

Friday, April 10, 2015

## The Current Highly Pathogenic Avian Influenza Situation

This document has been prepared by the AZA's Avian Scientific Advisory Group in cooperation with the AZA Zoo and Aquarium All Hazards Preparedness, Response, and Recovery (ZAHHP) Fusion Center.

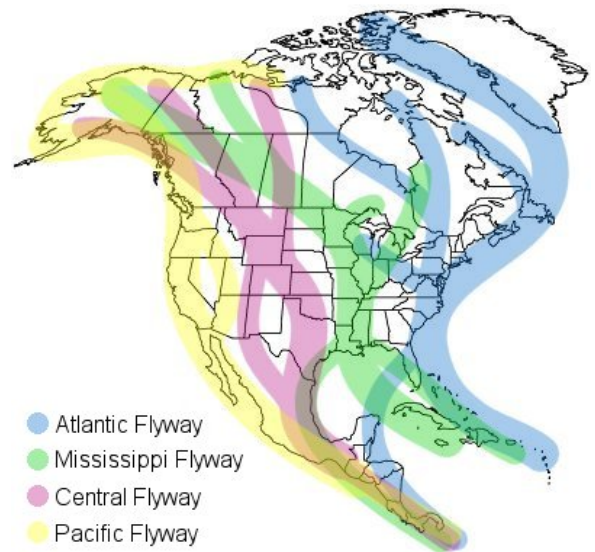
### Background

The US Department of Agriculture (USDA) has confirmed Highly Pathogenic Avian Influenza (HPAI) in the US in multiple states. The first cases were identified in late December in Washington State, and it has since moved to about a half dozen states in the US. The circulating HPAI virus originated in Asia and spread rapidly along wild bird migratory pathways during 2014. In the Pacific flyway, the HPAI H5N8 virus mixed with North American avian influenza viruses, creating new mixed-origin viruses. In the last several weeks, there have been isolated cases of disease, mostly in commercial turkey flocks, in the Mississippi and Central flyways in MN, MO, SD, AR, and KS.

### Scope and Species Affected

Currently the virus is spreading via wild waterfowl, particularly mallard ducks and those closely related to them. Generally it doesn't cause disease in these birds, but rather amplifies and becomes more infective and is then spread via feces and respiratory secretions. The virus is causing the worst disease in turkeys, presumably because they require a lower dose to become infected. It has also caused disease in mixed backyard poultry flocks and some captive raptors which were fed infected hunter killed waterfowl. Disease may spread due to direct contact with infected wild birds or due to fomites – infectious material on objects which carry it from an infected bird or area into a previously non-infected area. E.g. Shoes, tools, hands, bedding material, etc.

The experts do not think this is a short-term problem. They expect outbreaks to continue during this spring migration season, to quiet down during the summer while birds aren't moving around much, and then to pick back up again in the fall. This influenza strain may likely continue to re-assort and change its behavior. For example, it may become more or less infectious or deadly, or it may begin to involve more species.



### Zoonotic Potential

None of the influenza viruses currently affecting birds in the United States have been identified in humans, nor are they expected to pose a public health risk. The CDC considers the risk to people from these HPAI H5 infections in wild birds, backyard flocks and commercial poultry, to be low.

That being said, these virus strains can travel in wild birds without them appearing sick. People should avoid contact with sick/dead poultry or wildlife. If contact occurs, one should wash their hands with soap and water and change clothing before having any contact with healthy domestic poultry and birds.

### Responses Thus Far

All outbreaks have occurred on commercial farms and in backyard poultry flocks. State officials have quarantined the affected premises and birds on the properties are then depopulated to prevent the spread of the disease. As part of existing avian influenza response plans, Federal and State partners are working jointly on additional surveillance and testing in the nearby areas.

### What does this mean for zoos, and how can you prepare?

#### The worst case scenario should HPAI enter our facilities:

- Morbidity and mortality in our avian collections.
- Inhibiting regulations from government animal health officials.

