification, resulting in significant costs for producers and taxpayers alike. In several cases, wildlife pose an elusive reservoir for diseases APHIS is striving to eradicate in livestock. In addition to protecting livestock, our Agency also seeks to safeguard wildlife resources from livestock diseases, as well as emerging diseases and invasive species that can have devastating impacts on wildlife populations. Finally, our work to address certain zoonotic diseases helps protect the public health.

To meet these challenges, APHIS is leveraging its vast expertise in both veterinary science and wildlife biology through its Veterinary Services and Wildlife Services programs. Veterinary Services, the animal health arm of APHIS, is dedicated to safeguarding the Nation's livestock and poultry and to facilitating agricultural trade. Veterinary Services enforces the Animal Health Protection Act, which grants APHIS authority over diseases and pests that affect livestock (including poultry) health.

Wildlife Services, in partnership with other Federal agencies, provides Federal leadership and expertise to resolve wildlife conflicts that threaten public health and safety, natural resources, and agriculture. The Animal Damage Control Act gives APHIS broad authority to “conduct a program of wildlife services with respect to injurious animal species and take any action the Secretary considers necessary in conducting the program.” It further authorizes us to conduct activities and to enter into agreements with States, local jurisdictions, individuals, and public and private agencies, organizations, and institutions in the control of nuisance mammals and birds and those mammal and bird species that are reservoirs for zoonotic diseases (with the exception of urban rodent control). Together, the Wildlife Services and Veterinary Services programs address animal disease threats from both sides of the wildlife-livestock interface.

Under these authorities, APHIS conducts a wide array of activities to protect our Nation’s agriculture and natural resources. These activities are designed to prevent the entry of invasive species and exotic pests and diseases into the United States, including those that can affect livestock and other animals; look for signs of these pests and diseases within our borders; and, when necessary, mount cooperative response programs with States to prevent their further spread.

Our Agency’s scientific and technical knowledge, legal authorities, and nationwide field force make us particularly well equipped to address diseases, pests, and invasive species that affect wildlife populations. Through our cooperative programs, we work very closely with our State partners—including State departments of agriculture, State Veterinarians, and State wildlife agencies—to conduct disease surveillance and safeguarding activities to manage the risks posed to and by wildlife. We also conduct research and develop specific methods to mitigate the risk posed to wildlife by pests, diseases, and invasive species. APHIS’ National Wildlife Research Center, or NWRC, is the only organization of its type in the United States devoted exclusively to wildlife damage management research.

An example that shows many aspects of our work is our Agency’s cooperative efforts in Michigan to combat bovine TB in both wildlife and livestock. Bovine TB is a serious disease with animal health, public health, and international trade consequences. In Michigan, we are a lead Agency in the cooperative Federal-State Wildlife Risk Mitigation Program, which assists livestock producers in preventing disease spread from wildlife (primarily white-tailed deer) to livestock. The program conducts wildlife risk assessments of livestock facilities, develops mitigation plans to increase the separation between wildlife and livestock, and provides cooperative funding to help implement the plans. Our cooperative efforts include bovine TB surveillance, epidemiological investigations, disease management in affected herds, and herd depopulation.

In addition, our National Wildlife Research Center is conducting studies to better understand how livestock and deer interact. NWRC is also researching ways to detect bovine TB in wildlife, improve barriers between livestock and deer, and vaccinate white-tailed deer against the disease.

As this example shows, our authorities enable us to take action in situations—including those involving wildlife species—that present a risk of harm to animal or crop production in the United

States. Another example is viral hemorrhagic septicemia, a severe, exotic fish disease, that has caused die-offs in many freshwater fish species in the Great Lakes watershed since it was first discovered there several years ago. APHIS became aware that the virus could also affect several species of fish raised commercially in other parts of the country—including economically significant species such as baitfish species and channel catfish. To prevent the disease’s further spread, we issued a Federal Order preventing the movement of potentially infected fish out of the Great Lakes watershed region to unaffected parts of the country. This action is intended to protect U.S. aquaculture and natural resources industries, such as recreational fishing and boating, from the impacts of this very serious disease.

