

Washington
State Department of
Agriculture

Livestock Disposal Manual

12/22/2014

About this Manual

This manual is designed to help you, the livestock or poultry producer, to meet the challenge of disposing of your dead animals. This does not apply if an emergency is declared.

Today's livestock mortality management calls for proper and environmentally sound methods of disposal. Several options are available. Those that are approved by the Washington State Departments of Agriculture, and Ecology, as well as the Washington Board of Health are listed but not limited to:

1. Burial
2. Composting
3. Incineration
4. Rendering
5. Landfill
6. Natural decomposition

Questions starting on page two will help you find the appropriate section of law or rule that applies to your situation. Additional resources may be referenced, depending on the topic. Adherence to specific conditions identified in regulation for each option is required. There may be local regulations that limit the application of one or more of these management practices.

Questions to help you find laws, rules, and resources

What constitutes Livestock?

WAC 16-25-020 states: "Livestock" means horses, mules, donkeys, cattle, bison, sheep, goats, swine, rabbits, llamas, alpacas, ratites, poultry, waterfowl, game birds, and other species so designated by statute. This term does not include free ranging wildlife as defined in Title 77 RCW.

How soon must a dead animal be disposed of?

WAC 16-25-025 states: A carcass must be disposed of within seventy-two hours of the time of death or discovery to avoid nuisance odors or disease. If weather conditions prevent burial within seventy-two hours and rendering, composting, landfilling, or natural decomposition cannot be accomplished, then the carcass must be buried as soon as the weather permits.

WAC 246-203- 121 (2)(a)] states: Within seventy-two hours after death or discovery, the owner of a dead animal or, if the owner of the animal cannot be identified, the owner of the property on which the animal is found must properly dispose of the dead animal. A dead animal must be covered or otherwise removed from public view immediately upon discovery by the person responsible for disposing of the dead animal.

I don't know the cause of death. Does this affect the disposal of the carcass?

RCW 16.36.092 states: Every person owning or having in charge any livestock that has died because of disease shall dispose of the carcass within a time frame and in a manner prescribed in rule by the director, which may include, but is not limited to, burial, composting, incinerating, landfilling, natural decomposition, or rendering. Any livestock found dead from an unknown cause is presumed to have died because of disease.

What routine disposal methods are approved?

WAC 16-25-025 states: Approved methods of disposal are burial, composting, incineration, landfilling, natural decomposition, and rendering.

What constitutes "routine animal disposal"?

WAC 16-25-020 states: "Routine disposal" means the disposal of the carcass of a livestock animal that died in the normal course of business.

What constitutes "emergency disposal"?

WAC 16-70-010 states: "Emergency disposal" means disposal of carcasses ordered depopulated by the director or depopulated as a result of a reportable disease listed in.

How deep must livestock be buried?

WAC 16-25-025 states (b): A carcass must be buried to a depth so that no part of the carcass is nearer than three feet to the natural surface of the ground. Every part of the carcass must be covered with at least three feet of soil within twenty-four hours of placement in the ground.

What methods of composting are acceptable?

Aerated static pile, vessel, windrow composting and alternative methods. All of these methods follow strict guidelines which can be found in RCW 70.95 and 173-350 WAC and in Ecology's "On Farm Composting of livestock mortalities" publication number 05-07-03.

Who do I call for help at WSDA?

The State Veterinarians office at 360-902-1878.

Washington State Department of Agriculture Regulations

Washington State Department of Agriculture regulates the disposal of livestock that has died because of disease

Chapter 16-25 WAC - DISPOSAL OF DEAD LIVESTOCK

Statutory Authority: RCW 16.36.092 Duty to bury carcass of diseased livestock — Dead livestock are presumed diseased.
Every person owning or having in charge any livestock that has died because of disease shall dispose of the carcass within a time frame and in a manner prescribed in rule by the director, which may include, but is not limited to, burial, composting, incinerating, landfilling, natural decomposition, or rendering. Any livestock found dead from an unknown cause is presumed to have died because of disease.

