

# A Guide on Hazardous Waste Management for Florida's



**Furniture Refinishers & Manufacturers**

## Florida Department of Environmental Protection Hazardous Waste Compliance Assistance Program



This document was published to help educate businesses on hazardous waste management issues affecting them. The suggested options may help businesses operate in an environmentally appropriate manner. Some of the options may go beyond what is required to remain in compliance with regulations. Business owners are responsible for obtaining complete information about applicable regulations. Misrepresentations or omissions by the Florida Department of Environmental Protection or the Florida Center for Solid and Hazardous Waste Management do not relieve any person from any requirement of federal regulations or Florida law.



This document will help you with the RCRA definition:

- ◆ What is hazardous waste?
- ◆ Characteristics of wastes
- ◆ Typical hazardous wastes
- ◆ Recommended processing of waste
- ◆ How to reduce hazardous waste

These regulations are available at many public libraries. In addition, the Florida Department of Environmental Protection and the United States Environmental Protection Agency have posted links to copies of these regulations on the agencies' Internet sites:

<http://www.dep.state.fl.us>  
<http://www.epa.gov>

These sites also provide access to agency forms, fact sheets, checklists, rule summaries, answers to frequently asked questions and reports from our public information databases. Individuals who do not have Internet access may obtain copies of department publications through the contact information listed on pages 18 and 19 of this document.

Revised May 2004

## Why should I care about hazardous wastes?

As a business owner, operator or employee, you may be producing materials that can harm people and the environment. This booklet offers helpful tips on how to:

- ◆ Comply with federal and state hazardous waste regulations.
- ◆ Avoid penalties by properly managing hazardous wastes.
- ◆ Save money on disposal costs by reducing hazardous wastes.



### Health and Environment

Hazardous wastes spilled or dumped on the ground or disposed of in dumpsters may seep into the groundwater and contaminate drinking water supplies.

Hazardous wastes may run off into the nearest body of water where they may poison or kill fish and other wildlife.

Hazardous wastes pose a risk to you, your employees and your community.



### Cost Savings

State and county inspectors may visit your business to ensure that hazardous wastes are being managed properly. State penalties range from \$100 to \$50,000 **per violation per day**.

Reducing hazardous wastes can reduce your production and disposal costs and reduce your risk of future liability.



### Public Image

Your customers will appreciate your efforts to prevent pollution.

Your community will recognize your business as a good neighbor.

## What is a hazardous waste?

A waste is hazardous if:

- ◆ It is listed as a hazardous waste in the Title 40 Code of Federal Regulations (CFR) Part 261, Subpart D.
- ◆ It has any of the characteristics described below:

### Characteristic Wastes

#### Ignitable

Ignitable wastes are flammable or spontaneously combustible. If they have a flashpoint of less than 140 degrees Fahrenheit or an alcohol content of 24% or more, they are hazardous wastes. Examples include some paints, paint solvents, other solvents and degreasers.



#### Corrosive

Corrosive wastes can burn the skin or corrode metals. Liquids with a pH of 2 or lower or 12.5 or higher are corrosive. Examples include lye, rust removers, acid or alkaline fluids and battery acid.



#### Reactive

Reactive wastes are unstable and may explode or react rapidly or violently with water or other materials. Examples include bleaches, oxidizers, cyanides and explosives, such as sodium azide and dynamite.



#### Toxic

Wastes are toxic if they contain certain heavy metals above specific concentrations, such as mercury, or toxic organic chemicals. Examples include some spray gun cleaners, chromium-bearing paints, paint sludges, paint scrapings and spray booth filters.



## Listed Wastes

Some industrial processes and chemical wastes are listed specifically as hazardous in the federal regulations under 40 CFR 261, Subpart D. Copies of the rule can be found at many public libraries, on the Internet (<http://www.gpoaccess.gov/cfr/>) or may be purchased from the Government Printing Office.

