

SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL



GUIDANCE FOR ADDRESSING BURIAL OF
DEAD ANIMALS

Effective **April 15, 2020**

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I. INTRODUCTION

Agricultural Permitting Section of the South Carolina Department of Health and Environmental Control developed this guidance document for addressing the burial of dead animals. This guidance is to assist with R.61-43 Part 100.130.B and 200.130.B.

II. AGENCY APPROVAL OF ANIMAL DISPOSAL SITES

In order to obtain approval for a dead animal disposal site approval, an application (DHEC form 2511 – Standard Application Form for Agricultural Permit Modifications for existing facilities) with a management plan or an addendum must be submitted and written approval must be obtained from the Department before any animals are disposed of.

(A) Management Plans / addendums must contain:

- (1) A burial evaluation signed and stamped by one of the following; a licensed Professional Engineer, Professional Geologist, persons certified by SCDHEC in water table estimation and soil textural classification, a Certified Soil Classifier/Scientist, or qualified NRCS personnel.
- (2) All of the following; topographic map of the area, area map, site map, and burial location map depicting setbacks, elevations, and where the soil samples were taken in the proposed pit.
- (3) Soil logs with description of soil and seasonal groundwater table (Use DHEC Form 1903)

III. MANAGEMENT OPTIONS

Animals' carcasses may be disposed of by the following options:

- (A) At a certified solid waste disposal facility R.61-107.258,
- (B) Incineration,
- (C) Rendering with a contract,
- (D) Composting,
 1. Bin composting
 2. Windrow in the barns
 3. Biovators
 4. ECO Drums
 5. Rotoposters
 6. Hay Bale Composters

(E) In an approved animal disposal site as outlined in this procedure;

(1) Farm Animals- Daily, Mass or Excessive, Mortality

Large burial trenches / pits may be utilized for emergency conditions, as determined by the Department, when the primary method of disposal, including daily burial, is not sufficient to handle excessive mortality.

- a) Burial trenches / pits shall not be located in the 100-year floodplain.
- b) Soil type shall be evaluated for leaching potential.
- c) Burial trenches / pits shall not be located or utilized on sites that are in areas that may adversely affect surface or groundwater quality or further impact impaired water bodies. (Source Water Protection Areas)
- d) The bottom of the burial trench / pit may not be within 2 feet of the seasonal high groundwater level.
- e) No burial site shall be allowed to flood with surface water.
- f) Animals placed in a burial site shall be covered daily with sufficient cover (6 inches per day minimum) to prohibit exhumation by feral animals.
- g) When full, the burial site shall be properly capped (minimum 2 feet) and grassed to prohibit erosion.
- h) Proposed burial trench / pit sites shall be approved by the Department. The Department will review the geologic assessment of the proposed burial site prior to approval. Formation descriptions of soil borings should be provided on DHEC Form 1903.
- i) The Department may require any new or existing producers to utilize another method of disposal if burial is not managed according to the Plan or repeated violations of these burial requirements occur or adverse impact to surface or groundwater is determined to exist.
- j) The Department may require groundwater monitoring for dead animal burial trenches / pits on a case-by-case basis. The Department shall consider all of the facts including, but not limited to, the following: depth to the seasonal high water table; aquifer vulnerability; proximity to a State Approved Source Water Protection Area; groundwater use in the area; distance to adjacent surface waters; number of dead animals buried; and frequency of burial in the area.

IV. ANIMAL DISPOSAL PITS

Animal Disposal Trenches / Pits are an alternative to disposing of animal carcasses in a solid waste disposal facility or by one of the allowable alternative methods specified. Animal disposal trenches / pits must be designed and managed according to the following the criteria. Daily and mass burial trenches / pits can be the same area. If there are two different areas both locations must meet the same requirements:

