Animal Mortality Facility - Emergency Disposal

Conservation Practice Job Sheet ***FL316JS***

Natural Resource Conservation Service (NRCS) Fact Sheet May 2003

Client: _____ Farm # _____ Tract # _____

General Information

Each producer should have an established method to handle day-to-day disposal of mortalities. However, in the event of an unexpected disaster, a producer will need to dispose of a mass die-off. Each producer should have an emergency disposal plan in place. This plan should include a list of phone numbers of those to be contacted.

Disposal by a rendering company should be the preferred method of carcass disposal. Disposal at a landfill may be an option in some locations. When these methods are not available or when the catastrophic death is caused by a disease, on-farm disposal will have to be considered.

On-farm methods include burial and composting. Of these two methods, composting is considered the most environmentally sound. Burial can possibly result in ground water contamination and often creates a negative public image.

The State Veterinarian with the Florida Department of Agriculture and Consumer Services is responsible for approving methods or systems of dead animal carcass disposal.

Whether burying or composting, the disposal site should be evaluated for the following:

- Soil type,
- Depth to bedrock,
- Presence of fractured or cavernous bedrock,
- Depth to seasonal high water table. Seasonal high water table is defined as a zone of saturation at the highest average depth during the wettest season.
- Flooding hazard,
- Proximity to waterbodies (rivers, streams, ponds, lakes, etc.),
- Proximity to wells, and
- Distance to public areas

If the potential exists for animals such as coyotes, dogs, possums, etc., to dig into the burial or composting site, either use more than the two feet of cover material recommended or use an appropriate fence to exclude these type animals.

Burial

Burial of animals is not permitted for day-to-day mortalities. Burial should be used only in emergencies or on occasion to dispose of a large animal.

Site Approval

Contact the local NRCS office for an on-site assessment to establish a suitable burial site. In the event of a massive die-off, notify the State Veterinarian for approval to use the burial site for disposal.

Site Evaluation Criteria

Dead animal burial sites should be:

- At least 150 feet down gradient from any water supply source.
- At least 100 feet from a water body or stream.
- No closer than 2 feet from bedrock or the seasonal high water table.
- Located in suitable soils. Soils suitable for a sanitary landfill (trench) are also suitable for this purpose.

Burial Procedure

Burial sites are to be dug an appropriate depth for the specific soil and geologic conditions. The burial pit shall be a minimum of 4 feet wide with the length necessary to accommodate mortality. The maximum size of the burial excavation should be 0.1 acre

(about 4,400 sq. ft.). Multiple burial sites may be needed.

For small animals (poultry, nursery pigs, etc.) place carcasses no thicker than one foot and cover each layer with at least one foot of soil. Carcasses of large animals (hogs, cattle, etc.) should be placed in one layer and covered with a minimum of two feet of soil. For deep soils (where bedrock, water table, etc. is not a concern), carcasses and soil can be placed in multiple layers up to a total depth of eight feet.

In areas with high water tables, carcasses may be disposed of by placement on the natural ground, covering daily with six inches of compacted soil and a final fill of two feet of compacted soil.

The burial site should be mounded with a covering of at least two feet of soil, and surface water should be diverted away from the mound. The site should be vegetated immediately after completion to prevent erosion of the soil covering.

Appropriate safety measures should be used during excavation and material placement. Excavations over 3.5 feet deep should be sloped on the sides at least 1.5 (horizontal) to 1 (vertical) (1.5:1).

Composting

An alternative to burial is outdoor composting in windrows, bins made with large hay bales, or silage-type bunkers. Suitable bulking materials include chicken litter, sawdust, peanut hulls, straw, small wood chips, etc. Maximizing carcass contact with the bulking material will improve composting efficiency. Water may need to be added during the carcass and bulking material layering process when using dry bulking material.

The composting site should have a good vegetative filter around the pile for at least 20 feet.

Begin the composting process by placing 12 inches of bulking material.

Windrows

Windrow composting is best suited for small animal carcasses and may require specialized equipment to turn the compost for subsequent stages. The compacted clayey pad for windrowing should be approximately six feet wide. Place carcasses in one layer (three feet wide) and cover with an equal thickness of bulking material. Add additional layers up to a total depth of about two feet. Cover the windrow with a minimum of two feet of bulking material.

Hay Bale Bins

Place the bales end-to-end to form walls for three-sided enclosures. Excessively large bins should be avoided. A layout of two to three bales deep and three bales wide is the suggested size. Fill the bins with alternating layers of carcasses and bulking material. The carcasses should be one layer thick, and should be covered with an equal depth of bulking material. Cover the bin with a minimum of two feet of bulking material.

Silage-type Bunkers

Fill the bunker with alternating layers of carcasses and bulking material. The carcasses should be one layer thick, and should be covered with an equal depth of bulking material. Cover the bunker with a minimum of two feet of bulking material.

