

# Commercial and Residential Paint Removal and Disposal

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## Introduction

It is very important that the removal, management and disposal of paint residues containing toxic metals are done properly to prevent any adverse effects on human health and the environment.

Historically, toxic metals such as lead, chromium and cadmium were added to paints and primers to increase the paints' durability. Although lead based paint was banned for residential use in 1978, it is still allowed to be used in commercial and *industrial* applications. Commercial and industrial paints sold today may also contain the toxic metals chromium and cadmium.

## Do hazardous waste regulations apply to household paint waste?

No, lead paint waste from residential projects is considered household waste for disposal purposes and is not subject to hazardous waste regulation. "Household waste" includes waste from single and multifamily residences, hotels, motels, bunkhouses, ranger stations, crew quarters, picnic grounds and day-use recreational areas. Lead paint waste from households should be collected in plastic bags, sealed and placed in the household trash, or taken to a household hazardous waste collection facility or event. For a list of permanent household hazardous waste collection locations, go to:

<http://www.uwex.edu/erc/pdf/HHW/PermAddress.pdf>

Lead paint waste from renovation or repair of day care facilities and schools is not considered household waste, and is subject to applicable hazardous and solid waste rules summarized in this fact sheet.

## What are the health effects of exposure to lead and other toxic metals that may be in paint?

Childhood lead poisoning is a national and statewide health problem. Lead present in paints has been implicated in the poisoning of 40,000 children in Wisconsin from 1996 through 2006. Young children playing in areas where there are lead paint chips are especially susceptible to lead contamination through ingestion or inhalation. Lead exposure in children can impede growth and cause brain and central nervous system damage, hyperactivity, or other behavior and learning problems. Lead exposure in adults can cause difficulties during pregnancy, high blood pressure, nervous disorders, and memory and concentration problems.

Paints used in industrial applications may also contain high levels of chromium, which can be corrosive to tissues and is a suspected human carcinogen, or

## Paint residues from commercial, industrial or municipal properties: solid waste or hazardous waste?

Paint scrapings and abrasive or water blasting wastes from water towers, bridges and other commercial, industrial, municipal buildings or structures are solid waste and may be hazardous waste. Persons generating these wastes must determine if they are hazardous to ensure proper management and disposal.

Assume the paint contains lead or collect and analyze a sample of the paint before starting the removal operation to determine if lead or other toxic metals are present. Waste generated during paint removal operations is a hazardous waste if it exceeds the maximum concentration levels using the Toxicity Characteristic Leaching Procedure (TCLP) for certain metals.

Note: TCLP is a laboratory analysis that measures how much of the toxic metal leaches from the waste under certain conditions and has the potential to contaminate groundwater.

Analyses that are done for waste determinations, including TCLP, must be completed by a State of Wisconsin-certified laboratory prior to disposal of the paint waste. A list of certified labs is available at: <http://dnr.wi.gov/regulations/labcert/lablists.html>

A waste determination may also be made based on knowledge of the paint being removed. For example, if you know the paint is lead based, you can manage the paint waste as a hazardous waste instead of having TCLP analysis performed by a certified laboratory. However, the burden of proof that knowledge is correct and sufficient is your responsibility. Remember, the generator of a hazardous waste is responsible for the waste from the point of generation until it is finally disposed of in a licensed or permitted hazardous waste facility. Only nonhazardous waste may be disposed in a solid waste landfill.

To assist painting and other contractors that generate hazardous wastes at temporary jobs sites, the DNR has guidance that simplifies the transportation requirements if the wastes are taken back to their central business location. Contractors must follow all applicable hazardous waste generator requirements for the proper management and disposal of all hazardous waste consolidated at their central business location. For more information on WDNR's pilot project for contractor-generated wastes, see <http://dnr.wi.gov/files/pdf/pubs/wa/wa654.pdf>.

## Other considerations

### What precautions should I take to prevent paint wastes from contaminating the environment?

For all paint removal projects, use a containment system to prevent the wastes from contaminating soils or surface waters or from becoming airborne and dispersing. Using a High Efficiency Particulate Air (HEPA) filter vacuum may reduce the need for containment structures.