WAC 16-25-010 Purpose. The purpose of this rule is to prevent the transmission of livestock diseases and to protect the public health, safety, and welfare and Washington state's livestock industry through the proper routine disposal of carcasses of livestock that have died because of disease. The statutory authority for the rule is found in RCW 16.36.010 (Quarantine – Hold Order (1) The director shall supervise the prevention of the spread and the suppression of infectious, contagious, communicable, and dangerous diseases affecting animals within, in transit through, and imported into the state.) and

WAC 16-25-015 Applicability. This rule applies to the disposal of livestock that has died because of disease or an unknown cause.

WAC 16-25-020 Definitions. In addition to the definitions found in RCW 16.36.005, the following definitions apply to this chapter:

"Burial" means placing a carcass below the natural surface of the ground and completely covering it with soil.

"Carcass" means the body or tissues of a livestock animal that has died or has been killed other than by slaughter for human or animal consumption or commercial use.

"Composting" means the aerobic decomposition of organic matter under controlled conditions.

"Death from disease" means livestock that has died from a disease or an unknown cause.

"Emergency disposal" means disposal of carcasses ordered depopulated by the director or depopulated as a result of a reportable disease listed in WAC 16-70-010.

"Incineration" means the controlled and monitored combustion of carcasses for the purposes of volume reduction and pathogen control as approved by the department of ecology or local air pollution control authorities.

"Landfill" means a permitted facility, whether on-site or off-site, where solid waste is permanently placed in or on land, in accordance with chapter 70.95 RCW and chapters

173-350 and 173-351 WAC.

"Livestock" means horses, mules, donkeys, cattle, bison, sheep, goats, swine, rabbits, llamas, alpacas, ratites, poultry, waterfowl, game birds, and other species so designated by statute. This term does not include free ranging wildlife as defined in Title 77 RCW.

"Natural decomposition" means decomposition of carcasses through natural decay processes on the surface of the ground without cover material.

"Open burning" means the act of consuming or destroying a carcass by fire with or without the use of an accelerant.

"Rangeland" means a large open area for grazing of livestock in excess of one hundred sixty acres of contiguous usable grazing or timberland.

"Rendering" means the practice of using heat to convert dead animal carcasses and animal by-products into marketable products, such as meat and bone meal for animal feed, human food additives, or cosmetics.

"Routine disposal" means the disposal of the carcass of a livestock animal that died in the normal course of business. Routine disposal does not include carcasses of livestock ordered depopulated by the director or depopulated as a result of a reportable disease listed in WAC 16-70-010.

WAC 16-25-025 Routine disposal. A carcass must be disposed of within seventy-two hours to avoid nuisance odors or disease. The following are acceptable methods for the routine disposal of carcasses:

(1) Burial.

(a) A carcass may be disposed of by burial on the property where the livestock animal died if done with the approval of the property owner. Livestock that have died off the owner's property may be moved onto the owner's property for disposal purposes.

(b) A carcass must be buried to a depth so that no part of the carcass is nearer than three feet to the natural surface of the ground. Every part of the carcass must be covered with at least three feet of soil within twenty-four hours of placement in the ground.

(c) Carcass burial must be:

(i) At least three hundred feet from any well, spring, or body of surface water, such as a river, stream, lake, pond, or intermittent stream;

(ii) At least three hundred feet from any residence not owned by the owner of the livestock animal;

(iii) At least fifty feet from any property line; and

(iv) Not in a low-lying area subject to seasonal flooding or within a hundred-year flood plain or in a manner that will impact ground water.

(d) Each burial site is limited to one thousand pounds of carcasses or one

livestock animal weighing more than one thousand pounds.

(e) Carcass burial is not allowed on a property of less than five acres, except for the burial of a single carcass weighing less than two hundred pounds. The maximum amount of land used for burial during any year is limited to ten percent of the property or one acre, whichever is greater.

(2) Burning. Open burning of carcasses is not allowed for routine disposal under RCW 70.94.775. (Ecology)

(3) Composting. Composting must be conducted in compliance with chapter 70.95 RCW and chapter 173-350 WAC.

(4) Incineration.