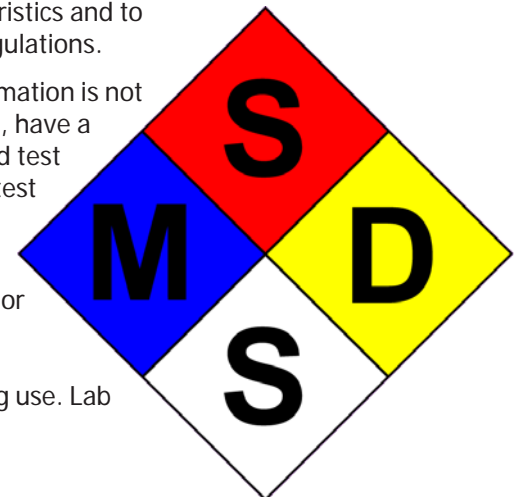
## Acutely Hazardous Wastes

Small amounts of very dangerous wastes, such as arsenic and cyanide compounds, are regulated in the same way as large amounts of other wastes. A business that generates 2.2 pounds (1 kilogram) or more of these acutely hazardous wastes per month is subject to full regulation as a Large Quantity Generator (LQG, see page 10) under the hazardous waste rules.

## Identifying Your Hazardous Wastes

It is very important to determine whether a waste is hazardous or non-hazardous. There are several ways to identify hazardous wastes.

- ◆ Always ask for a Material Safety Data Sheet (MSDS) before ordering any new product. The MSDS will give you valuable information about the product. Note: the MSDS does not identify chemicals present in concentrations less than 1%, or 10,000 parts per million.
- ◆ Talk to product suppliers and manufacturers.
- ◆ Read product labels.
- ◆ Compare product and process information to hazardous waste characteristics and to wastes listed in federal regulations.
- ◆ If product or process information is not available or is inconclusive, have a commercial lab sample and test the waste using the TCLP test or other appropriate analytical tests.
- ◆ A non-hazardous material or product may become a hazardous waste due to contaminants added during use. Lab testing may be necessary.



## SOURCES OF HAZARDOUS WASTE

### Strippers and Cleaners



Paint stripper wastes and finish stripper wastes are usually hazardous because of the stripper used. Paint sludges may contain heavy metals.

Methylene chloride (dichloromethane), the main active ingredient in most strippers, removes old paint and polyurethane. Use less toxic strippers.

Flammable solvents are often used to remove shellac, lacquers and varnishes and to wash down furniture after stripping with methylene chloride.

Lye is the active ingredient in caustic strippers. Pieces are usually rinsed with water before finishing. Lye solutions can have a pH high enough to be hazardous. Paint sludges from rinse tanks can be hazardous. Rust removers (naval jelly) and aluminum cleaners usually contain phosphoric acid. Waste waters can have a pH low enough to be hazardous.

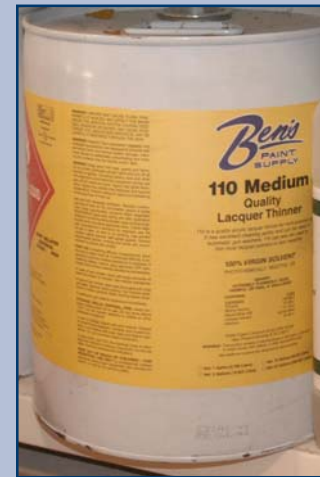
If you are using a mechanical stripping method such as sanding, the sandings may be hazardous waste and should be collected for hazardous waste determination.

### Glues, Adhesives and Fillers

Contact cement, PVC cement or laminating adhesives may contain hazardous chemicals such as trichloroethylene or tetrachloroethylene (perc). Less hazardous adhesives are available. Yellow carpenter's wood glue and white glue are non-hazardous. Fillers such as wax sticks, almond sticks and shellac sticks are non-hazardous. Epoxies are not hazardous after the components react and solidify.

### Finishing Wastes

Stains can be water- or solvent-based. Wood bleaches usually contain oxalic acid. Shellac, a natural resin, becomes hazardous when mixed with flammable solvents. Oil finishes polymerize as they dry, generating heat. Soiled rags are hazardous because they can ignite spontaneously.



Some varnishes such as spar varnish have a high percentage of drying oils and a higher risk of spontaneous combustion than spirit varnishes made of resin thinned with solvent. Polyurethanes are usually thinned with solvents; less toxic water-based polyurethanes are now available.

## Special Wastes

### Mercury

Some antique pieces may contain mercury. Liquid mercury can give off toxic vapors and is difficult to clean up. If you have a mercury spill, call a cleanup contractor who has specialized equipment and training.

