

Department of Environmental Protection
 DEP Guidelines for a Highly Pathogenic Avian Influenza (HPAI) Outbreak

Highly Pathogenic Avian Influenza (HPAI) Response Guidance

NOTE: No human cases of avian influenza from these viruses have been detected in the United States, Canada, or internationally and there continues to be no public health concern.

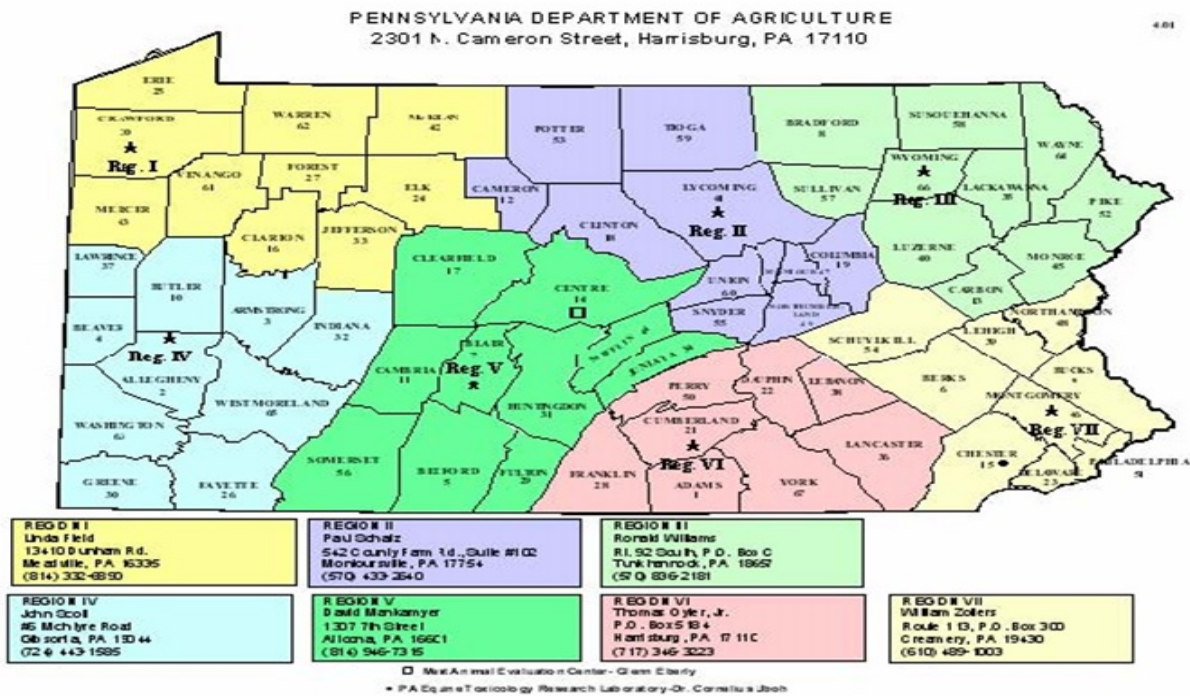
Information on farms infected with HPAI

The Department of Agriculture’s Lead EPLO will communicate information about infected farms to DEP’s Lead EPLO. The DEP EPLO will email that information to “EP_County Conservation” distribution list, Emergency Response Managers/Coordinators, Regional Directors and Assistant Regional Directors.

Requests for assistance from Dept. of Agriculture/USDA

The Director, Environmental Emergency Response will inform the Department of Agriculture that requests for DEP technical assistance and/or permitting should be made to the appropriate Regional Environmental Emergency Response Manager/Coordinator or the Director, Environmental Emergency Response as the disease outbreak begins. As it proceeds, I anticipate that there will be an activation of the Commonwealth’s Emergency Operations Plan and Emergency Support Function (ESF) #11 – Agriculture. At that time, the Department of Agriculture will assume the response lead for the Commonwealth, the Governor will likely issue a Declaration of Disaster and then requests for assistance may come from Agriculture directly or through PEMA to the DEP EPLO in the State Emergency Operations Center.

The map below shows the Department of Agriculture Regions. Regional personnel should be aware that they may receive requests from multiple Department of Agriculture Regions depending on the locations of these infections.



