

DEPARTMENT OF AGRICULTURE

ANIMAL INDUSTRY DIVISION

BODIES OF DEAD ANIMALS

Filed with the Secretary of State on September 26, 2007

These rules become effective immediately upon filing with the Secretary of State unless adopted under sections 33, 44, or 45a(6) of 1969 PA 306. Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

(By authority conferred on the department of agriculture by section 27 of 1982 PA 239, MCL 287.677)

R 287.651, R 287.652, and R 287.655 of the Michigan Administrative Code are amended, R 287.651a is added, and R 287.656 of the Code is rescinded as follows:

R 287.651 Definitions.

Rule 1. As used in these rules:

- (a) "Afterbirth" means fetal fluids, placenta, and fetal mortality.
- (b) "Animal process operation" is a place where animals or animal tissues may accumulate in a non-production (no multiple-day care and feeding) setting such as a butcher shop, slaughter facility, taxidermist, road commission, veterinary clinic, or market collection point.
- (c) "Animal production operation" generally described as a "farm," means an operation where animals under common ownership or management receive care and feeding for the production of food co-products, or pleasure.
- (d) "Finished" compost means ready for final utilization as a soil amendment, plant fertilizer, or rooting medium. Finished compost shall be dark, humus-like with little odor, and free of any animal soft tissue.
- (e) "Forced aeration" means air is pushed or pulled through compost using a blower and perforated ductwork (within the compost or in the floor or walls surrounding the compost) to speed the composting process.
- (f) "In-vessel" means composting within a container, using forced aeration by mechanical turning (rotating drum).
- (g) "Leachate" means any liquid that may drain from compost.
- (h) "NRCS" means Natural Resources Conservation Service of the United States Department of Agriculture.
- (i) "Passive aeration" means air exchange within the compost pile accompanies heat release with fresh air pulled into the lower portion of the pile as heat pulls gases out of the upper portion of piles.
- (j) "Restaurant grease" means animal or vegetable oils and fats that have been used or generated as a result of the preparation of food by a restaurant or other establishment that prepares or cooks food for human consumption. Restaurant grease does not include trap grease, interceptor grease, or other contents of grease traps or interceptor traps.
- (k) "Site" means the location on premise where composting occurs.

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- (l) “Specifically designed container truck” means a truck or other vehicles designed or modified and constructed to haul individual leak proof containers.
- (m) “Surface waters” means the definition in R 287.651(1)(o)(i)-(viii).
- (n) “Trap grease,” also referred to as “interceptor grease,” means any restaurant grease skimmed, filtered, separated, or otherwise captured from wastewater before discharge.
- (o) “Waters of the state” means all of the following, but does not include drainage ways and ponds used solely for wastewater conveyance, treatment, or control:
- (i) The great lakes and their connecting waters.
 - (ii) All inland lakes.
 - (iii) Rivers.
 - (iv) Streams.
 - (v) Impoundments.
 - (vi) Open drains.
 - (vii) Other surface bodies of water within the confines of the state.
 - (viii) Groundwater.

R 287.651a Adoption of standards by reference.

Rule 1a. The following standards are adopted by reference in these rules and are available for inspection, and may be obtained without cost, from the Michigan Department of Agriculture, Animal Industry Division, P.O. Box 30017, Lansing, Michigan, 48909. The rules may also be obtained at no cost from the sources listed below:

- (a) The Natural Resources Conservation Service 635 Wastewater Treatment Strip Conservation Practice Standard, Date September, 2006, is available at <http://www.nrcs.usda.gov/technical/Standards/nhcp.html> or Natural Resources Conservation Service, Attention: Conservation Communications Staff, P.O. Box 2890, Washington, DC 20013.
- (b) The Generally Accepted Agricultural Management Practices for Nutrient Management, as specified in 1981 PA 93, as amended, MCL 286.471 et seq., is available at http://michigan.gov/mda/0,1607,7-125-1567_1599_1605---,00.html or Michigan Department of Agriculture, P.O. Box 30017, Lansing, MI 48911 .
- (c) The Natural Resources Conservation Service 313 Waste Storage Facility Conservation Practice Standard is available at <http://www.nrcs.usda.gov/technical/Standards/nhcp.html> or Natural Resources Conservation Service, Attention: Conservation Communications Staff, P.O. Box 2890, Washington, DC 20013.
- (d) The Michigan Animal Tissue Composting Operational Standards, Michigan State University and Natural Resources Conservation Service, September, 2006, is available at http://www.canr.msu.edu/dept/ans/community/people/rozeboom_dale.html or Swine Nutrition & Production Management, 2209I Anthony, Department of Animal Science, Michigan State University, East Lansing, MI 48824-1225.