(a) Complete incineration of carcasses to a mineral residue must be performed in an approved incineration facility or by a mobile air curtain incinerator; and

(b) Appropriate permits must be obtained in advance through the local air pollution control authority or the department of ecology in accordance with requirements of chapter 70.94 RCW, Washington Clean Air Act.

(5) Landfill. Carcasses may be disposed of at a privately or publicly owned landfill with prior approval of the local health officer and the landfill operator, and permitted in accordance with chapter 70.95 RCW and chapters 173-350 and 173-351 WAC.

(6) Natural decomposition. A livestock animal that dies on private or state rangeland from causes other than a significant infectious or contagious disease agent may be left to decompose naturally on that property as long as the carcass:

(a) Is at least one thousand three hundred twenty feet from any well, spring, sinkhole, or body of surface water such as a river, stream, lake, pond, or intermittent stream;

(b) Is at least one thousand three hundred twenty feet from any residence not owned by the owner of the dead livestock animal;

(c) Is at least one thousand three hundred twenty feet from any public roadway;

(d) Is out of public view; and

(e) Is left to decompose on the land with the property owner's permission.

(7) Digestion. Digestion of carcasses may be accomplished only in a properly designed and sized carcass digester approved by the director.

(8) Rendering. Carcasses may be rendered only by a rendering plant licensed under chapter 16.68 RCW, Disposal of dead animals.

WAC 16-25-030 Disposal of livestock that have died from a reportable disease. The carcass of a livestock animal that has died from a reportable disease must be disposed of in consultation with the state veterinarian. The list of reportable diseases and reporting requirements are found in chapter 16-70 WAC.

WAC 16-25-040 General emergency authority. If the state veterinarian determines there is an animal health emergency, the state veterinarian has the authority to

specify the method of disposal and place additional requirements for the disposal of carcasses of livestock animals that die of disease or are euthanized to prevent the spread of disease.

Washington State Board of Health Regulations

Disposal of animals not known to be affected with disease is governed by the Washington State Board of Health

WAC 246-203-121 Disposal of dead animals.

(1) Definitions. For the purpose of this regulation the following definitions apply:

(a) **"Burial"** means completely covering with soil in a manner and location not requiring a permit for a landfill under Washington State Department of Ecology chapter 70.95 RCW, Solid waste management -- Reduction and recycling.

(b) **"Composting"** means a process of controlled aerobic decomposition in compliance with Washington State Department of Ecology chapter 70.95 RCW, Solid waste management -- Reduction and recycling.

(c) **"Dead animal"** means the carcass or tissue from an animal, large or small, except part of an animal used for food or other beneficial purpose in accordance with federal, state, and local laws and regulations. "Dead animal" does not mean a fish or other primarily aquatic animal.

(d) **"Incineration"** means controlled and monitored combustion for the purposes of volume reduction and pathogen destruction in an enclosed device approved by the department of ecology or the local air pollution control authority under Washington State Department of Ecology chapter 70.94 RCW, Washington Clean Air Act, and Washington State Department of Ecology chapter 70.95 RCW, Solid waste management -- Reduction and recycling.

(e) **"Landfilling"** means a process of disposal at a permitted facility where solid waste is permanently placed in or on land in compliance with rules adopted by the department of ecology under Washington State Department of Ecology chapter 70.95 RCW, Solid waste management -- Reduction and recycling.

(f) **"Livestock"** means horses, mules, donkeys, cattle, bison, sheep, goats, swine, rabbits, llamas, alpacas, ratites, poultry, waterfowl, game birds, or other species according to Washington State Department of Agriculture RCW 16.36.005.

(g) **"Natural decomposition"** means natural decay on the surface of the ground without cover material.

(h) **"Rendering"** means heat processing according to requirements under Washington State Department of Agriculture chapter 16.68 RCW, Disposal of dead animals.

(2) Disposal methods.

(a) Within seventy-two hours after death or discovery, the owner of a dead animal or, if the owner of the animal cannot be identified, the owner of the property on which the animal is found must properly dispose of the dead animal. A dead animal must be covered or otherwise removed from public view immediately upon discovery by the person responsible for disposing of the dead animal.

(b) The person responsible for disposal of a dead animal must dispose of it in a manner so as not to become a public or common nuisance or cause pollution of surface or ground water.