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DEP Emergency Operations Plan – ESF-11 Responsibilities

- DEP will support state and municipal efforts to ensure the safety and security of the Pennsylvania agricultural community.
- DEP will support state and municipal efforts to control and eradicate outbreaks of highly contagious or economically devastating animal/zoonotic disease or pests, highly infective exotic plant disease, or economically devastating plant pest infestation.
- DEP will provide water supply technical assistance to PDA and other agencies, and inspect / oversee regulated water suppliers.
- DEP will provide assistance with the processing and disposal of contaminated plant matter or animal carcasses, including emergency permitting for appropriate processing or disposal facilities (*Assistance in this context does not mean helping to pick up dead birds and/or transporting carcasses to disposal sites. It means providing technical information, advice on selection of disposal options, quick turn around on emergency permits and field testing of decontamination waste water prior to disposal.*)
- DEP will establish and maintain a liaison with the following: landfills, incinerators, processors and other facilities that may process or dispose of animal carcasses in order to facilitate the destruction of potentially disease bearing animals; USDA and other agencies involved with agriculture; and with PaSART and various County Animal Rescue Teams (CARTs).
- Technical manpower support requests will be coordinated through DEP's Regional Emergency Response Programs.
- All resources expended by DEP in support of an agricultural disaster response will be documented and retained on-file to support claims for reimbursement in the event of a federal disaster declaration.

DEP visits to farms infected with HPAI – [Standard Operating Procedure for Agriculture Biosecurity](#)

Poultry operations at which DEP personnel conduct routine inspections and which are identified as having a suspected or confirmed HPAI outbreak, should not be visited for routine inspections. The DEP inspector and supervisor should agree to postpone routine inspections until the HPAI infection is determined to be controlled or eradicated.

USDA's Animal and Plant Health Inspection Service (APHIS) has reported on the likely modes of transmission of HPAI. Three of these are modes of transmission about which DEP field personnel should be aware:

- Sharing of equipment between infected and noninfected farms;
- Employees moving between infected and noninfected farms;
- Lack of cleaning and disinfection of vehicles moving between farms;

PDA will exercise its legal authority to quarantine poultry operations that are suspected of being contaminated or infected. DEP personnel who must go to an infected poultry operation to provide technical advice or permitting assistance for disposal of carcasses should be prepared to follow the Agricultural Biosecurity requirements in place on the premises of the poultry operation. If they are less stringent than [DEP's Agricultural Biosecurity SOP](#), they should also adhere to the DEP SOP where it does not directly conflict with the Biosecurity

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measures in place on the farm.

Potential Carcass Disposal Methods

- Burial
- Composting
- Ensiling
- Incineration
- Landfill
- Alkaline Digestion or other chemical treatment

Burial as a disposal option – consists of excavating a trench, placing the carcasses in the trench and covering them with soil.

Clean Water requirements

The Deputy Secretary for Water has determined that mass mortality burial does meet the definition for the various “agricultural” activities that are exempt from NPDES permitting under Ch. 102. Therefore, mass mortality burial requiring earth disturbance of an acre or greater in size will not require an NPDES permit from Clean Water.

DEP Nuisance regulations:

The 24 hour burial time specified in “Title 25 § 243.11 - Dead animal carcasses.” should not be enforced in a mass mortality emergency situations because burial may not be appropriate based on the cause of the mass mortality and may not be possible where there is insufficient space on the farm to safely bury all the carcasses. However, where burial is proposed, the following setback distances and site conditions that are based on past practices and modeled on the setback distances for on-lot sewage disposal systems are recommended.

Emergency Guidelines for mass mortality burial

All burial activities must:

- Have E&S best management practices (BMPs) installed
- Have a written E&S plan developed and implemented if there is 5,000 ft.² or greater of earth disturbance. DEP, in cooperation with the Department of Agriculture and the State Conservation Commission, has developed a standard/generic E&S plan for use in these types of circumstances. Contact Ken Murin or Jennifer Orr for information on this.
- Be located more than 100 feet from the waters of the Commonwealth,
- Be located outside of the 100-yr flood plain,
- Be at least 2 feet above the groundwater table,
- Be covered by at least 2 feet of earth.

Burial Area Unsuitability

- A proposed area having the following characteristics should be considered unsuitable for the burial of animal carcasses where:
 - The slope of the proposed area is greater than 25%.
 - The area is identified by completed Federal Flood Insurance mapping as a floodway. Where there is no flood mapping, a flood way extends 50 feet from the top of the stream bank as determined by the local agency.

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- One or more rock outcrops exist within the proposed area.
- The proposed area is underlain by limestone with depressions left by earlier sinkholes either in whole or in part within the area.
- Animal carcasses should not be placed in or on fill unless the fill has remained in place for a minimum of 4 years to allow restoration of natural permeability. The fill should be composed of clean mineral soil without large rocks, bricks or pieces of cement.

Minimum Horizontal Isolation Distances

- The minimum horizontal isolation distances between the features named and the proposed area for mass burial of animal carcasses should be:
 - A public water supply well, spring or reservoir – 600 ft.
 - An individual water supply well, cistern, spring or water supply suction line—100 ft.
 - Occupied buildings and swimming pools—100 ft.
 - Mine subsidence, boreholes, and sinkholes—100 ft.
 - Active on lot sewage disposal systems—25 ft.
 - Detention and retention basins and stormwater seepage beds—25 ft.
 - Natural or manmade slope greater than 25%—25 ft.
 - Property lines, easements or right of ways—25 ft.
 - Roads or driveways—25 ft.
 - Rock outcrop or identified shallow pinnacle—25 ft.
 - Streams, watercourses, lakes, ponds, wetlands or other surface waters—100 ft.
 - Surface drainage ways—25 ft.
 - Unoccupied buildings—25 ft.
 - Water supply line under pressure—25 ft.
 - If conditions warrant, greater isolation distances may be required.