(A) Siting of Animal Disposal Trenches / Pits

- (1) Will not to be located in the 100-year floodplain;
- (2) At least 200 feet from the property line or 1000 feet from a residence (whichever is greater) for 500,000 pounds or less for all animals other than swine
- (3) At least 400 feet from the property line or 1000 feet from a residence (whichever is greater) for 500,000 pounds or less for all animals other than swine,
- (4) At least 200 feet from property line or 1000 feet from residence (whichever is greater) for 250,000 pounds or less for swine;
- (5) At least 400 feet from property line or 1000 feet from residence (whichever is greater) for 250,000 to 500,001 pounds for swine;
- (6) At least 1250 feet from property lines for 750,001 to 1,000,000 pounds for swine;
- (7) At least 200 feet from water supplies not owned by applicant;
- (8) At least 50 feet from water supplies owned by applicant
- (9) At least 100 feet from waters of the State for other than swine and 200 feet from waters of the State for swine;
- (10) Bottom of pit not less than 2 feet above seasonal high groundwater, or less than 5 feet above bedrock;
- (11) Uniform soil samples across the proposed site to verify a site consistent seasonal high groundwater table.
- (12) Trenches / Pits must be dug along the ground contour.

For additional setbacks requirements please reference Table 1 and the Regulations 61-43.

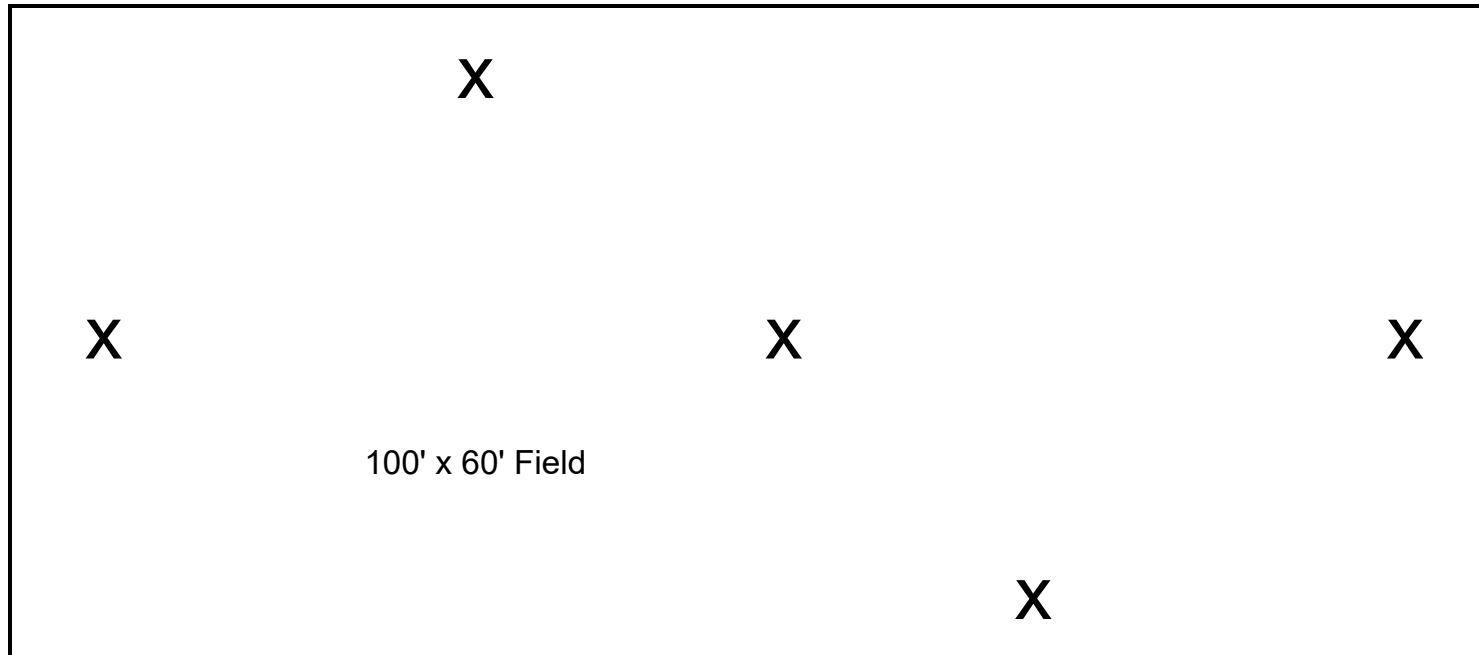
(B) Management of Dead Animal Disposal Trenches / Pits

