Rev. 1/16/2016

**FLORIDA ANIMAL PRODUCER GUIDANCE**

**FOR**

**ROUTINE DISPOSAL OF ANIMAL CARCASSES**

This guidance applies to routine animal mortality encountered by animal producers. It does not apply to catastrophic animal loss resulting from disease outbreaks or natural disasters.

Each animal producer should have an established method to handle disposal of routine animal mortality.

**Mortality Due to Disease**

Animals that die due to disease should be disposed of according to Florida Statute 823.041 and local laws in a manner that does not adversely affect ground or surface water or create public health concerns. Florida Statute 823.041 states:

 *Any owner, custodian, or person in charge of domestic animals, upon the death of such animals due to disease, shall dispose of the carcasses of such animals by burning (allowed only in incinerators) or burying at least two feet below the surface of the ground; provided, however, nothing in this section shall prohibit the disposal of such animal carcasses to rendering companies licensed to do business in this state.*

 *It is unlawful to dispose of the carcass of any domestic animal by dumping such carcass on any public road or right-of-way, or in any place where such carcass can be devoured by beast or bird.*

 *Any person violating any of the provisions of this section shall be guilty of a misdemeanor of the second degree, punishable as provided in Florida Statutes 775.082 or 775.083.*

For the purposes of this statute, the words "domestic animal" shall include any equine or bovine animal, goat, sheep, swine, dog, cat, poultry, or other domesticated beast or bird.

**Mortality Not Related to Disease**

Animals that die of causes not related to disease should adhere to the disposal guidance provided below.

**Off-site disposal by a rendering company:**

Rendering is a mechanical, thermal, or chemical process for the disposal of routine animal mortalities. It involves the conversion of carcasses into three end products: carcass meal, melted fat or tallow, and water.

Commercial rendering facilities in Florida can be located by visiting the website directory of the National Renderers Association at: <http://www.nationalrenderers.org/about/directory/>.

**Off-site disposal at a landfill facility:**

In Florida, Class 1 landfill facilities may accept biological waste, which includes animal carcasses.

Locations may be found by contacting the county solid waste disposal agency for the closest landfill operator’s name and contact information. Another option is to contact the Florida Department of Environmental Protection at (850) 245-8706.

**Off-site or on-site incinerating:**

In Florida, while open burning of animal carcasses is not allowed, privately-owned incinerators or commercial incineration facilities are options available to the producer. Incinerator owners or operators must obtain construction and operating permits before construction or use.

Modern incineration equipment is designed to reduce carcasses to residual ash. Producers should dispose of residual ash in an appropriate manner recommended by United States Department of Agriculture-Natural Resource Conservation Service (USDA-NRCS) Florida Conservation Practice Standard, Nutrient Management (Code 590 located at <http://efotg.sc.egov.usda.gov/references/public/FL/FL590.pdf>.

Commercial incinerator locations or private incinerator construction and operating permit information may be obtained by contacting the Florida Department of Environmental Protection at

(850) 245-8706.

**On-site composting:**

Composting is a natural, biological process involving the decomposition of organic materials in a predominantly aerobic environment. During the process, bacteria, fungi, and other microorganisms break down organic materials into a stable mixture called compost, while consuming oxygen and releasing heat, water, carbon dioxide (CO2) and other gases.

Composting is a preferred method of animal carcass disposal, and is more environmentally sound than burning or burial. Two recommended methods of compositing are described below.

 Pile or Windrow composting:

 A compacted pad for composting should be prepared approximately twice as wide as the animals to be composted. Place a base layer of absorbent bulky at least 12 inches deep. If an individual large animal carcass is being disposed of, place in the center of the pad. If multiple carcasses are being disposed of, place large animal carcasses in a row on their sides down the center of the prepared pad. If small animal carcasses are being disposed of, up to four multiple alternating layers of carcasses and bulking material can be made. Cover carcass with an equal thickness of bulking material. Cover the windrow with a minimum of two feet of additional bulking material.

 Compost piles or windrows should not be placed in areas that frequently flood. Compost piles or windrows should not be located:

* + Within 200 feet of a potable or irrigation water well,
	+ Within 200 feet of a natural or artificial body of water, and
	+ Within 100 feet of a property boundary.