R 287.652 Disposal of dead animals and residue from burning process of dead animals.

Rule 2. (1) Dead animals, excluding restaurant grease, buried in individual graves shall be in compliance with all of the following requirements:

- (a) The dead animal shall not come in contact with waters of the state.
- (b) The number of individual graves per acre shall not be more than 100 and the total combined animal weight shall not be more than 5 tons per acre.

- (c) Individual graves shall be separated by a minimum of 2 1/2 feet.
- (d) A grave shall not be located within 200 feet of any existing groundwater well that is used to supply potable drinking water.
- (e) The owner of the land has authorized the placement of the dead animal.
- (2) Dead animals, excluding restaurant grease, buried in a common grave shall be in compliance with all of the following requirements:
 - (a) Dead animals in a common grave shall be covered with at least 1 foot of soil within 24 hours of burial.
 - (b) A common grave shall not remain open for more than 30 days and shall receive not less than 2 feet of soil as final cover.
 - (c) Dead animals shall not come into contact with waters of the state.
 - (d) The total weight of dead animals in common graves shall not be more than 5,000 pounds per acre, and if there is more than 1 common grave per acre, each common grave within that acre shall be separated by a minimum of 100 feet.
 - (e) A common grave shall be located not less than 200 feet from any existing groundwater well that is used to supply potable drinking water.
 - (f) The owner of the land has authorized the placement of the dead animals.
- (3) By written request, an exemption to the total number of individual or graves per acre or the total weight of carcasses in an individual or common grave may be granted by the director upon concurrence with the director of the department of natural resources.
- (4) Residue from the burning process of dead animals may be land-applied at agronomic rates or properly disposed of in a landfill licensed by the department of natural resources under the solid waste management act, 1978 PA 641, MCL 299.401.
- (5) If the director suspects that the disposition of dead animals, or the residue from dead animal incineration would produce a source of toxicological contamination that represents a threat to the health of humans or animals or a toxicological threat to the environment, the director may require that the dead animal or animals, or the residue from the dead animal incineration, be disposed of in a manner determined by the director. The cost of the disposal shall be the responsibility of the owner.

R 287.655 Composting.

- Rule 5. (1) Unless otherwise approved by the director, composting methods shall accommodate only normal daily natural mortality under common ownership, and be designed with capacity for both active composting and curing.
- (2) Active composting consists of all of the following:
 - (a) Organic materials.
 - (b) Aeration and moisture management.
 - (c) Heat production.
 - (d) Repeated temperature patterns.
 - (3) Bulking agent is a material added to compost to provide nutrients, decrease bulk density, promote aeration, and remove heat. Bulking agent also means amendment, medium, carbon source, and feedstock. Any of the following may be used as compost bulking agents:
 - (i) Dried grass.
 - (ii) Hay.
 - (iii) Chopped straw.
 - (iv) Chopped corn stover.

