



COMMONWEALTH of VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
Solid Waste Guidance Memorandum

**Subject:** Waste Guidance Memo No. 03-2009  
**On-Site Burial of Routine Animal Mortality**

**To:** Regional Waste Program Managers  
Regional Water and Agriculture Program Managers  
Regional Solid Waste Inspectors  
Regional Agricultural Inspectors

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**Summary:**

This guidance is provided to the regulated community in response to the new FDA requirements for rendering facilities and provides an alternative disposal method for routine/daily animal mortality by allowing and regulating on-site burial of these animal carcasses.

**Electronic Copy:** An electronic copy of this guidance is available on DEQ's website at <http://www.deq.virginia.gov/>.

**Contact Information:** Please contact Debra Miller at (804) 698-4206 or [Debra.Miller@deq.virginia.gov](mailto:Debra.Miller@deq.virginia.gov) with any questions regarding the application of this guidance.

**Disclaimer:** *This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any alternative method. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.*



## On-Site Burial of Routine Animal Mortality

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### **I. Background and Introduction**

Due to additional requirements implemented by the FDA, farmers and other livestock owners can no longer obtain rendering services for cattle or are being faced with higher rendering service bills, less frequent service, and a requirement to segregate brain and spinal material from cattle carcasses. Recent regulations on horse slaughter have also resulted in a reduction in rendering services available. As a result, DEQ developed this document which will provide guidance for on-site disposal of animal carcasses.

Rendering facilities in Virginia have notified their customers that they will cease acceptance of most cattle because of the requirement to remove brains and spinal cords from cattle 30 months of age and older. While this FDA rule applies only to cattle, local disposal options are limited for other livestock species such as sheep, swine, or horses. Rendering is the preferred option for livestock disposal; however, the availability of rendering as a means for disposal of routine livestock mortalities has been greatly reduced and other options may not be economical or locally available. This guidance provides criteria for conducting on-site burial of dead animals in such a manner as to not create an open dump, hazard or nuisance.

### **II. Authority**

§ 10.1-1402 of the Virginia Waste Management Act, Chapter 14 (§ 10.1-1400 *et seq.*) of Title 10.1 of the Code of Virginia, authorizes the Virginia Waste Management Board to promulgate regulations necessary to carry out its powers and duties and the intent of the Act.

This guidance is consistent with Virginia Code § 18.2-510; Burial or cremation of animals which have died, which addresses management of animal mortalities.

### **III. Definitions**

The definitions in the Virginia Waste Management Act and the Virginia Solid Waste Management Regulations, 9 VAC 20-80 *et seq.* (VSWMR) apply to this policy. However, for clarification, some VSWMR definitions are included below:

"Nuisance" means an activity which unreasonably interferes with an individual's or the public's comfort, convenience or enjoyment such that it interferes with the rights of others by causing damage, annoyance, or inconvenience.

"Open dump" - means a site on which any solid waste is placed, discharged, deposited, injected, dumped or spilled so as to present a threat of a release of harmful substances



into the environment or present a hazard to human health. Such a site is subject to the Open Dump Criteria in [9VAC20-80-180](#).

#### **IV. Hierarchy for Animal Mortality Management**

DEQ recognizes that available options for animal disposal vary across the Commonwealth. A hierarchy of animal disposal options has been developed indicating DEQ's preference for environmentally sound animal mortality management in Virginia. The order of mortality management options that should be pursued are as follows:

- 1) Rendering- to recycle animal mortality into useful products in commerce
- 2) On-site composting- to convert animal mortality back into stable soil nutrients
- 3) Concentrated animal composting – composting of mortality at DEQ permitted composting facilities
- 4) Incineration - using a DEQ permitted incinerator to sanitarly dispose of mortality
- 5) Landfill burial – burial in a permitted sanitary landfill (please contact your local landfill first for their acceptance procedures).
- 6) On-site burial - burial on the site that animal mortality waste is generated

#### **V. Guidance Document**

This guidance applies only to routine animal mortality at sites engaged in the raising or husbandry of domestic livestock for private use, such as traditional farm-based livestock husbandry. This guidance does not apply to agricultural operations defined as Animal Feeding Operations (AFOs) by DEQ or poultry operations. Additionally, this guidance does not apply to epidemic or mass culling of herds due to disease or catastrophes. In those cases, the State Veterinarian shall be contacted and disposal shall be accomplished in accordance with all appropriate state regulations and requirements.