We responded similarly after chronic wasting disease, a transmissible spongiform encephalopathy that affects ruminants such as wild deer and elk, was detected in farm-raised species in several States. This degenerative neurological illness has affected both farmed and wild cervids in the United States, impacting the hunting and wildlife industries as well as domestic and international markets for farmed cervids and cervid products.

APHIS developed regulations for a certification and monitoring program that would facilitate the interstate movement of farm-raised cervids and guard against the further spread of the disease within this industry. In 2006, APHIS published a final rule for the chronic wasting disease program; however, based on concerns and feedback we received from our State veterinary and natural resources partners, our Agency delayed the rule’s implementation and has been developing a new regulation. In March 2009, we proposed changes to the final rule that address, among other things, recognition of State bans on the entry of farmed or captive cervids for reasons unrelated to the disease, the number of years an animal must be monitored for the disease before it may move interstate, interstate movement of cervids that originated from herds in proximity to a chronic wasting disease outbreak, and herd inventory procedures. The changes are intended to help eliminate chronic wasting disease from farmed or captive cervid herds in the United States.

Our work to address another disease, rabies, has significant public health as well as wildlife health impacts. The Centers for Disease Control and Prevention estimate that the public health costs associated with rabies disease detection, prevention, and control exceed \$300 to \$450 million annually. APHIS’ National Rabies Management Program, a multi-agency cooperative program, is working to implement a coordinated, cost-effective, science-based program to contain and eventually eliminate rabies in wildlife.

Wildlife Services and its partners currently conduct rabies control efforts in 25 States. These efforts include distributing oral rabies vaccination and/or carrying out enhanced wildlife rabies surveillance. We also work closely with State departments of health, agriculture, wildlife, and others to contain specific strains of the rabies virus in raccoons, coyotes, gray foxes, and feral dogs. Together, we annually distribute more than 11 million oral rabies vaccine baits in 15 States to reduce the threat of rabies to humans, domestic animals, and wildlife.

Wildlife Services also works closely with Canadian and Mexican partners along shared borders to manage rabies in wildlife as part of an international strategy outlined in the North American Rabies Management Plan. The program is a model for the “One Health Initiative,” a worldwide

strategy that promotes expanding interdisciplinary collaboration and communication and that recognizes the inextricable link between human and animal health.

We also form cooperative relationships with our State counterparts to eradicate invasive species, which can devastate ecosystems. For example, nutria, a large, semi-aquatic rodent native to South America, has been found in 22 States, is currently established in at least 16 States, and has caused extensive damage to wetlands, agricultural crops, and structural foundations such as dikes and roads. The rodents may also threaten human health and safety and serve as a reservoir for tularemia and other diseases. APHIS and the Department of the Interior are leading the first large-scale North American effort to eradicate a mainland population on the Delmarva Peninsula in Maryland where the rodents have devastated coastal Chesapeake Bay marshes. In cooperation with the Department of the Interior's Fish and Wildlife Service, Maryland Department of Natural Resources, U.S. Geological Survey, Tudor Farms (a 6000-acre private wildlife management area), and 400 private landowners, APHIS has completed an initial nutria removal from more than 150,000 acres of coastal marsh in Maryland.

We are also working cooperatively in Florida to eradicate the Gambian giant pouched rat, a rodent native to Africa, which had become established on Grassy Key. If this rodent reaches the mainland, it could cause significant damage to agriculture and natural resources. APHIS and the Florida Fish and Wildlife Conservation Commission began working together to eradicate the rat several years ago and are in the final stages of surveillance and removal of any remaining rats.

In Hawaii, we provide technical and operational assistance to Hawaii Island communities who are involved in efforts to control the coqui frog, an invasive Caribbean tree frog. These frogs—which are abundant and have no predators—pose a threat to agriculture, tourism, and Hawaii's fragile habitat of rare and endangered plants and animals.