- (v) Chopped bean stover.
 - (vi) Unpainted wood chips that do not have additives or preservatives.
 - (vii) Unpainted shredded bark that does not have additives or preservatives.
 - (viii) Sawdust which is unpainted and which does not have additives or preservatives.
 - (ix) Leaves.
 - (x) Grass clippings.
 - (xi) Grain hulls.
 - (xii) Poultry litter or litter cake.
 - (xiii) Animal manure solids.
 - (xiv) Waste animal feeds.
 - (xv) Finished or cured compost.
 - (xvi) A mixture of any of the recommended bulking agents listed in subdivisions (i) to (xvii) of this subrule.
 - (xviii) Other, as approved by the director.
- (4) Curing is the period of time after active composting for further decomposition at a slow rate. Less intense heat production and lower temperatures will be sustained during curing.
- (5) In response to a written request, the use of composting methods other than as specified in this rule and the Michigan Animal Tissue Composting Operational Standard (MSU and NRCS), as adopted by reference in R 287.651a, may be permitted by the director.
- (6) One or more of the following methods of composting shall be used: Passive, forced, and (or) active aeration may be used with each method.
- (a) Open pile.
 - (b) Bin.
 - (c) Windrow.
 - (d) In-vessel.
 - (e) Other, as approved by the director.
- (7) In addition to the 2 cubic feet of primary poultry composter capacity, a minimum of 2 cubic feet of secondary composter capacity shall be provided for each pound of poultry to be composted. The composting structure shall be constructed and maintained to withstand structural damage caused by active composting and equipment used for compost aeration and movement. Any structural damage to the structure shall be repaired before it is used again for active composting.
- (8) Poultry compost surface runoff shall be routed around the poultry composting site. The site for composting shall maintain the following minimum isolation distances:
- (a) Two hundred feet from waters of the state as defined in R 287.651(1)(o)(i)-(viii).
 - (b) Two feet above the seasonal high water table, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard, and adopted by reference in R 287.651a.
 - (c) Two hundred feet from any well.
 - (d) Two hundred feet from nearest non-farm residence.
- (9) The composting site shall be selected and/or graded to direct surface runoff away from the compost site and prevent effluent from contacting surface waters.
- (10) For an animal production operation accumulating more than 20,000 pounds of mortality annually or any animal process operation, regardless of composting method, composting shall be done in compliance with the following:
- (a) All active, finished, curing, and cured compost at the site shall be located in or on, 1 or both of the following:

(i) On an improved surface, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard, and adopted by reference in R 287.651a, (see section on “Liners”) and designed to withstand anticipated loads from the equipment used for placement, aeration, and movement of compost.

(ii) In an in-vessel system.

(b) All effluent generated and runoff events during active composting and curing, not retained in the compost, shall be managed in a manner consistent with all applicable federal, state, and local laws and with at least 1 of the following:

(i) Reintroduced into compost piles.

(ii) Collected and stored in a storage facility with a liner that meets the criteria defined in NRCS 313 Waste Storage Facility Conservation Practice Standard and adopted by reference in R 287.651a, and utilized for crop production in accordance with the recommendations in Generally Accepted Agricultural Management Practices for Nutrient Management, as established in 1981 PA 93, MCL 286.471.

(iii) Diverted to a treatment system meeting the criteria in NRCS 635 Wastewater Treatment Strip Conservation Practice Standard, and adopted by reference in R 287.651a.

(iv) Disposed of in accordance with 1969 PA 136, MCL 323.271.

(v) Other methods, as approved by the director.

(11) For an animal production operation accumulation less than 20,000 pounds of mortality annually, composting may be done without a structure or vessel provided the following conditions are met:

(a) A new composting site shall be selected for use annually. The following shall apply:

(i) Use of the current year’s site may continue until the compost is finished, but not more than 2 years from the time of the first dead animal addition, at which time the finished compost must be disposed of in accordance with Rule 5(10).

(ii) No new tissue shall be added to a site after 1 year from the first dead animal addition.

(iii) A new site may be immediately adjacent to a previous site.

(iv) A previous site shall not be reused within a 10-year period of time.

(b) A new site shall be on land used in crop rotation.

(c) A new site shall not be directly above subsurfacing drains or tile.

(12) Active composting shall maintain all of the following:

(a) Carbon-to-nitrogen ratio minimum of 15:1.

(b) Moisture content, range of 40% to 60%.

(c) At least 1 reading of a temperature greater than 130 degrees Fahrenheit after the initiation of a batch with the temperature measured at a depth of one foot into the compost once weekly. A temperature reading shall be conducted twice per week for a rotating drum, continuous flow, in-vessel system.