Composting as a Processing Option – No DEP Waste Management permit is required for composting.

Poultry is especially suited to be managed through composting, and poultry houses make ideal confined environments for composting the poultry carcasses. Composting in windrows within poultry houses contains the disease, provides some control of vector access to carcasses, contains potential leakage, prevents runoff, and kills the HPAI virus through the heat generated by composting. Composting requires carbon sources like sawdust, wood chips, or mulch. The windrows of a composting operation must be carefully constructed for maximum heat retention. When the composting is complete, the remaining material can be spread on farm fields as a soil amendment. No DEP permit is required for composting and spreading.

Ensiling as a Processing Option – No DEP Waste Management permit is required for ensiling.

Ensiling is similar to composting except that the carcasses are placed in silos to develop the heat of decomposition to kill the HPAI virus. This is relatively new and is not commonly used.

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Incineration as a Disposal Option - A DEP Air Quality permit may be required for use of a portable incinerator unless a Request For Determination finds that the source is of Minor Significance. (See below)

Requests to use Portable Incinerators for carcass destruction –

Following a review of a certain mobile incinerator, DEP Air Quality Central Office's conclusion was that the GP-14's ten pages of specific criteria that must be met by the owner or operator of human or animal crematories might not be able to be met by some mobile incinerators making it difficult to permit necessary units. **However, as an emergency measure** DEP may determine such a source to be of minor significance under [§127.14\(a\)](#), using the [Request for Determination of Requirement for Plan Approval/Operating Permit \(RFD\) form](#). The time required to dispatch and assemble a mobile incinerator on-site should be sufficient to allow review and approval to operate such a unit through the RFD process. Requests to use mobile incinerators on an emergency basis for the destruction of animal carcasses should be directed immediately to the Bureau of Air Quality.

Requests to destroy Carcasses by Pyre –

Pyres are mounds of carcasses that are burned for destruction. Under § 4004.1 of the Air Pollution Control Act, the production of agricultural commodities is not regulated by the Act or regulations promulgated thereunder. "The production of agricultural commodities" is defined to include on-farm disposal of residual materials resulting from the commercial production of livestock and livestock products, which include poultry. Even though open burning operations are prohibited generally, under §123.1, fugitive emissions arising from the production of agricultural commodities in their unmanufactured state on the premises of the farm operation are exempted.

However, pyres should be strongly discouraged based on an analysis of, "environmental factors [that] may also play a part in transmitting HPAI. APHIS found that air samples collected outside of infected poultry houses contain virus particles, indicating that the virus could be transmitted by air. In addition, preliminary analysis of wind data shows a relationship between sustained high winds and an increase in the number of infected farms approximately 5 days later." If requests are received to destroy carcasses by pyre, DEP should strongly recommend that the pyre is conducted in a trench with an air curtain destructor in use to contain the virus particles. Otherwise a pyre may only spread virus particles in the environment, some of which may be viable at the time of becoming airborne.

Landfilling as a Disposal Option – A Form U is required

DEP permitted municipal and residual waste landfills can accept such loads if accompanied by a [Form U \(2540-PM-BWM0395\)](#). DEP will not require landfills to accept such wastes. DEP may advocate that permitted landfills accept such loads if there are no other viable options available for their disposal.

Alkaline Digestion as a Disposal Option – See below

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Alkaline digestion is a process using corrosive chemicals, heat and pressure to destroy carcasses and disease causing agents. It has seen limited use by the Pa. Game Commission in the early days of the Chronic Wasting Disease discovery in Pennsylvania. Alkaline digestion presents its own set of concerns. The process destroys the carcass, but leaves the operator with a liquid waste that Publicly Owned Treatment Works (POTWs) have been reluctant to accept. The process itself does not require a DEP permit, but the disposal of the liquid waste may if it is not accepted at a POTW. Requests for placement on fields, similar to liquid manure spreading, have been received by DEP in the past, but the material is not similar to liquid manure and may have relatively high or low pH. A waste liquid with a pH higher than 12.5 is a characteristic hazardous waste.

Finally - Act with Compassion

All DEP personnel should be prepared for unusual questions and requests. Remember that many of the people you deal with could potentially be losing everything they have worked for, not just chickens and turkeys. Many major egg producers in the Midwest have closed their doors permanently. They will not be able to recover from their catastrophic losses and neither will their employees because there are no jobs to which to return. Be sensitive to these facts and act with compassion for those whose livelihoods may be disappearing. Thank you.

Questions should be directed to Kerry Leib, Director – Environmental Emergency Response