



Catastrophic Animal Mortality Management Guidance

Introduction

Catastrophic natural disaster, disease, or non-disease events when significant animal losses occur could overwhelm the capabilities of a livestock operation. The disposal plans made by a ranch, dairy, poultry farm, or other livestock operation to dispose of the animals may require outside assistance. When this happens, multiple disposal options should be considered.

Livestock owners, or those in charge of a livestock operation, should report to Washington State Department of Agriculture (WSDA) and local authorities when a significant mortality event occurs due to disease, natural disaster, or other non-disease-related event. Non-disease related events could include, but are not limited to, supply chain or market disruption or infrastructure failure such as a building collapse or overturned trailer.

This document provides guidance to individuals and local agencies dealing with animal disposal in an area where mortality losses exceed the capabilities and resources of the local jurisdiction, including areas where the Governor of Washington has declared a State of Emergency.

Requests for Assistance

If a local government has depleted, or anticipates depleting, its resources to dispose of animal carcasses, it may request assistance through the State Emergency Operations Center (SEOC). The SEOC will coordinate with state agencies to assist, including WSDA and other agencies under the Emergency Support Function (ESF) 11 Annex to the State Comprehensive Emergency Management Plan.

After local governments have exhausted their resources, WSDA is the primary state agency for identifying disposal options of dead animals resulting from a disaster. The agency will consult with the local health jurisdictions and the Washington State Department of Ecology (Ecology) to select the most effective method for the disposal of dead animals based on the situation, location, and environmental and health concerns. The state will provide coordinating support required to complete proper disposal of the dead animals, contaminated products, and animal waste once the disposal method is determined.

WSDA may request assistance from the Washington Department of Transportation (WSDOT) and Utilities and Transportation Commission (UTC) regarding loading and transporting animal carcasses. Transporters of animal carcasses will comply with all applicable regulations. When animal carcasses are being transported through Tribal lands for off-site disposal methods, notification may be necessary.



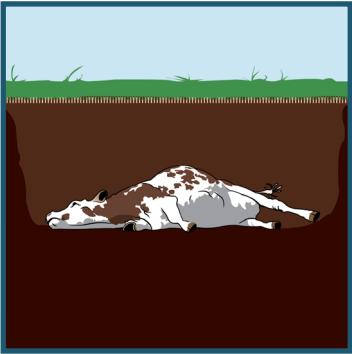
Disposal Management



The [Office of the State Veterinarian](#) at WSDA can provide technical assistance on approved methods for the disposal of diseased animal carcasses. Contact information for the Office of the State Veterinarian can be found at agr.wa.gov by following the link for 'Contact Us' at the top of the page. This information is also included at the end of this publication.


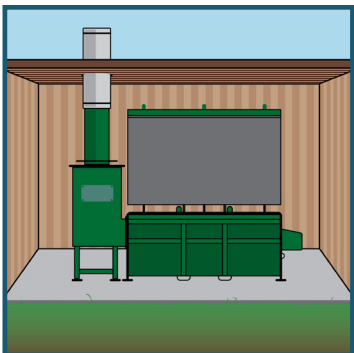
Effective disposal of animal carcasses and materials will be a key component of a successful response to prevent or mitigate the spread of pathogens. In a foreign animal disease (FAD) outbreak where mass animal casualties are likely, any single animal carcass disposal method may be insufficient to handle the large quantity of animal carcasses, and more than one disposal option may be necessary. The state veterinarian or their designee will specify the disposal method for animal carcasses that die of disease or are euthanized to prevent the spread of disease.

Potential Methods and Considerations

*During emergency situations and natural disasters, disposal options might be identified on a case-by-case basis. The following chart describes potential disposal options and includes considerations for each method. **Consult with WSDA and Ecology to help determine the best methods for carcass disposal options during these scenarios.***

METHOD	DESCRIPTION	RESOURCES NEEDED	CONSIDERATIONS
Burial 	<ul style="list-style-type: none">Below ground and above ground burial is an on-site disposal option.Carcasses must be covered by at least 3 feet of soil; at least 100 feet from a well, spring, stream or other surface waters; not in a low-lying area subject to seasonal flooding or within a 100-year flood plain; and not in a manner likely to contaminate groundwater.Mass burial sites must be approved prior to implementation.	<ul style="list-style-type: none">Heavy equipment for carcass movement and burial.Personnel and small equipment to prepare carcasses for burial.	<ul style="list-style-type: none">Burial sites for catastrophic mortality are evaluated on a site-by-site basis.Above ground burial (partial burial with mounding of the cover soil) has a number of challenges that must be addressed on a case-by-case basis.May be limited due to natural disaster conditions and groundwater limitations.Livestock cannot be buried in areas with high water tables.

