



Animal Care Tech Note

Protecting Captive Wild Birds From Highly Pathogenic Avian Influenza

Whether you operate a large zoo or run a home-based wildlife rehabilitation facility, you can take steps to protect captive wild birds and yourself from highly pathogenic avian influenza (HPAI) and other infectious diseases. Use the checklist below to consider how you could strengthen biosecurity practices at your facility. Be sure to involve facility management, curators, avian care staff, attending veterinarians, and volunteers in the planning process. State animal health and wildlife agencies may also be able to give you site-specific recommendations.

As you work through the questions below, consider which biosecurity measures you can put in place right away and those you will adopt over time. You should also review the Centers for Disease Control and Prevention's (CDC) hierarchy of controls ([cdc.gov/niosh/topics/hierarchy/](https://www.cdc.gov/niosh/topics/hierarchy/)), which ranks potential biosecurity solutions from the most to the least effective.

Biosecurity Checklist

Taking in New Birds

- What is your facility's quarantine period for new birds? (The incubation period for avian influenza can be up to 14 days.)
- Is your quarantine area adequate? Have you considered issues such as ventilation, food prep separation, and staff traffic?
- Is the triage (intake examination) area separated from general avian areas? For example, it could be outdoors or in a separate building, have a separate entrance, or allow only designated staff to enter.
- What personal protective equipment, cleaning and disinfection, and staff decontamination protocols are used in the triage area?
- Are some types of birds, such as waterfowl, shore birds, and sick birds, not accepted?
- If birds are euthanatized at triage, how are carcasses managed?
- Are diagnostic samples taken at triage or intake? What diseases are you testing for, and which laboratories are you sending samples to?

Separating Captive Birds From Free-Ranging Wild Birds

- Do collection birds share ponds or lakes with free-ranging wild birds?
- Do free-ranging wild birds have access to feed or feeding areas?
- Can you keep collection birds inside or move them to more protected habitats? How long can birds stay inside without undue stress?
- Are there free-ranging collection birds, such as pea fowl, golden pheasants, chickens? Can they be contained, moved inside, or moved offsite?
- For avian habitats with outdoor pools or ponds, do you use flagged horizontal grids, fencing, netting, or other measures to keep free-ranging wild birds away?

Compartmentalization

- Can you establish physical and/or functional barriers (compartments) between different bird populations, such as raptors, waterfowl, penguins, conservation critical species, educational birds, birds in flight cages, juvenile birds, and others? Compartmentalization could include physical structures, food prep, supplies, ventilation, staffing, visitor traffic, or other areas or activities.
- What are the protocols for moving staff or materials between compartments?

Detecting and Managing Illness

- Are staff and/or volunteers actively observing captive wild birds (i.e., behavior, appetite, activity, drinking, feces, etc.) each day? Are their observations recorded and reported?
- What is the notification process when illness or other signs are detected?
- Is there a treatment area with isolation capabilities? What personal protective equipment and access procedures do facility personnel use?
- Do attending veterinarians necropsy animals that die unexpectedly or submit them to diagnostic laboratories?
- Does the attending veterinarian consider HPAI in differential diagnoses? Is there a written protocol for contacting the State Veterinarian for potential cases of HPAI and similar diseases?

- What is the process for disposing of dead birds or hazardous infectious materials?
- What avian vaccines, if any, are used at the facility? (There are no HPAI vaccines approved for use in the United States.)

Supply Chain Risk

- Are random source birds (such as euthanized or hunter-killed wild birds) fed to other birds (such as convalescing raptors)?
- Do you purchase poultry-based or whole-bird products (such as packaged chicken or frozen whole chicks or quail) for feeding? What is the source of those products? What disease screening occurs at the source (e.g., National Poultry Improvement Plan certification)?
- Where do delivery vehicles unload (for example, outside the fence, supply area, or other location)? Do they ever approach animal habitat areas? Do delivery vehicles also service other bird facilities? Is there a delivery vehicle wash area at your facility? Do drivers get out of the vehicles?

Risk To or From Staff, Volunteers, and Visitors

- Does the facility have a written biosecurity plan and procedures?
- Do employees and volunteers receive biosecurity training?
- Do employees and volunteers change into dedicated work clothing/outerwear onsite? Is work-provided clothing laundered onsite, or is it taken home with employees?
- What personal protective equipment (such as boots, gloves, coveralls, and masks) do you provide?
- Are staff and volunteers, especially those who work around conservation critical birds, allowed to keep poultry or pet birds at home? Do staff engage in sport hunting of wild birds?
- Do staff or volunteers bring home-produced eggs into the facility for sale or trade?
- If the attending veterinarian is an offsite contractor, do they treat birds at other locations? What precautions do they take when visiting your facility?
- Are there protocols (such as showering, changing clothes, or avoiding bird contact for 72 hours) for people who visit other captive wild bird facilities or poultry premises?
- Are avian care staff at zoos allowed to volunteer at wildlife rehabilitation facilities?
- Are staff asked to stay home if sick?

- Are staff encouraged to follow CDC guidelines for preventing seasonal human influenza? Are staff and volunteers asked to notify their physician of their bird contact if they develop serious respiratory infections?
- Are there measures in place (such as barriers, glass windows) that keep visitors from having close contact with birds?
- During times of high HPAI risk, are visitors asked to stay away if they hunt wild birds or have contact with commercial poultry, backyard flocks, or sick birds?
- Are visitors asked to not enter if showing signs of respiratory illness?

Environmental Risk

- What other avian populations or facilities are near your premises?
- Are there any wild bird natural habitats, particularly riparian habitats, near the facility?
- Are there any commercial poultry, backyard flocks, or other captive wild bird facilities nearby? How far away are they? What is the prevailing wind direction?
- Could streams, canals, flooding, or surface water bring HPAI-contaminated water into your facility?
- Are there persistent wet, cool areas at the facility that could harbor the HPAI virus for longer periods of time? What can be done to mitigate those areas?

Cleaning and Disinfection

- Do you have written cleaning and disinfection procedures?
- Are all new staff and volunteers trained in cleaning and disinfection?
- Do procedures account for porous surfaces (such as wood, concrete, dirt, or plants) that may be hard to clean and even harder to disinfect?
- What disinfectant(s) are used? Are they approved by the U.S. Environmental Protection Agency for use against avian influenza? Go to www.epa.gov and search “avian influenza disinfectants.”
- Are cleaning and disinfection practices monitored and enforced?

For More Information

To learn more about HPAI, go to www.aphis.usda.gov and search “avian influenza.” Search “HPAI response” to learn how the U.S. Department of Agriculture (USDA) responds to HPAI outbreaks or “defend the flock” to see more biosecurity resources.