



**National Wildlife Health Center
Wildlife Health Bulletin 2015-03**

Highly Pathogenic Avian Influenza Virus Found in the Central United States

To: Natural Resource/Conservation Managers
From: Dr. Jonathan Sleeman, Center Director, USGS National Wildlife Health Center
Date: March 27, 2015

In response to recent detections of highly pathogenic avian influenza (HPAI) viruses in wild birds and poultry in the western United States and Canada, the USGS National Wildlife Health Center (NWHC) continues to work closely with the U.S. Department of Agriculture APHIS Wildlife Services, U.S. Fish and Wildlife Service, and state wildlife agencies to implement enhanced mortality investigations and surveillance in wild birds (for background, see NWHC bulletins on [Detection of Highly Pathogenic Avian Influenza Viruses H5N2 and H5N8 in Wild Birds of the United States](#) and [Detection of Novel Highly Pathogenic Avian Influenza Viruses in Wild Birds](#)).

In early March 2015, HPAI H5N2 virus was confirmed at a commercial turkey facility in Minnesota, followed about one week later by detections of the same virus in turkey facilities in Missouri and Arkansas. HPAI H5N2 virus was subsequently confirmed in a mixed backyard poultry flock in Kansas. A multi-agency epidemiological investigation to characterize the spread of HPAI viruses across the United States is ongoing.

It is important to note that although North American wild ducks have not been reported to exhibit signs of disease when infected with HPAI, a Canada goose confirmed infected with HPAI exhibited neurologic signs. In addition, raptors also appear to be highly vulnerable to HPAI virus infection. For example, several captive falcons that were apparently fed meat from HPAI-infected game became ill and died rapidly. Various other raptor species have also died following infection with HPAI, including two red-tailed hawks, a bald eagle, peregrine falcon, and Cooper's hawk. Testing of various tissues from these raptors has identified HPAI infection as causing or contributing to their deaths.

State and federal authorities with regulatory oversight of wildlife rehabilitators, wildlife exhibitors, and falconers may wish to consider contacting permit holders to caution them against feeding wild game, especially wild waterfowl, to their raptors and other captive wildlife. Authorities may also wish to encourage implementation of biosecurity practices to eliminate contact between captive and wild birds and to be alert for raptors and other avian species showing neurologic signs of disease, as this may indicate potential infection with HPAI. Birds showing neurological signs or acute changes in behavior should be immediately isolated from other birds. In addition, wildlife biologists and agency staff should exercise careful field hygiene (e.g., hand washing and disinfection of equipment and clothing) after visiting wetlands or when handling waterfowl or their tissues or parts.

For an up-to-date summary of results from combined federal and state agency HPAI virus surveillance in wild birds, view this multiple agency table: [Wild bird HPAI cases in the U.S.](#) For surveillance results for HPAI in poultry and captive wild birds, view this USDA APHIS table: [Update on Avian Influenza Findings](#).

The NWHC is continuing to monitor for HPAI viruses by testing sick and dead birds. In an effort to maximize early detection of HPAI and to understand the spatial extent and species involvement of HPAI in North America, wildlife managers should remain vigilant for wild bird morbidity and mortality events and continue to contact us to discuss submission and testing of carcasses from events that meet the criteria described below. Avian influenza testing may be performed in cases that fall outside these criteria if warranted based on field history or necropsy

findings. Note that the following is not an all-inclusive list of cases accepted by NWHC (see [NWHC Submission Guidelines](#)).

Submission criteria for HPAI diagnostics:

- 1) Mortality events involving 5+ waterfowl (ducks, geese, or swans) or other water birds (loons, grebes, coots, shorebirds, or wading birds such as egrets, herons, or cranes).
- 2) Mortality events involving raptors or other avian scavengers (ravens, crows, or gulls), particularly those observed near locations with on-going water bird mortality.
- 3) Mortality events involving gallinaceous birds such as wild turkeys, quail, and sage grouse.
- 4) Mortality events involving wild bird species in close proximity to facilities harboring domestic birds in which HPAI has been detected.
- 5) Any mortality events involving wild bird species where estimated dead exceeds 500 birds.
- 6) Wild raptors with neurologic/respiratory signs that die or are euthanized within 72 hours of admission to a rehabilitation facility. Please also provide treatment records.
- 7) Raptors held in captivity (i.e., falconer birds, rehabilitation facility) with sudden, unexplained morbidity/mortality after exposure to wild waterfowl or a known/suspect case of HPAI H5.

General safety guidelines for handling wildlife:

Hunters and biologists should follow these routine precautions when handling game and their tissues or parts:

- Do not handle or eat sick game.
- Prepare game in a well-ventilated area.
- Wear rubber or disposable latex gloves while handling and cleaning game.
- Wash hands thoroughly with soap or disinfectant, clean knives, equipment, and surfaces that come in contact with game.
- Do not eat, drink, or smoke while handling animals.
- All game should be thoroughly cooked to an internal temperature of 165 degrees F.
- Additional guidance for hunters: [Guidance for Hunters – Protect Yourself and Your Birds from Avian Influenza](#)

Field biologists should follow these precautions when handling sick or dead birds associated with a mortality event:

- Wear protective clothing including coveralls, rubber boots, and rubber or latex gloves that can be disinfected or discarded.
- Minimize exposure to mucosal membranes by wearing protective eyewear and a particulate respirator (NIOSH N95 respirator/mask or better is recommended).
- Wash hands often with soap and disinfect work surfaces and equipment between sites.
- Do not eat, drink, or smoke while handling animals.
- Decontaminate work areas and properly dispose of potentially infectious material including carcasses.
- **Field Biologists working with wild birds in areas where H5 HPAIs have been detected** should monitor their health for any signs of fever and respiratory symptoms for one week following exposure to live or dead wild birds. If symptoms develop please contact your health care provider.

Disease Investigation Services:

To request diagnostic services or report wildlife mortality, please contact the NWHC at **608-270-2480** or by email at NWHC-epi@usgs.gov, and a field epidemiologist will be available to discuss the case. To report wildlife mortality events in Hawaii or Pacific Island territories, please contact the Honolulu Field Station at 808-792-9520 or email Thierry Work at thierry_work@usgs.gov. Further information can be found at <http://www.nwhc.usgs.gov/services/>.

Wildlife Mortality Reporting and Diagnostic Submission Request Form

If you have any questions or concerns regarding the scientific and technical services the NWHC provides, please do not hesitate to contact NWHC Director Jonathan Sleeman at 608-270-2401, jsleeman@usgs.gov.

To see past Wildlife Health Bulletins, click [here](#). WILDLIFE HEALTH BULLETINS are distributed to natural resource/conservation agencies to provide and promote information exchange about significant wildlife health threats. If you would like to be added to or removed from the mailing list for these bulletins, please contact Gail Mode Rogall at 608-270-2438 or e-mail: nwhc-outreach@usgs.gov.