A containment system may be as simple as a ground cover (e.g., a tarp), while some projects may require a total enclosure. Place paint waste collected in the containment system into closed containers and label

them to identify the contents. The type of container will depend on the physical and chemical state of the waste. Containers of hazardous paint waste must be labeled "hazardous waste".

### Are there Environmental Concerns with Specific Paint Removal Methods?

In short, yes. Commonly used methods to remove paint – chemical stripping, high-pressure water blasting or high-pressure abrasives – can cause harm to human health or the environment if the wastes generated during the removal process are not properly contained and managed.

Chemical stripping agents or surface treatments may contain organic solvents that are listed as hazardous waste, causing the paint waste to be managed as hazardous waste even if the paint doesn't contain toxic metals.

Chemical stripping agents that contain caustic materials to dissolve the paint do not contain toxic or flammable solvents. However, these materials may be corrosive hazardous waste when disposed. For more information on characteristic and listed hazardous waste, see NR 661 subch. C. and s. NR 661.31, Wis. Adm. Code at [http://docs.legis.wisconsin.gov/code/admin\\_code/nr/600/661.pdf](http://docs.legis.wisconsin.gov/code/admin_code/nr/600/661.pdf)

If possible, we recommend choosing more environmental friendly paint removal products, such as soy-based products.

When using high-pressure water blasting to remove paint from residential and commercial structures, it is essential that a proper containment system is used to capture the water blast material. The resulting wastewater must be managed according to wastewater regulations. Discharge to the sanitary sewer must be approved by the local sewerage authority or the DNR, as appropriate. Wastewater discharged to the ground has the potential to reach surface water or groundwater and may be subject to the general permitting requirements of ch. 283, Wis. Stats.

The paint chips and other solid residues should be separated from the water, collected, and properly managed according to the applicable hazardous waste or solid waste requirements.

If using high-pressure abrasives (with sand, corncob, walnut shells or glass beads) to remove paint from structures, you'll need a closed loop system that

contains dust and debris to prevent a release to the air and to allow for proper disposal of the waste. If this process is used, the paint chips and other solid residues should be characterized and properly managed as hazardous or nonhazardous waste.

Paint removal projects may generate substantial amounts of dust. The DNR Air Management Program regulates the release of fugitive dust emissions and hazardous air pollutants, such as toxic metals that occurs during paint removal and reapplication on residential and commercial structures.

If the paint to be removed is lead based or contains other toxic metals, install a containment system to prevent the release of blasting waste and paint overspray to the air. Discontinue paint removal operations if you can see dust escaping into the ambient air. DNR staff can help you determine how to comply with the air requirements. Find the DNR Air Program contact for your county at:

<http://dnr.wi.gov/topic/AirQuality/Contacts.html>

When evaluating the hazards of the paint to be removed, consider that asbestos was added to interior and exterior paints and textured surfacing materials prior to the 1980's. The textured surfacing materials were applied to walls, ceilings and building exteriors and then painted. Asbestos can be found in "dum-dum" paints on commercial structures, water towers and bridges and in the silver paint on mobile homes. Paint waste from these projects should be tested for asbestos. If the paint waste contains asbestos, contact the DNR Asbestos Program at 608/266-3658. In addition, asbestos certification requirements may apply to this type of work. Contact the Department of Health Services (DHS) Asbestos Program at 608/261-6876 for more information.

### **What other requirements apply?**

U.S. Environmental Protection Agency and DHS regulations require renovators and painters to assume that the paint contains lead on all pre-1978 residential and child-occupied facilities (e.g., day care centers and schools) unless proper testing proves the paint is lead-free. Training, certification and special work practices are required for persons providing renovation, repair or painting services on or in these structures. For contractor requirements, visit <http://www.dhs.wisconsin.gov/lead/>

The DNR's Bureau of Drinking Water and Groundwater regulates painting of the interior of water towers and other structures that are used for potable water supply. Approval from this bureau is

required prior to conducting all interior painting projects. For more information, go to <http://dnr.wi.gov/topic/drinkingwater/>.

Local units of government, including health departments, may have additional requirements that apply to paint removal activities. Check with your county and municipality for applicable local ordinances.

### **Where can I get more information?**

For more information about hazardous waste and DNR hazardous waste staff contacts, visit <http://dnr.wi.gov/topic/Waste/>

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