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- For example: required quarantine (which may include closing the doors on visitation), required euthanasia or depopulation, or cessation of animal transports.
- Media and public fear leading to questions for the zoos and possibly a decrease in visitation.

**Main Goals:**

- Protect our collections from disease (biosecurity)
- Continue normal operations (visitation, animal transports, education programs, etc.).
- Be prepared and present a united front for media and the public.

**Recommended Actions to Take to Attain these Goals:**

*The exact actions each zoo takes will depend on their particular risk level, their facility, and many other factors. These are only suggestions of things to consider. This list is by no means exhaustive.*

- 1) Develop a relationship with your local and regional animal and public health officials.
  - a. Let them know you are there and need to be considered when decisions are made. Zoos are not automatically at the top of the priority list of animal health officials. You do not want to be forgotten when important information is disseminated or when stakeholders gather to make decisions, which may affect your zoo.
  - b. The poultry industry is worth billions of dollars, and that is what officials must first try to protect. If the region you are in is or becomes affected, you stand the best chance of being able to continue normal operations if you are able to assure government animal health officials that your zoo is not a threat to being the source of the spread disease to other animals in the region or to our staff and guests.
  - c. Ask your state veterinarian for his or her assessment of the risks your zoo faces. Every local is different. For example, do you know how many poultry farms there are within a 50 mile radius of your zoo? Ask for their suggestions on how best to prepare.
- 2) Collaborate with other zoos in your region to develop plans and media messages together.
  - a. Two (or multiple) heads are better than one.
  - b. Consider the situation where zoo A brings all of their birds indoors while zoo B two counties over leaves them on exhibit. This will likely bring media attention. If both zoos give a different message, more questions, confusion and potential fear will follow. If both zoos give the same message to the media, that can be avoided.
- 3) Assess the biosecurity of your avian collection, particularly those birds which are most susceptible.
  - a. Species that are most susceptible to infection include poultry: chickens, turkeys, pheasants, quail, ducks, geese and guinea fowl.
  - b. Species that have contact with wild waterfowl or shorebirds are at the greatest risk.
- 4) Possible considerations to increase biosecurity:
  - a. Train staff in the basics of biosecurity and identification of diseased birds.
  - b. Identify indoor or enclosed space for at risk birds/move at risk birds indoors or to a covered area.
  - c. Discourage wild waterfowl from visiting the zoo (drain ponds, cover ponds, obtain permits to disrupt nests, etc.) These decisions should be discussed with any State Department of Natural Resources, or other wildlife regulatory authority. USDA Wildlife Services, which works to decrease human: wildlife conflict may be a knowledgeable source of information.
  - d. Require keepers to use boot baths or change boots between exhibits.
  - e. Do not move potential fomites: tools and supplies such as enrichment and diet supplies should not be moved from susceptible areas unless thoroughly disinfected first.
  - f. Launder staff uniforms on site, and require footwear worn in the field to remain on grounds.
  - g. Increase surveillance of free-ranging wildlife: necropsies and AI testing of all high risk species found dead or ill on grounds. Make sure that all appropriate Permits are in place, and that discussion with your State Veterinarian has occurred prior to submission of any samples for HPAI.
  - h. Sick worker/Sick birds at home: While these current HPAI strains do not appear to carry a zoonotic risk, good zoonotic disease prevention dictates that any worker with flu or flu-like symptoms should be instructed not to attend work. Any worker with contact with pet or farm birds outside of work will be

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required to report any avian illness to the zoo for further evaluation and may not be allowed to have contact with zoo birds.

- i. Discontinue feeding raw poultry from unknown sources to avian species. Poultry that is sourced from commercial flocks; which participate in the National Poultry Improvement Plan, (NPIP) are safe. These flocks diligently test for avian influenza and do not pose a risk to collections from HPAI.
- j. Consider taking outreach avian species off program to disallow contact with the general public.