DEQ must emphasize that management of animal mortalities should follow the waste management hierarchy as promoted by DEQ (see Section IV). Thus, when feasible, animals should be reused (rendered), treated and reused (composted on-site or at a permitted composting facility), disposed at a permitted facility (incineration or landfill), and finally, as a last option, buried on-site. Please note, DEQ and Virginia Cooperative Extension have additional information on methods of on-site composting for large animals (see DEQ Waste Guidance Memorandum 02-2009) and other disposal options. In most cases, composting on-site in accordance with DEQ Waste Guidance Memorandum 02-2009 is a preferred option over on-site burial. Please contact your local DEQ office or Virginia Cooperative Extension office for information on disposal options available in your area.

Farmers/livestock owners, who are not able to reuse, compost, or landfill their mortality per the hierarchy of Section IV, may choose to bury their routine animal mortality and shall adhere to all of the following criteria for on-site burial:

- Burial shall only occur on the property which is used for the raising or husbandry of livestock.

- The carcass shall be buried within 48 hours of death and prior to creation of an open dump, hazard, or nuisance situation.
- Each carcass shall be buried in a separate pit (i.e., one carcass per burial pit).
- There must be at least two acres that are able to meet the siting criteria for burial as noted below.
- Burial pits shall NOT be within:
  - 50 feet of the property boundary;
  - 100 feet of any surface waters (streams, creeks, ponds, lakes, rivers, wetlands, etc.);
  - 200 feet from any well or spring currently used as a drinking water source;
  - 50 feet from caves and sinkholes;
  - 50 feet of rock outcrops;
  - a 25-year floodplain as defined by FEMA and/or local planning officials;
  - two (2) feet from high seasonal groundwater table (i.e., bottom of the pit);
  - areas where bedrock occurs at a depth less than five (5) feet;
  - 200 feet from any off-property residence, health care facility, school, recreational park area, daycare or similar public institution ; and
  - 25 feet from all other buildings and structures.
- The carcass shall be buried deep enough to cover the top of the carcass with at least two (2) feet of compacted soil to keep other animals from unearthing the carcass.
- Carcasses shall not be buried deeper than six feet below grade.
- On-site burial is limited to 2,000 lbs of dead animals on any given acre per year.

The animal mortality management hierarchy shall be followed, as applicable, prior to making any decision to bury animal mortalities on-site. If no other management method is suitable, on-site burial offers flexibility and is reasonably convenient. The information presented provides criteria to utilize in order to safely bury routine animal mortality.

## **VI. Compliance Evaluation**

Animal mortality is highly putrescible and of potential concern for vectors and pathogens detrimental to human health and the environment. These wastes should be transported quickly and directly to the site of reuse or disposal. Animal mortality should not be handled through a public convenience center or waste transfer station unless specifically allowed by the DEQ.

Routine animal mortality burial will not be appropriate in all communities and geographic areas of the Commonwealth. In areas where other waste disposal options are available, the option highest in the mortality management hierarchy shall be pursued first. Burial shall not be allowed in areas where it is prohibited by local government. Please contact your local government concerning prohibitions.

Animal mortality burial on the site of origin will be considered exempt from regulation under VSWMR so long as these wastes are handled in a manner that does not constitute a public nuisance, health hazard or open dump. DEQ retains the obligation and right to investigate any and all sites of animal burial, to the limit allowed by state law, to verify

that site operations do not create a nuisance, open dump, or threat to human health and the environment.

For purposes of determining compliance with this guidance, a site may be deemed a nuisance if:

1. There is any exposure of animal carcass;
2. The site is malodorous to the point of offense to neighbors and by-passers;
3. It attracts scavengers, rodents, insects or other vectors;
4. The burial site discharges fluids or has staining indicative of surface discharge;
5. Standing water is pooled above or adjacent to the burial site;
6. The site is unsightly and ill-kept;
7. The burial is not carried out in accordance with this guidance criteria; or
8. The site constitutes an open dump.

If any of the above conditions exist, appropriate DEQ compliance/enforcement action shall be pursued.

## **VII. Collaboration Process**

This guidance was developed by a small project team consisting of Central and Valley Regional Office staff from the Solid Waste and Agricultural programs. Additionally, staff from Virginia Cooperative Extension, and Virginia Department of Agriculture and Consumer Services were consulted with in its preparation. The timing of the rendering ban precluded the forming of a larger team to develop this guidance.