

USGS National Wildlife Health Center

2021 NWHC Highly Pathogenic Avian Influenza (HPAI) morbidity/mortality surveillance guidance

The USGS National Wildlife Health Center (NWHC) is the leading partner in wildlife morbidity and mortality investigation as part of the [U.S. Interagency Strategic Plan for Early Detection and Monitoring for Avian Influenzas of Significance in Wild Birds](#) and continues to monitor for HPAI viruses nationwide by testing dead birds submitted for diagnostic evaluation. Mortality-based investigations serve to enhance capability for early detection of HPAI in wild birds and increase understanding of the spatial extent and species involvement.

Wildlife managers should remain vigilant for wild bird morbidity and mortality events and continue to contact NWHC as soon as possible to discuss submission and testing of carcasses from events as part of the Strategic Plan (page 16). The following criteria, (as an expansion of NWHC's standard [Diagnostic Case Submission Guidelines](#)) should be used to determine suitability for submission for HPAI diagnostics. Any carcass being submitted to NWHC, should not be swabbed for avian influenza in the field. This will be done at NWHC as part of the mortality investigation. 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.

Expanded submission criteria for HPAI diagnostics:

- Mortality involving wild bird species where estimated number of dead exceeds 500 birds.
- Mortality involving wild birds of any species near facilities housing domestic birds in which HPAI has been detected.
- Mortality involving gallinaceous birds such as wild turkeys, quail, and sage grouse.
- Mortality involving 5 or more waterfowl (ducks, geese, or swans) or other water birds (loons, grebes, coots, shorebirds, or wading birds such as egrets, herons, or cranes).
- Mortality involving any number of raptors, waterfowl, or avian scavengers (ravens, crows, or gulls) observed in the same or adjacent counties to confirmed HPAI in poultry or wild birds.
- Mortality involving any number of raptors or avian scavengers (ravens, crows, or gulls) near locations with on-going waterfowl mortality.
- Mortality involving raptors, waterfowl, or avian scavengers (ravens, crows, or gulls) observed with clinical signs consistent with neurological impairment, which may include swimming or walking in circles, moving the head in a “jerky” motion, and holding the neck and head in an unusual position (more drastic than simply drooping). Neurological signs associated with HPAI infection are not well characterized; thus, please collect detailed descriptions of the observed signs and call the NWHC with questions. Video and photos are strongly encouraged.
- 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.

- 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. NOTE: If your agency receives a report that falls outside of these criteria, but you suspect there is elevated potential for HPAI infection please do not hesitate to contact the NWHC.

For cases where the primary reason for submission is HPAI, the NWHC may only screen carcasses for HPAI in lieu of other diagnostic tests unless otherwise instructed.

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

- Wear protective clothing including aprons, coveralls, rubber boots, rubber or latex gloves, eye protection, and face shields that can be disinfected or discarded to prevent skin and mucous membrane contact with biological materials and movement of biological materials among sites.
- Work in well-ventilated areas or upwind of animals to decrease the risk of inhaling airborne particulate matter such as dust, feathers, or dander.
- A particulate respirator (NIOSH N95 respirator/mask or better) is recommended when working in confined spaces or conditions that promote aerosolization of debris. Check with your agency policies for specific respirator guidance while handling sick and dead wildlife.
- Wash hands often and thoroughly for at least 30 seconds with soap or alcohol-based hand sanitizer.
- Do not eat, drink, or smoke while handling animals.
- Decontaminate work areas and properly dispose of potentially infectious material including carcasses.

Additional minimum precautions for field biologists working with wild birds in areas where H5 HPAI viruses have been detected:

- Follow recommendations for handling sick or dead birds associated with a mortality event.
- Remove dirty protective clothing and equipment, store in a tied bag for washing or disposal upon leaving a site and change into clean protective clothing and equipment before handling birds at a new site.
- Disinfect work surfaces and equipment between sites with 10% bleach solution or other product registered as effective at killing influenza A viruses. Allow disinfected surfaces and equipment to air dry between sites.
- If possible, avoid bringing vehicles into contact with avian fecal materials. If vehicles (trucks, ATVs, boats) are in contact with potentially infectious materials (feces, feathers, tissues) remove all debris from tires, wheel wells, vehicle bodies, and watercraft and wash down with a water sprayer on site, if possible. Potential vehicle cleaning mechanisms include a hand pump water sprayer or gas-powered sprayer. If the vehicle undercarriage or side panels are heavily soiled, a commercial carwash is an option to remove debris. Once clean, disinfect tires, wheel wells, and watercraft surfaces with a 10% bleach solution or other product rated effective at killing influenza A viruses before moving to a new site.
- Check with your state environmental quality agency for local guidelines on using and disposing of disinfectants in the field.