Guidance for the Mass Disposal of Animal Carcasses in Landfills



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Animal carcasses may be disposed of in Wisconsin's municipal solid waste (MSW) landfills provided they are disposed of in accordance with the landfill's plan of operation and s. NR 506.07(1)(d), Wis. Adm. Code, which requires the carcasses be immediately compacted and covered. The mass disposal of animal carcasses, however, may require additional special handling and disposal procedures, which should be addressed in the landfill's operating plan prior to acceptance. Section NR 514.06(8), Wis. Adm. Code, requires a description of waste types accepted or excluded, typical waste handling techniques and methods for handling unusual waste types. Mass volumes of animal carcasses would qualify as an unusual waste type. If the amount of animal carcasses to be disposed of is significant enough that it would require a landfill to implement special handling procedures, a plan modification to update the special handling and disposal procedures would be required.

Prior to acceptance of a mass volume of animal carcasses, a landfill should determine if they have the ability to accept a mass volume of animal carcasses and whether their current plan of operation addresses this. Landfills may request a plan of operation modification at any time to incorporate procedures for disposal of a mass volume of animal carcass or, if a landfill is in the siting process, it may be included in a plan of operation report. Preplanning and approval may help prevent delays should the need arise. A modification to an existing plan of operation may qualify as an expedited plan modification if it is limited in scope.

The following are recommended special handling and disposal procedures to be incorporated into a landfill's plan of operation. These procedures are guidelines only and exact procedures should be proposed by the landfill on a site specific or case specific basis.

- The plan should include notification and pre-acceptance procedures similar to those outlined in existing special waste acceptance plans.
- Landfills will need to determine the overall volume of animal carcasses they could reasonably manage at one time given operational and disposal constraints. This may vary depending on the size or type of animals (fish versus swine), the duration of mass carcass disposal needs, amount and type of other wastes being disposed and the stage in landfill development.
- The waste should be disposed of in a location that maintains a minimum separation of 20 vertical feet from the drainage blanket, 60 horizontal feet from side slopes, and 10 vertical feet from final contours.
- The waste should be placed in trenches dug into the existing waste mass with sufficient volume to accept the expected delivery. This could be on a truck by truck basis or, at most, what can be delivered in a single day.
- Waste lifts should not exceed a certain thickness, typically three feet, but this may vary based on the type of animal.
- The landfill operator should minimize any unnecessary manual handling of the animal carcasses and must follow any appropriate safety precautions or plans. At a minimum, operators should consider use of protective gloves and safety glasses if some manual handling of carcasses is needed.
- A layer of absorbent material may be placed in advance of disposal of the animal carcasses to absorb any free liquids. Some examples of absorbents include saw dust, wood shavings, chips or mulch. Any voids

- between the carcasses may be covered with additional kiln dust or lime, which impedes fermentation and absorbs generated liquids.
- Animal carcasses should be covered with at least three feet of municipal solid waste or other suitable waste at the end of truck delivery.
- Additional bird control measures may be necessary during placement to avoid scavenging during disposal.
- Run-on of surface water into the carcass disposal area should be minimized.
- Offensive odors may require more cover soil and/or improved gas collection in the carcass disposal area.
- Subsidence during the first six months may be significant. Cover materials may have to be replaced as the area settles.
- The landfill should monitor for seeps or leachate breakouts and have plans in place to fix any seeps or breakouts immediately, if they occur.
- As areas become filled with animal carcasses, it may be necessary for landfill operators to avoid them and to construct new working areas instead. The disposal location should be pre-planned to avoid future disturbance such as during gas well installation.
- Landfills should record the vertical and horizontal coordinates of the disposal location in the operating record and avoid future disturbance of those areas. The landfill may also need to limit or restrict liquids addition and/or leachate recirculation in these areas.
- Records of the type, volume, and source of animal carcasses should also be maintained in the facility operating record.
- If the animals are diseased, best management practices for transport and landfill personnel may need to be followed. Refer to PUB-WA 1795, "Guidelines for Landfill Disposal of Solid Waste from Avian Influenza Response"
- Landfills should consider encapsulating diseased carcasses with soil, such as clay, to restrict the transport of disease, such as prions associated with chronic wasting disease in deer.

Other resources or references:

"Industrial Solid Waste Management Plan: Generic Conditions for the Acceptance of Carcasses or Carcass Ash Waste", May 2020, Minnesota Pollution Control Agency, https://www.pca.state.mn.us/sites/default/files/w-sw4-64.pdf

"Guidelines for Landfill Disposal of Solid Waste from Avian Influenza Response", Pub-WA 1795, September 2015, Wisconsin DNR, https://dnr.wi.gov/files/PDF/pubs/wa/WA1795.pdf

"Evaluating the Risk of Wild Bird Exposure to Highly Pathogenic Avian Influenza Virus in Leachate from Landfills Accepting Poultry Carcass Waste", September 2020, United States Department of Agriculture https://www.aphis.usda.gov/animal_health/emergency_management/downloads/high-path-risk-assessment-summary.pdf

Contact DNRWasteMaterials@wisconsin.gov for further information.

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