If you bury your carcasses on your own property, you should follow these best management practices:

- (1) The trench / pit must be managed so that the carcasses do not attract pests or vectors;

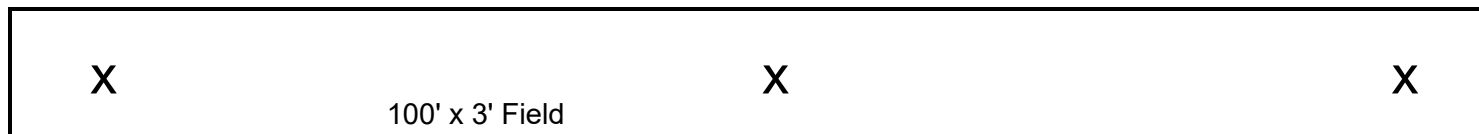
- (2) Upon their deposit in the trench / pit the carcasses must be:
 - a) Covered with a minimum of 6" layer of cover per day; or
 - b) Be covered with boards or other approved material; or
 - c) Managed in an alternative manner if approved in advance by the Agricultural Permitting Section; or
 - d) There should be a bottom layer of carbon source (straw or hay), then a layer of birds, then another layer of carbon source. Alternate and repeat layers until burial site is full (2 feet of ground cover).
 - e) Layers of lime or quicklime should be applied below and above the carcass to help accelerate decomposition of the waste. Care should be used in applying lime as it is caustic and can cause severe burns to the skin and eyes;
- (3) Active trenches / pits should have markers, or equivalent around the perimeter until the top of pit is at ground level;
- (4) No carcasses shall be deposited within 12" of the surface (variations may be approved by the Department);
- (5) Burial trenches / pits must be covered with a minimum of two feet of soil. Final cover shall consist of at least 2 feet of compacted soil (no more than 12" above grade) and seeded.
- (6) Surface water must be diverted from the burial site through the use of berms or other structures.
- (7) Burial sites should not be located in areas with fractured or cavernous rock, high seasonal water tables or highly permeable soils.
- (8) Carcasses cannot be placed in any body of water, seasonal creek or pond, or in areas that may carry or hold water such as gullies, ditches, blowouts or natural depressions.
- (9) To minimize potential impacts to groundwater, large numbers of bigger carcasses (e.g., more than ten cows) should not be limed and buried together.

Emergency Burial Plot



Soil borings should be completed across the entire field to assure that the seasonal high water table requirements are met. The size of the field will determine how many samples you should take. Soil borings should be completed 40 to 50 feet apart (possibly closer depending on the seasonal high water table). Burial plots should be constructed parallel to the topographic contours, not perpendicular. If your pit is going to be 5' deep, it must be 2' above the seasonal high water table, 2' of burial (a layer of animal, hay, and soil, and repeat), this leaves 1' of space between the surface and animals. After filling the pit to surface, you must put another 1' of soil above grade, mounding so runoff will slope away from the pit, and it must be grassed. The area needed for emergency burial of the entire flock will need to be determined by the plan preparer and signed by a P.E., P.G., certified Soil Scientist.

Daily Burial Plot



Soil borings should be completed across the entire field to assure that the seasonal high water table requirements are met. The size of the field will determine how many samples you should take. Soil borings should be completed 40 to 50 feet apart (possibly closer depending on the seasonal high water table). Burial plots should be constructed parallel to the topographic contours, not perpendicular. If your pit is going to be 5' deep, it must be 2' above the seasonal high water table, 2' of burial (a layer of animal, hay, and soil, and repeat), this leaves 1' of space between the surface and animals. After filling the pit to surface, you must put another 1' of soil above grade, mounding so runoff will slope away from the pit, and it must be grassed. Daily burial pits may be put in the same area as an approved emergency pit.