Maintenance

The compost may need to be re-covered after a day or two as the compost pile settles. Temperature monitoring is recommended to ensure adequate temperatures of 130-150 ^{o}F have occurred.

During rainy periods cover the compost pile with plastic to avoid possible anaerobic odors from the pile and to avoid seepage or runoff from the pile.

The composting process will work best when the moisture content is 45 - 55 percent by weight (similar to a damp sponge). Water may need to be added when compost is turned.

After two months, turn the compost and allow it to undergo a second composting stage. Any animal parts exposed in this process should be covered with additional bulking material. Allow two additional months before land applying this material. If raw animal parts exist after the second composting stage, a third compost cycle will be required.

The compost should be land-applied at agronomic rates in accordance with FL NRCS conservation practice standard Nutrient Management, Code 590.

References

NRCS FL Conservation Practice Standard
Code 316 – Animal Mortality Facility
Code 317 - Composting Facility
Code 590 – Nutrient Management

Animal Mortality Facility - Emergency Disposal Specification Sheet *FL316JS*

Client: _____ Contract Id _____

Farm Number: _____ Tract Number: _____ Location (fields): _____

Date and version of NRCS standard used: _____

Planned by: _____ Date: _____

Checked by: _____ Date: _____

Approved By: _____ Date: _____

Method of Disposal (Check all that apply):

Type of operation (dairy, layer, broiler, hog, etc.): _____

Number of animals at this operation: _____

☐ **Landfill**

☐ **Rendering**

☐ **Composting**

- ☐ Windrows
- ☐ Hale Bale Bins
- ☐ Silage-type Bunker

☐ **Burial**

Size of Pit: Length _____ ft

Width _____ ft

Depth _____ ft

Side Slope: ___:1 ft

Number of Pits: _____

Location Map

Additional Information:

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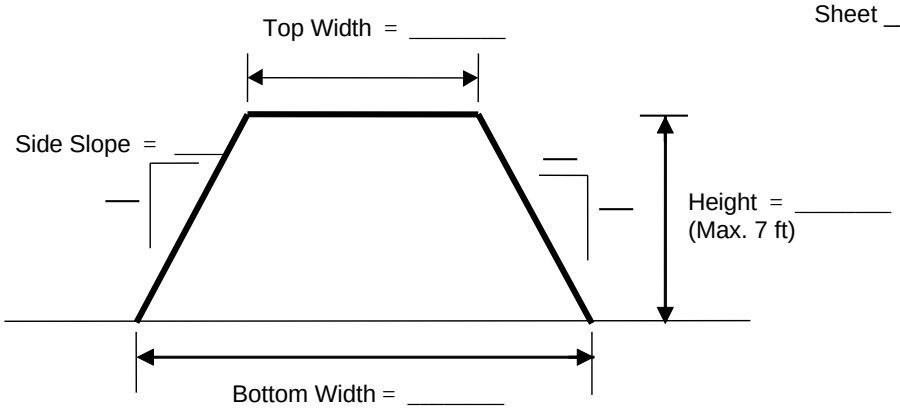
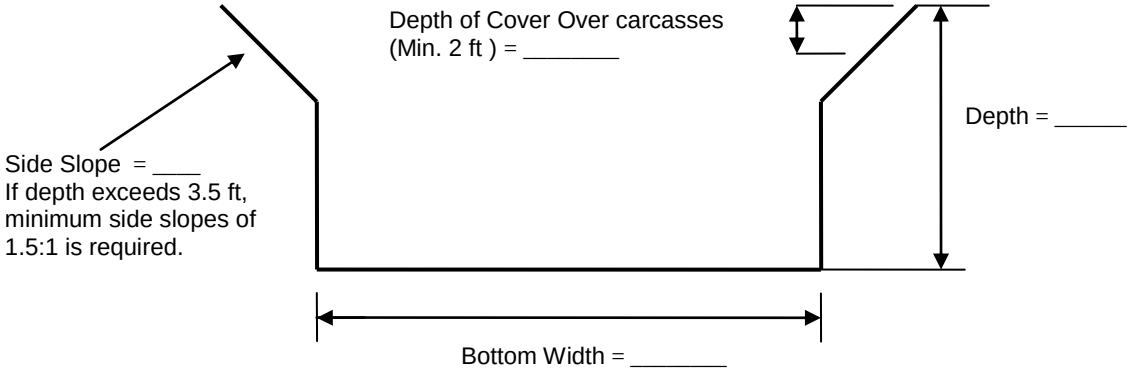
Sheet ___ of ___



Typical Composting Section

Length of Pit = _____



Typical Burial Pit Section

Operation and Maintenance

This practice meets NRCS specifications yes ☐ no ☐

Signature of authorized conservationist: Date:

Follow-up Observations:

Were the primary goals and objectives accomplished? yes ☐ no ☐

If no, why did the type of emergency disposal fail to meet the goals and objectives?

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