 Whenever possible, compost piles or windrows should be covered with a fleece blanket or other breathable material that will shed water but transfer air. A cover captures the heat produced, protects from scavengers, and sheds rain.

 Bin composting:

 A bin is constructed that confines the material to be composted while allowing air to flow through the composting material. It can also help keep animals from accessing the carcasses.

 A simple bin may be constructed of different materials such as wood pallets for smaller animals or hay bales for larger animals or large volumes of smaller animals, and is formed into a three-sided structure. Excessively large bins should be avoided. 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 additional bulking material.

Detailed information about these and other composting methods can be obtained by exploring the links provided below.

Composting methods are discussed in the USDA-NRCS National Engineering Handbook (NEH) Part 637, Chapter 2 (Composting) located at <http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=18398.wba>.

Composting methods and facility structural elements are also discussed in the USDA-NRCS Florida Conservation Practice Standard, Composting Facility (Code 317) located at <http://efotg.sc.egov.usda.gov/references/public/FL/fl317_CPS_June_2013.pdf>.

When applying composted materials to land, the USDA-NRCS Florida Conservation Practice Standards, Nutrient Management (Code 590) and Waste Utilization (Code 633) should be followed. The Nutrient Management (Code 590) can be found at <http://efotg.sc.egov.usda.gov/references/public/FL/FL590.pdf>. The Waste Recycling (Code 633) can be located at <http://efotg.sc.egov.usda.gov/references/public/FL/fl633_Aug_2012.pdf>.

**On-site burial:**

Burial must be done properly to prevent groundwater contamination, which is a high possibility in Florida with its porous soils, geological formations, and high water table. Two recommended methods of burial are described below.

 Trench burial:

 On-farm burial of routine mortality typically is done using the trench burial method, which is excavating a narrow and relatively shallow trench with a backhoe, placing a single layer of carcasses in the trench, and covering them with the excavated soil.

 The bottom of the trench should be two feet above the seasonal high water table. The trench should be a minimum of four feet wide with the length necessary to accommodate the carcasses. Surface water and storm water runoff should be diverted from the trench.

 For small animals, place carcasses in a layer no thicker than one foot and cover each layer with at least one foot of soil with a final cover layer of two feet. Carcasses of large animals should be placed in one layer and covered with a minimum of two feet of soil.

 Trench burial should not be located:

* Within 500 feet of any potable or irrigation water wells,
* Within 200 feet of a natural or artificial body of water,
* Within 100 feet of a property boundary,
* In any natural or artificial body of water, including groundwater,
* In a 100-year floodplain,
* In a dewatered pit, or
* On the right-of-way of any public highway, road, or alley.

 To determine the optimum location for trench burial based upon soil characteristics and seasonal high water table, refer to the Web-based USDA-NRCS Web Soil Survey (WSS) described below or contact the local USDA-NRCS office. Local Field Office locations and contact information can be found at <http://www.nrcs.usda.gov/wps/portal/nrcs/main/fl/contact/local/>.

 Above ground burial:

 In areas with high water tables, carcasses may be disposed of by placement on the natural ground, covered with six inches of compacted soil and then a final covering of two feet of compacted soil. Surface water/storm water should be diverted away from the mound.

 The sides of the mound should have a gradual slope to prevent erosion. The finished mound should be more than one and a half times wide as it is tall.

 The site should be vegetated immediately to prevent erosion of the soil covering. For planting designs, species, conditions and rates refer to the USDA-NRCS Florida Conservation Practice Standard, Critical Area Planting (Code 342) located at <http://efotg.sc.egov.usda.gov/references/public/FL/FL342.pdf>.

 Above ground burial should not be located:

* Within 500 feet of any potable or irrigation water wells,
* Within 200 feet of a natural or artificial body of water,
* Within 100 feet of a property boundary,
* In any natural or artificial body of water, including groundwater,
* In a 100-year floodplain,
* In a dewatered pit, or
* On the right-of-way of any public highway, road, or alley.

**Additional Information**

**Additional issues for on-site disposal of animal carcasses:**

For on-site carcass disposal, producers should develop a suitable on-farm/ranch facility for the treatment or disposal of domestic animal carcasses in accordance with USDA-NRCS Florida Conservation Practice Standard, Animal Mortality Facility (Code 316) located at

<https://efotg.sc.egov.usda.gov/references/public/FL/fl316_CPS_Jan_2016.pdf>

Objectionable odors generated by gases from carcass decomposition should be controlled using additional soil or bulking material cover or other management techniques.  For information about methods to manage air quality resources impacted as a result of carcass disposal, refer to USDA-NRCS Florida Conservation Practice Standard, Windbreak/Shelterbelt Establishment (Code 380) located at <http://efotg.sc.egov.usda.gov/references/public/FL/FL380.pdf>.