(i) The following conditions shall be met for active composting:

(A) Composting temperature may remain in a range of 100 to 150 degrees Fahrenheit for several weeks.

(B) Properly timed aeration and (or) moisture alterations.

(ii) Each batch of animal tissue compost must undergo a minimum of 3 heat cycles of active composting before final utilization.

(iii) A static compost pile may be aerated passively, by periodic agitation, mixing or turning, or by using forced aeration.

(13) A person shall manage the composting process in compliance with the guidelines described in the Michigan Animal Tissue Composting Operational Standards, as adopted by reference in R 287.651a, and all of the following:

(a) The composting process shall be managed in batches. Composting shall involve controlled active and curing phases, temperature-based aeration, and a planned end point of not more than 2 years from the time of the first dead animal addition to a batch. Complete curing is not required. Compost is considered finished based on its planned use as a soil amendment or rooting medium, and its aesthetic acceptability. In the context of animal tissue composting, finished and cured are different terms. Compost shall be finished; however, complete curing is not required.

(b) Dead animals shall be added to the compost batch within 24 hours following death.

(c) Afterbirth may be stored in closed impervious containers and shall be added to the batch within 3 days of initiating container use.

(d) Initially, the compost pile or windrow shall be constructed with a base of dry absorbent bulking agent that is at least 1 foot deep before any dead animal is added for composting. A base depth of 2 feet shall be used for dead animals of greater than 600 pounds body weight.

(e) Dead animals shall not be placed in the pile or windrow closer than 6 inches to any edge or wall.

(f) Dead animals shall be covered by a minimum of 6 inches of bulking agent and not be exposed.

(g) Pieces of hide remaining at the completion of curing shall be removed and added to a new active compost batch or shall be disposed of under section 21, 1982 PA 239, MCL 287.671, before the compost may be sold or transferred or applied to crop land.

(h) Large bones of mature animals remaining at the completion of curing shall be crumbled during the mechanical spreading process or removed and added to a new active compost batch, or disposed of under section 21, 1982 PA 239, MCL 287.671, before the compost may be sold or transferred or applied to crop land.

(i) Flies, rodents, pests, vermin, and other scavengers or predators shall be controlled so as not to disrupt the compost piles or constitute a risk or health hazard to human or animal populations.

(j) Odors shall be controlled in accordance with the Michigan Animal Tissue Composting Operational Standards, as adopted by reference in R 287.651a.

(14) The disposition of finished compost may be by direct application to soils, sale, or other transfer of ownership. Application to soils shall be done in accordance with the recommendations within the generally accepted agricultural and management practices for nutrient management as specified in 1981 PA 93, MCL 286.471.

(15) In the interest of public health or animal health, the director may require that any compost be tested at a laboratory approved by the director for certain pathogenic organisms or any contaminant at any time before the compost leaves the composting site.

(16) Composting dead animals shall not be removed from the composting site, except as finished compost, unless the dead animal is disposed of in accordance with section 21 of 1982 PA 239, MCL 287.671.

(17) The owner or operator of the composting site shall keep records for 5 years containing the following information and shall make the records available to the director immediately upon request:

(a) The start date of each compost batch.

(b) The approximate weight, maturity, and species of dead animals or afterbirth added each time an addition is made and the dates the tissue is added to new compost batches.

(c) The temperature of each batch measured weekly, shall be taken at a minimum of 1 foot deep into the compost.

(d) The date compost is mechanically aerated shall be recorded.

(e) The final disposition of finished compost, including the method, destination, date, and volume for the batch.

(18) A contingency plan to remedy problems and ensure the proper disposal of dead animals shall be kept at the compost site. The contingency plan shall include all of the following information:

(a) A list of the following:

(i) The location of telephone numbers for and emergency numbers for the police, the fire department, and medical aid.

(ii) The person or persons responsible for the composting operation.

(b) An action plan for all of the following emergencies:

(i) Fire.

(ii) Wind.

(iii) Flood.

(c) Plans for the proper disposition of dead animals if composting is temporarily or permanently terminated.

R 287.656 Rescinded.