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## **Fire Damaged Debris Disposal**

This guidance document has been produced by the Nebraska Department of Environment and Energy (NDEE) to outline the requirements for disposing of materials generated by exposure to fire. This will cover the major types of debris and how the disposal process differs between them. The regulations applying to these wastes can be found in Nebraska [Title 128 – Hazardous Waste Regulations](#) and Nebraska [Title 132 – Integrated Solid Waste Management Regulations](#).

When dealing with partial structure fires it is important to seek guidance from the State Fire Marshal's Office on the structural stability of a building before entering any damaged structure. If the structure is completely consumed or compromised to such a degree where it is unsafe to enter, the entire building and its contents may have to be demolished for disposal. If the building is safe to enter it may be possible to recover unburned property and separate other wastes from the building. In either case, the structure should be checked by a licensed asbestos inspector before disposal activities, if possible. More information on asbestos inspections and removal can be found on the Nebraska Departments of Health and Human Services (DHHS) Asbestos Program website listed in the Resources section below.

An important factor to understand about fire damaged materials is that fire is a chemical process that not only alters what it burns, but it also affects all nearby materials exposed to the heat, fumes, and smoke from the fire. Exposure to fire and smoke can dramatically alter the chemical composition of materials and release potentially dangerous compounds.

For example, pressure treated lumber is often infused with arsenic, cyanide, and other compounds that inhibit rot and pest infestation. In its normal state, these chemicals are fixed to the lumber and will release to the environment very slowly, if at all. When exposed to extreme heat these compounds can be released which allows them to travel quickly through the soil. If the burned lumber is then buried, the compounds in it can quickly descend to the water table causing groundwater contamination. This is why the NDEE prohibits the burial of burned structures on a farm where the burial of unburned buildings is allowed in some circumstances.

### **Unburned and Uncharred Materials**

Only completely unburned and uncharred debris can be sent to a Construction and Demolition (C&D) landfill.

## **Non-hazardous Burned and Charred Materials**

All non-hazardous burned or charred materials must be disposed of at a Municipal Solid Waste (MSW) landfill. This includes fire damaged buildings, their contents, and any other burned or charred materials.

A permitted MSW landfill has engineered structures designed to capture and control leachate as well as to divert stormwater runoff. This prevents contamination from burned wood and other materials from entering the environment. Disposal of burned and charred materials at any site other than a MSW landfill has the potential to cause groundwater issues and damage to the environment.

Scorched brick, mortar, and concrete are generally unaffected by all but the most intense fires. These items would still meet the definition of Fill and may be used as such unless it is otherwise contaminated. Fill is defined in Title 132 as a waste that consists of only one or more of the following: sand, gravel, stone, soil, rock, brick, concrete rubble, asphalt rubble, or similar material.

## **Hazardous Materials**

Hazardous materials must be disposed of at a permitted hazardous waste Treatment, Storage, and Disposal Facility (TSDF). Under no circumstances can hazardous materials be disposed of at an MSW.

Any material that qualifies as a hazardous material before exposure to a fire is most likely still hazardous after fire exposure and will require a waste determination before disposal. Non-hazardous commercial chemical products that have been altered by fire and heat may now qualify as a hazardous waste.

Fire can also weaken containers such as paint cans, pesticide jugs, and household chemical containers. Containers that are weakened or compromised by fire can rupture and release their contents. It is extremely important that fire damaged products are handled very carefully to avoid spills and exposures. Most labels and markings are burned off during a fire, making identification of the contents very difficult. The NDEE recommends that facilities maintain an inventory of their chemicals on-site, including the container size, material, shape, and location within the facility. Knowing what chemicals are on-site and their physical location within the facility can assist with cleanup efforts. In the case of fires affecting a storage area for hazardous materials, it may be necessary to hire a professional remediation service to safely handle and remove the materials for proper disposal.

## **RESOURCES:**

- NDEE Home Page <https://dee.nebraska.gov/>
- Nebraska State Fire Marshall <https://sfm.nebraska.gov/>
- Nebraska DHHS Asbestos Program <https://dhhs.ne.gov/pages/asbestos.aspx/>

## **Contacts:**

- NDEE Main Number (402) 471-2186
- NDEE Toll Free Number (877) 253-2603
- NDEE Hazardous Waste Compliance Assistant (402) 471-8308
- Email questions to: [NDEE.moreinfo@nebraska.gov](mailto:NDEE.moreinfo@nebraska.gov)

## **NDEE Publications:**

- Environmental Guidance Document – “ABC’s of Demolition”
- Environmental Guidance Document – “Waste Determinations & Hazardous Waste Testing”  
*Guidance documents are available on the NDEE Home Page under “Forms”, “Publications, Grants & Forms”.*
- [Title 128 – Nebraska Hazardous Waste Regulations](#)
- [Title 132 – Integrated Solid Waste Management Regulations](#)  
*Titles are available on the NDEE Home Page under “Resources and Services”, “Laws & Regulations”, “Rules & Regulations”.*

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