METHOD	DESCRIPTION	RESOURCES NEEDED	CONSIDERATIONS
<p>Composting</p> 	<ul style="list-style-type: none"> Composting is a preferred on-site carcass disposal option. It is possible composting, under the right conditions, could be used off-site to meet the needs created by a multiple-county event. 	<ul style="list-style-type: none"> Site allowing adequate access for heavy equipment and space for the compost pile(s), carbon source storage, and maneuvering vehicles and equipment. Heavy equipment such as front-end loaders, with skilled operators to create and turn compost piles. A carbon source such as straw, hay, corn silage, wood shavings, or other high carbon organic material. Nitrogen (found naturally in manure and carcasses). Water. Composting subject matter expert to oversee compost construction. WSDA, Ecology, and WSU Extension can assist with identifying qualified personnel. 	<ul style="list-style-type: none"> Appropriate carcass composting site considerations: <ul style="list-style-type: none"> » Prevailing winds that do not affect nearby residences, farms or communities. » Adequate, gentle grade slope to encourage on-site drainage. » A site not affected by potential leachate, odors, or pests. » A location not on a flood plain. A location a safe distance from water bodies, water wells, or drainage leading to water bodies or wells. Compost piles require turning, and temperature monitoring to ensure pathogen desiccation.
<p>Rendering</p> 	<ul style="list-style-type: none"> Rendering is a preferred off-site option with some limitations due to timing challenges and access to carcasses during natural disaster events. It is low cost and results in a product of value from rendered carcasses. 	<ul style="list-style-type: none"> Transportation (may be available through the renderer) - transporters of animal carcasses must comply with all applicable regulations; and Timely access to carcasses (natural disaster conditions can often prevent timely access, causing the carcasses to be unusable for rendering). 	<ul style="list-style-type: none"> Animals that have been euthanized with barbiturates are prohibited from going to rendering.

METHOD	DESCRIPTION	RESOURCES NEEDED	CONSIDERATIONS
Landfills 	<ul style="list-style-type: none"> Landfills are an off-site option. Limiting factors in using landfills include: acceptance of carcasses by the landfill, acceptance of diseased materials by the landfill, amount of landfill material available after an event to cover the carcasses, and the number of carcasses to be landfilled. 	<ul style="list-style-type: none"> Leak-proof transport for carcasses - transporters of animal carcasses must comply with all applicable regulations. Access to animals (time is not a factor as with rendering). Equipment to load carcasses into transport vehicles. 	<ul style="list-style-type: none"> Make arrangements in advance to ensure a landfill will accept carcasses for disposal. Some landfills will not accept animals euthanized with barbiturates. Some landfills will not accept animals outside of the animal county of residence
Incineration 	<ul style="list-style-type: none"> Incineration is an off-site option for smaller scale events. This option may not be viable beyond routine mortalities or for smaller carcasses, such as poultry. Using this carcass disposal option requires appropriate permits be obtained in advance through Ecology or the local air pollution control authority. 	<ul style="list-style-type: none"> Environmental permits to incinerate. Transportation to incineration sites - transporters of animal carcasses must comply with all applicable regulations. 	<ul style="list-style-type: none"> Off-site incineration may be an option for some sites and circumstances. Effective when used properly. Best for smaller scale disposal. Not readily available. Need to work with approved facility.