A surface water/storm water management system should be developed to prevent surface water/storm water from running onto or through carcass disposal areas.

**Comprehensive Nutrient Management Plans (CNMPs):**

To ensure that natural resources are protected and agricultural operations are sustainable, producers should develop whole farm/ranch conservation plans. Confined livestock operators should develop Comprehensive Nutrient Management Plans (CNMPs). For more information, go to the USDA-NRCS Information for Farmers, Ranchers and Other Agricultural Producers at <http://www.nrcs.usda.gov/partners/for_farmers.html> or contact the local USDA-NRCS Field Office. Local Field Office locations and contact information can be found at <http://www.nrcs.usda.gov/wps/portal/nrcs/main/fl/contact/local/>.

**Agency resources and contact information:**

Florida Department of Environmental Protection can answer questions about routine disposal of animal carcasses, and provide guidance on landfill facilities, burial, composting and incineration. Their headquarters in Tallahassee can be contacted at (850) 245-8706. District office locations and contact information can be found at <http://www.dep.state.fl.us/secretary/dist/>.

USDA-Natural Resource Conservation Service (NRCS) can answer questions about routine disposal of animal carcasses and guidance on burial or composting, conservation planning and incentive-based programs designed to assist private landowners in natural resource stewardship and conservation. Please contact the local county USDA-NRCS Field Office or the State Office in Gainesville at (352) 338-9500. Local Field Office locations and contact information can be found at <http://www.nrcs.usda.gov/wps/portal/nrcs/main/fl/contact/local/>.

Florida Department of Agriculture and Consumer Services, Division of Animal Industry, can answer questions about animal deaths due to unusual disease or Florida’s Reportable Animal Diseases. The headquarters in Tallahassee can be contacted at (850) 410-0900. Information about Florida’s Reportable Animal Diseases can be found at <http://www.freshfromflorida.com/Divisions-Offices/Animal-Industry/Business-Services/Veterinarians/Reportable-Animal-Diseases>.

Florida Department of Health, Division of Environmental Health, can answer questions about animal diseases communicable to humans. The headquarters in Tallahassee can be contacted at (850) 245-4250.

**Links:**

The Florida Animal Carcass Management Working Group Website contains an extensive listing of informational links at <http://www.flsart.org/acmwg>.

**USDA-NRCS Web Soil Survey (WSS) website:**

To access the USDA-NRCS Web Soil Survey (WSS):

1. Go to: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.
2. Once at the WSS website, select the “Start WSS” button on the screen and perform the following selections:
3. Select an “Area of Interest” by various methods
provide, e.g., county, township, range and section, etc.
4. Click “View.”
5. Zoom-in on an area of interest.
6. Create an area of interest with one of the “AOI” tools.
7. Select the “soil map” at top of page.
8. Select “soil date explorer” at top of page.
9. Select “disaster recovery planning” topic.
10. Select the “Catastrophic Mortality, Large Animal Disposal, Trench” method of disposal.
11. Select “view rating.”

An aerial map of the proposed disposal site will be displayed with a soil map overlay and a description of the projected limitations of the site for carcass disposal. Based upon soil characteristics to a depth of 79 inches from the surface, areas will be defined as either “Not Limited,” ”Somewhat Limited,” or “Very Limited.” Along with the aerial map, a table of the soils and written description of the rating descriptions will be provided.

 Step 3. To print, save, or e-mail a copy of your soil map and report:

* + 1. Select the “Add to Shopping Cart” tab in the upper right-hand corner.
		2. Click “OK.”
		3. Click on the tab labeled “Shopping Cart (Free).”
		4. Click the “Check Out” tab, and select “get now.”
		5. Your report will come up as a pdf document labeled “Custom Soil Resource Report.”

There is also an “I want help with….How to Use the Web Soil Survey” link on the WSS home page.

Although this website was designed for catastrophic animal mortality, the criteria are applicable for routine animal carcass disposal for on-site burial.