Our fight against invasive species also extends to U.S. territories such as Guam, where the invasive brown tree snake has caused extensive economic and ecological damage. The species is an opportunistic feeder and has eradicated most of Guam's native forest birds and is responsible for numerous power outages across the island each year. APHIS coordinates operational efforts on Guam aimed at keeping the snake from spreading to other destinations. APHIS program specialists use snake trapping in high-risk areas, trained snake-detector dogs to search cargo, nighttime spotlight searches, and public education as tools to achieve this goal.

Finally, research is a significant and vitally important part of our wildlife disease management efforts. The National Wildlife Research Center is the research arm of the APHIS Wildlife Services program. The mission of NWRC is to apply scientific expertise to resolve human-wildlife conflicts while maintaining the quality of the environment shared with wildlife. NWRC scientists design, develop, and test new tools for minimizing human-wildlife conflicts that are biologically sound, environmentally safe and socially responsible. NWRC employs a diverse team of approximately 160 scientists, technicians, and support staff. NWRC works closely with the operations arm of Wildlife Services and collaborates with international, federal, state, academic and private partners.

Among other activities, NWRC investigates the ecology and transmission of wildlife diseases, as well as develops and tests wildlife vaccines and new disease surveillance methods. Diseases studied include avian influenza, bovine TB, chronic wasting disease, pseudorabies, rabies, and West Nile virus, among others.

For example, NWRC and collaborating scientists are developing risk assessment models to identify potential routes of introduction and subsequent spread of avian influenza by waterfowl in the United States. These models allow scientists to identify areas where highly pathogenic strains of avian influenza may be introduced into the United States and where they may subsequently spread in relation to domestic poultry operations and human populations.

NWRC has been active in the development and testing of wildlife rabies vaccines. Though rabies is well controlled in domestic animals, its spread among wildlife populations is still cause for concern. In support of our national rabies program, NWRC scientists helped to identify an effective, easy-to-use biomarker that allows for noninvasive identification of animals that have been exposed to oral rabies vaccine baits.

NWRC scientists are also testing the efficacy of infrared thermography to successfully detect signs of rabies in raccoons and other diseases, such as foot-and-mouth and classical swine fever, in domestic livestock. Thermography is a technique that detects and measures variations in the heat emitted by various regions of the body and transforms them into visible signals that can be recorded photographically. Coupled with what we know about certain diseases and their clinical signs, this technique could potentially be used to detect and measure increases in an animal's surface temperature as a result of infections. These changes in temperature often occur at specific locations on the animal's body and form thermal patterns that may be unique to particular diseases.

In other research, NWRC scientists and collaborators have developed a new live rectal-tissue biopsy method for detecting chronic wasting disease in captive deer and elk. This live test appears to be nearly as accurate as proven post-mortem diagnostic tests, but has the key advantage that it can be performed on live animals. Until now, there was no practical live test for CWD in elk.

To help further enhance its research capabilities, Wildlife Services will be moving into a new Biosafety Level 3 Ag research facility on the NWRC campus in Fort Collins, Colorado being rented from the GSA. The new research building will contain approximately 21,000 square feet of user space and will greatly expand APHIS' capabilities to respond wildlife disease emergencies and resolve important disease issues that involve livestock-wildlife and human-wildlife interactions.

We also are in the process of finalizing a memorandum of agreement with the Association of Fish and Wildlife Agencies (AFWA), several Department of the Interior agencies (the U.S. Geological Survey, Fish and Wildlife Service, National Park Service, and Bureau of Land Management), and our colleagues with USDA's Forest Service to foster closer collaboration in identifying high-priority science and research needs. Under the terms of the agreement, the AFWA's Science and Research Liaison will coordinate with all parties to identify State science

capabilities that will help Federal agencies make management decisions and facilitate communication.

In summary, APHIS has a deep understanding of the link between the health of wildlife, the health of our Nation's agricultural animals, and the health and safety of our human populations. We are committed to continuing the strong, cooperative partnerships with other Federal agencies and the States as we work to protect both the agricultural and natural resources of our Nation. We appreciate the interest of your Subcommittees in these efforts, and we look forward to working with you on wildlife issues of mutual interest.

Now I would be happy to answer your questions.