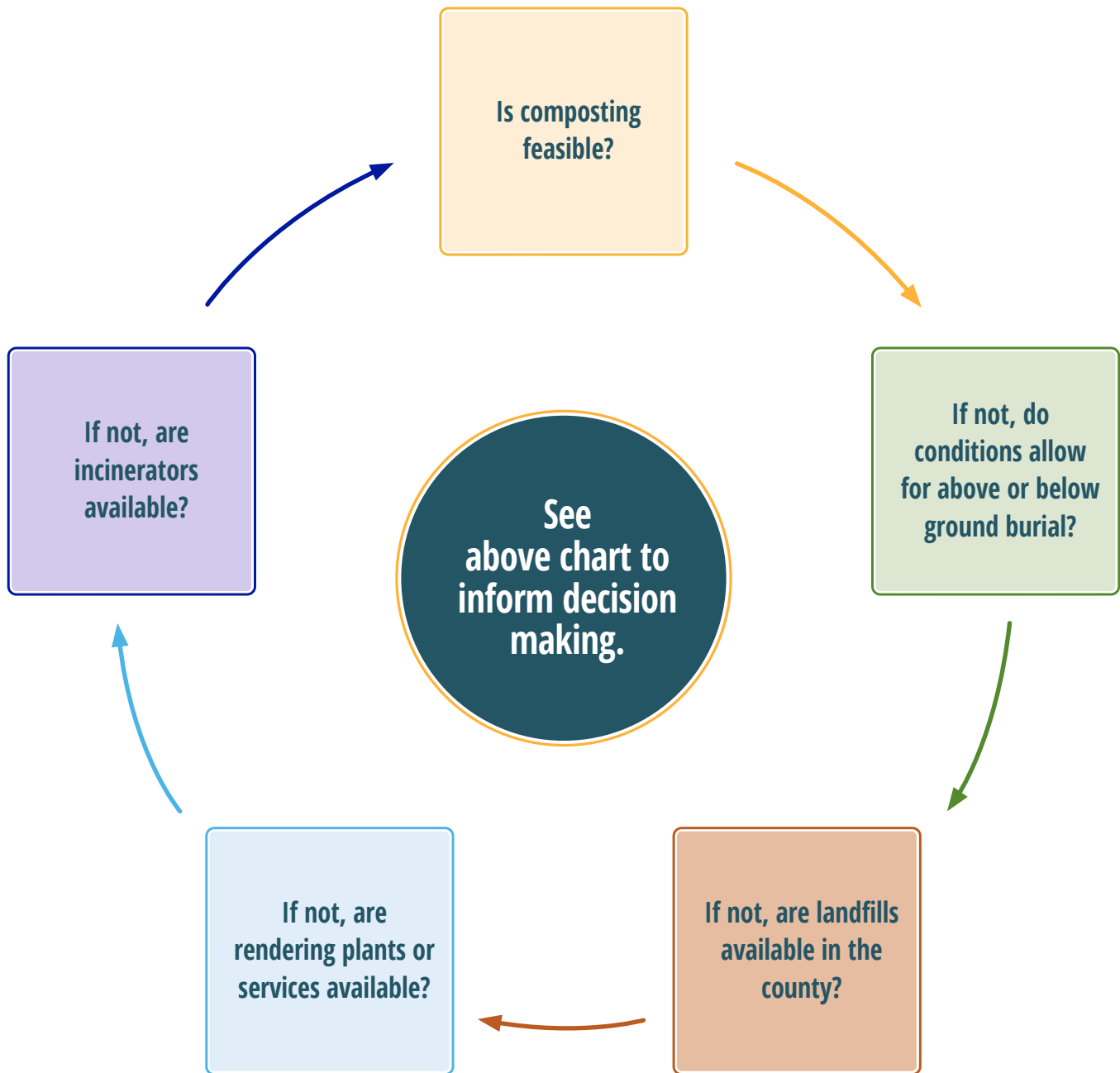
Contact the Washington Office of the State Veterinarian for more information:

Phone: 360-902-1878

Web: agr.wa.gov and search for the Animal Health Program

Email: ahealth@agr.wa.gov

Mortality Management Decision Cycle



*Flow adapted from the [FADPreP Emergency Carcass management Desk Reference Guide](#) indicates an order of options for catastrophic animal mortalities from a natural disaster. During a disease response, disposal measures to remove animal carcasses and associated materials, including contaminated animal feed and manure, are implemented to prevent the introduction and spread of infectious pathogens to other animals or farms. In the event of a Foreign Animal Disease (FAD) outbreak, the [USDA FAD PReP/NAHEMS Guidelines: Disposal](#) and the [FADPreP Emergency Carcass management Desk Reference Guide](#) document will be used to provide guidance on choosing and using optimal disposal methods for a range of situations.