(c) The person responsible for disposal of a dead animal must dispose of it by burial, landfilling, incineration, composting, rendering, or another method approved by the local health officer (such as natural decomposition) that is not otherwise prohibited by federal, state, or local law or regulation.

(d) A person disposing of a dead animal by burial must place it so that every part is covered by at least three feet of soil; at a location not less than one hundred feet from any well, spring, stream or other surface waters; not in a low-lying area subject to seasonal flooding or within a one hundred-year flood plain; and not in a manner likely to contaminate ground water.

(e) A person disposing of a dead animal must not bury or compost it within the sanitary control area of a public drinking water supply source as designated under Washington State Board of Health chapter 246-290 WAC, Public water supplies, or Washington State Board of Health chapter 246-29 1 WAC, Group B public water systems.

(f) The local health officer may specify the method of disposal for a dead animal if:

(i) The animal died with a communicable disease transmissible to humans; or

(ii) The local health officer considers a public health emergency to exist.

(g) The provisions of Washington State Department of Agriculture RCW 16.36.092 and Washington State Department of Agriculture chapter 16-25 WAC supersede the provisions of this regulation for the disposal of a livestock animal that has died because of disease or unknown cause.

Washington State Department of Ecology Regulations

Washington State Department of Ecology regulates outdoor burning and solid waste disposal

RCW 70.95.306 Composting Bovine and Equine Carcasses

Chapter 173-350 WAC- SOLID WASTE HANDLING STANDARDS

Statutory Authority: **Chapter 70.95 RCW**- Solid waste management -- Reduction and recycling

Washington State University

On-farm Composting of Large Animal Mortalities
Website: http://cru.cahe.wsu.edu/CEPublications/eb2031e/eb2031e.pdf

Washington State Department of Ecology

On-farm Composting of Livestock Mortalities
http://www.ecy.wa.gov/biblio/0507034.html

Rendering Facilities

Baker Commodities
4423 E Hutton Ave Spokane, WA , 99212-1364
Phone: 509-534-2137 FAX: 509-536-3817
Website: www.bakercommodities.com

Baker Commodities Incorporated
PO Box 58368
Seattle, WA 98138
(206) 243-4781

Landfills

Western Washington

Cedar Hills Landfill – (206) 296-4490

Eastern Washington

Asotin County MSW Landfill - (509) 758-9230

Grant County Ephrata Landfill – (509) 754-4319

Okanogan County Public Works - (509) 422-2602

Roosevelt Regional Landfill - (509) 384-5641

Wenatchee Landfill – (509) 884-2802

Yakima County Solid Waste Division – (509) 574-2450

Resources and Links:

Animal Burial Guidelines During a Declared Emergency

North Carolina State Animal Response Team (SART)
http://www.ncagr.gov/oep/docs/isabel/AnimalburialGuidelines.pdf

Composting Animal Mortalities
Agricultural Development Division,
Minnesota Department of Agriculture
http://www.mda.state.mn.us/news/publications/animals/compostguide.pdf

Composting Poultry Mortality
The University of Georgia College of Agriculture and Environmental Sciences Cooperative Extension Service.
http://www.ces.ncsu.edu/depts/poulsci/tech_manuals/composting_poultry_mortality.html

Dead Animal Disposal, Chapter 8
Clemson University Cooperative Extension Office Henry, Stephen T.
https://www.clemson.edu/extension/livestock/camm/camm_files/poultry/pch8_03.pdf

Disposal of Dead Animals
University of Vermont
http://www.uvm.edu/~ascibios/?Page=General/Disposal_of_Dead_Animals.html&SM=submenugeneral.html

Natural Rendering Fact Sheet 2002
Cornell Waste Management Institute
http://compost.css.cornell.edu/naturalrenderingFS.pdf

Natural Rendering Website
Penn State College of Agricultural Sciences
http://composting.cas.psu.edu/NatRendering.htm

Rendering – A Disposal Method for Dead Birds (ANR-923)
Alabama A&M and Auburn Universities Extension
http://www.aces.edu/anr/aawm/animalbirdmortality.php