

HPAI Response

Landfill Disposal Guidance – Recommended Waste Acceptance Practices for Landfills

January 5, 2023

Please note: These procedures may be revised as the situation develops.

BACKGROUND

Highly pathogenic avian influenza (HPAI), commonly known as bird flu, is a severe disease of poultry caused by certain strains of influenza A virus. These viruses are found naturally in wild bird populations, and waterfowl can carry HPAI viruses without showing signs of illness. Wild birds can serve as a source of HPAI virus infection for domestic poultry, resulting in an outbreak. The USDA is the lead federal agency in responding to foreign animal diseases, such as HPAI.

PURPOSE

The intent of this guidance is to provide recommended waste acceptance practices for landfill disposal of carcasses of HPAI affected birds and other materials contaminated with the virus. In an outbreak, responders must dispose of all carcasses and other contaminated materials in a timely, biosecure, and environmentally responsible manner to prevent the spread of the virus to other poultry farms. Contaminated material should stay on the infected premises whenever possible. The use of permitted landfills may be an option for disposal of infected material that cannot be disposed of on the premises. Operators of these landfills must manage carcasses according to necessary environmental controls. In addition, landfill workers and outbreak responders must follow strict biosecurity procedures during transportation and disposal of contaminated materials.

PROTECTION OF LANDFILL OPERATORS

While the Centers for Disease Control and Prevention (CDC) has determined that risk for human infection from previous U.S. HPAI outbreak strains is low (see the *CDC Interim Guidance for Landfill Workers in the United States Disposing of Poultry Carcasses During Outbreaks of HPAI*), the CDC recommends landfill operators to protect workers involved in disposal operations to mitigate exposure to HPAI virus. Landfill operators disposing of HPAI contaminated materials should follow CDC's guidelines, which are available [here](https://www.aphis.usda.gov/fadprep) or by visiting www.aphis.usda.gov/fadprep.

GENERAL LANDFILLING PROCESS

Personnel from USDA or State Departments of Agriculture will supervise all landfill operations disposing of HPAI contaminated materials.

The landfill operator will determine the number of carcasses and other materials and frequency of deliveries they will accept from an HPAI affected premises. The incident management team may require disposal of a variety of contaminated materials, including manure, eggs, litter, feed, egg packaging, pallets, used personal protective equipment, and decontamination supplies.

Landfill management, State or Federal site managers and/or case managers for an HPAI affected premises, and the USDA APHIS contracting officer will communicate to determine the scope of work. Landfill operators and the State or Federal site manager for an affected premises will coordinate deliveries of contaminated material to the landfill in advance.

REQUESTING REIMBURSEMENT OF LANDFILL COSTS

The National Incident Management Coordinator (NIC) must approve landfilling as a disposal method for HPAI contaminated materials **in writing prior to** transport of materials off an affected premises. Parties responsible for disposal activities on an HPAI affected premises must provide detailed cost estimates for labor, equipment, supplies, and fees associated with the landfill disposal process to the NIC as part of the request for approval.

LANDFILL REIMBURSEMENT

For landfills to be reimbursed by USDA APHIS for any HPAI-related disposal costs, USDA APHIS must approve costs in advance. Producers should consult with their USDA APHIS reimbursement specialist regarding reimbursement at the time of an outbreak prior to any expenditures. Producers may choose to contract directly with landfills.

Contractors can be hired through the USDA to provide roll offs and other equipment at farms, commercial truck drivers (to transport roll offs to and from landfills), and personnel to perform cleaning and disinfection (C&D) of all conveyances. Costs associated with the landfill may also be included in State emergency agreements.

Any entity receiving payment from USDA must register in SAM.gov to be paid.

GUIDELINES FOR STATE REGULATORS

State environmental protection or natural resources agencies typically determine the guidelines for containment liners, leachate management, grey water management, timelines for covering contaminated materials, the depth of covering, modifications to working faces, and permits for landfill burial. The USDA can provide suggestions and brief the landfill regulatory agencies, but ultimately it is the landfill's responsibility to follow their state's rules and regulations. An example of preparations that should be made in advance by State regulatory agencies are below.

1. Technical requirements and procedures for landfilling of HPAI waste is established by the State-level regulatory agency responsible for permitting of landfills (State environmental agency). These requirements are designed to be protective of human health and the environment, to preserve the structural or operational integrity of the landfill, and to allow the facility to operate in compliance with their land disposal facility permit. Federal/State agencies charged with protecting animal health, biosecurity, and disease control are responsible for establishing any additional technical requirements and procedures pertaining to their authorities.
2. The State environmental agency may survey all potentially qualified land disposal facilities to determine their interest in accepting HPAI wastes. Information on the technical requirements and procedures for land disposal of HPAI wastes should be included in the communication so landfills can perform an initial evaluation of their facility's capability in regards acceptance of HPAI wastes.
3. The landfill notifies the State environmental agency of its willingness to accept HPAI wastes.
4. The State environmental agency meets with landfill representatives to evaluate the suitability of their facility to accept HPAI wastes. The evaluation includes the following topics:
 - a. Area within the landfill for disposal of HPAI wastes; verification that the area is underlain by a leachate collection system.

- b. Number of acres available for disposal of HPAI wastes.
- c. Thickness of already-disposed waste layer between surface of landfill and leachate collection system.
- d. Leachate management activities and method for disposal of excess leachate.
- e. Logistics of HPAI waste acceptance and coordination of HPAI waste acceptance with acceptance of routine waste streams.
- f. Gas collection system – location and any necessary operational changes during HPAI waste disposal activities to reduce the risk of fires.
- g. Public relations and community outreach – discuss how the public and local elected officials will be informed of and educated about potential HPAI waste landfilling activities at the facility.

TYPICAL EMERGENCY LANDFILL PROCEDURES, ROLES, AND RESPONSIBILITIES

1. The landfill agrees to receive infected birds.
2. State provides permits and permit conditions to landfill.
3. Contracted service visits the landfill to evaluate access, and works with the landfill to:
 - Plan traffic routing for trucks carrying HPAI waste
 - Select the location for vehicle C&D, and
 - Select C&D wash water disposal option(s)
4. The landfill consults with the local Incident Command on costs.
5. A biosecurity station is set up for vehicle and personnel C&D.
6. The contractor provides, loads, and disinfects outbound trucks at origin (e.g., sealed roll-offs lined with plastic to allow bags to slip out; biocontainment bag placed in roll-off over liner; 1 foot wood chips placed in bottom of bag; birds loaded to within 1 foot of top of roll-off; biocontainment bag sealed; roll-off disinfected and tarped).
7. USDA provides a permit for the truck to leave the infected premises.
8. The contractor or subcontractor drives the truck to the landfill and prepares to dump where directed by landfill staff or designee.
9. The truck driver tips load where directed.
10. The contractor or landfill personnel covers the waste material.
11. The landfill manages leachate in accordance with permit conditions.
12. The contractor or subcontractor drives the truck to the C&D station for washing prior to leaving landfill.
13. The contractor or subcontractor disposes of C&D wash water in accordance with the landfill and State requirements (likely at the municipal wastewater treatment plant).

FOR FURTHER INFORMATION

Please see the following websites for further information concerning HPAI:

- ◆ [FAD PReP Material and References](#)
- ◆ [USDA APHIS HPAI FAD PReP](#)
- ◆ [Landfills in HPAI Responses](#)
- ◆ [Risk Assessment Study Leachate from Landfills](#)