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Flood Damaged Grain, Hay, and Cornstalks Disposal

It would be rare to be able to use flood-soaked grain or hay for its intended original use of food or feed. Additionally, exceptional flood events often displace old cornstalks and create blockages at points of drainage. The grain, hay, and cornstalks are almost certainly contaminated with floodwater contaminants or related toxins. They can also harbor fungal growth such as Ergot, which can lead to lethal poisoning if consumed, even by livestock. Drying the damaged grain or hay will not make the materials safe for consumption again and storing the materials in stacks or bundles presents a potential fire danger.

It is not unusual for soaked bulk grain, hay bales, or hay “piles” to spontaneously ignite. Freshly bailed or piled hay or grain can go through a process of fermentation leading to combustion when as low as 20% water by weight. If flood-damaged grain & hay must be stored, carefully spread the material out to encourage drying without the potential of creating heat sufficient for combustion. Because the dried material will still be unusable as a product this presents a disposal problem for the farmer or rancher in possession of the flood-damaged grain, hay, and even cornstalks.

The department has historically allowed spoiled grain, hay, or some food processing by-products to be spread evenly on farm or ranch fields. This allowance has, and continues to be, based on factors such as the land topography, season, amount, proximity to inhabited structures, and nature of the spoilage. Spoiled, unusable grain or hay will rarely ever exhibit the characteristic of hazardous waste toxicity. If it is, or is suspected of being, a hazardous waste then [Title 128 – Nebraska Hazardous Waste Regulations](#) must be followed and the waste grain or hay cannot be spread on the ground. If the grain is spoiled but not capable of causing an infectious disease to humans then it may be either sent to a permitted municipal solid waste landfill or land applied. For land application prior approval is required from the NDEQ ([Title 132 – Integrated Solid Waste Management Regulations](#), Chapter 13, §003) if the material is not applied to the land at an appropriate agronomic rate for the application site. If approval is required, use the following form for land application: [Special Waste Disposal Request](#). This form can be accessed at the NDEQ web site. If approved, the department will provide information on application procedures with the approval.

Flood-damaged grain & hay have been demonstrated to be a danger to bird wildlife. As a result, the department recommends land application of flood damaged grain & hay to be disked into the soil within 24 hours of application. The department discourages stockpiling of flood-damaged grain or hay prior to application except for a short period of time prior to land application.

Depending on the nature of the contamination and the condition of the flood-damaged grain, hay, or cornstalks, burning might be the best method of waste management. If so, [Title 129 – Nebraska Air Quality Regulations](#) covers the exceptions to the general prohibition against open burning. Generally, this on-site open burning can be exercised without an Air permit if the flood-damaged material was on

the site when initially flooded and there is no other debris or waste. On any open burning situation always contact the local fire department to secure a burn permit.

Flood damaged grain, hay, and cornstalks have no exclusions from requiring a waste permit from NDEQ for burial. Waste farm products other than trees or brush must be disposed at a permitted municipal solid waste landfill unless burned per the discussion in the previous paragraphs. Ash from such a burn is considered a newly generated waste and as such cannot be buried on site, it must be sent to a municipal solid waste landfill.

Cornstalks redistributed by flood waters pose a somewhat unique problem. They were never intended to leave the site they originated, most are the result of no-till or not-yet-tilled farmland. Cornstalks are normally left on land as winter livestock fodder, or to be reincorporated into the soil before the next planting. Additionally, cornstalks are often found after a flood event clogging up ditches and culverts, and blocking the natural and engineered drainage in the area. These water-logged cornstalks are often moved by landowners into a pile for later disposal or to be spread and disked into the fields. However, cornstalks that clog up ditches and culverts are usually on publicly owned and maintained land. As a result these cornstalks are often removed by city or county and stockpiled at the city or county yard, or other locations. Cornstalks collected in this way may be applied to farm fields the same as flood-damaged grain & hay. Additionally, since they are no longer safe for livestock to consume, cornstalks applied in this way must be incorporated into the soil the same as grain & hay to prevent potential disease vectors to local wildlife and livestock. If mixed with a significant quantity of soil the cornstalks may be used to fill some low spots in a field to promote growth and amend the soil, but cannot be buried.

RESOURCES:

- NDEQ Home Page <http://dee.ne.gov/>

Contacts:

- NDEQ Waste Management Section (402) 471-4210
- NDEQ Toll Free Number (877) 253-2603
- NDEQ Hazardous Waste Compliance Assistant (402) 471-8308
- Email questions to: NDEE.moreinfo@nebraska.gov

NDEQ Publications:

- NDEQ Guidance Document – Natural Disaster Debris Management
Guidance is available on the NDEQ Webpage under “Publications & Forms”
- [Title 128 – Nebraska Hazardous Waste Regulations](#)
- [Title 129 – Nebraska Air Quality Regulations](#)
- [Title 132 – Integrated Solid Waste Management Regulations](#)
Titles are available on the NDEQ Webpage under “Laws/Regs & EQC”, “Rules & Regulations”