### Electroplating

Specialized training is needed if you operate plating lines to resilver mirrors or refinish metal fixtures and parts. Electroplating operations may never discharge wastes into septic tanks or ponds on site. Most plating operations require a pretreatment permit from your municipal sewer system and the assistance of a professional engineer in designing the waste treatment system. Electroplating wastes almost always are regulated hazardous wastes, and they may cause your operation to be an LQG in the months you empty a process tank.



### Rags

Disposable rags or paper towels used with hazardous substances should be disposed of as hazardous wastes. They should not be disposed of in a dumpster.

## TYPICAL HAZARDOUS WASTES

Acetone  
Benzene  
Carbon tetrachloride  
Chlorobenzene  
Chloroform  
Cresol  
Ethyl benzene  
Ethanol  
Ethylene dichloride



Hexachloroethane  
Kerosene  
Methyl ethyl ketone  
Methylene chloride  
Pentachlorophenol  
Phenol  
Toluene  
White spirits, Vasrol  
Xylene

## Dos and Don'ts



**DO**  
keep  
containers  
closed.



**DON'T**  
leave  
containers  
open.

HW / Used Oil Container Inspection Log

Date	Time	Inspector's Name	# of Containers	Containers Condition	Observations	Date & description of discharges and cleanup

**DO**  
keep accurate  
inspection logs.



**DO**  
label all  
containers.



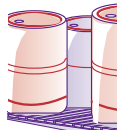
**DON'T**  
leave  
containers  
unlabeled.

## How should I manage hazardous wastes?

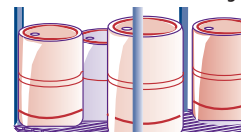
First, determine how much hazardous waste you generate **each month**. The rules you must follow depend on how much you generate, how much you store and how long you store it.



**Less than 220 pounds per month** (100 kilograms or about half a drum), and never accumulate more than 2,200 pounds (1,000 kg) at any time: you are a “Conditionally Exempt Small Quantity Generator” (CESQG).



**220 -2,200 pounds per month** (100-1,000 kilograms or about half a drum to 5 drums): you are a “Small Quantity Generator” (SQG).



**More than 2,200 pounds per month** (1,000 kilograms or more than about 5 drums): you are a “Large Quantity Generator” (LQG).

The following practices may be required for your business. Even if they are not required, they are good waste management practices. Additional information is available from FDEP.

### Containers

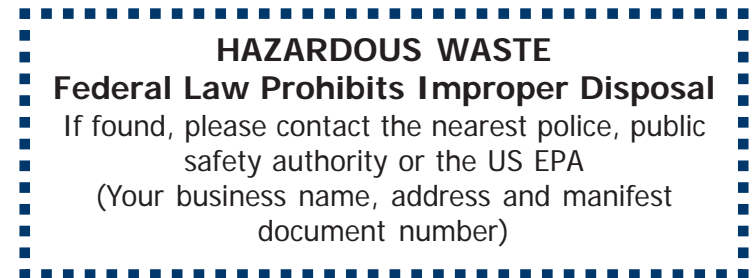
- ◆ Maintain containers in good condition. Prevent leaks, ruptures and accumulation of rainwater on tops of drums.
- ◆ If a container leaks, transfer waste to a new container.
- ◆ Keep containers closed. Use self-closing funnels when adding waste. Do not allow wastes to evaporate; this is a serious offense.
- ◆ Wastes must be compatible with the container. For example, use HDPE plastic containers for corrosive wastes.
- ◆ Never place incompatible wastes, such as wastes that react with each other (e.g., acids and bases), in the same container.

### Storage

- ◆ Maintain adequate aisle space between container rows to allow inspection for leaks and damages.
- ◆ Store ignitable and reactive wastes at least 50 feet from property boundaries.
- ◆ Store containers with incompatible wastes in separate areas.
- ◆ Time limit for SQGs is 180 days and 90 days for LQGs.

- ◆ For some hazardous material containers, secondary containment pallets or platforms may be a cost-effective option for spill-prevention.

### Labels



- ◆ The above label represents proper wording for a hazardous waste label. You must also comply with Florida Department of Transportation requirements.
- ◆ Label every container with the type of waste and whether it is hazardous or non-hazardous.
- ◆ Include the accumulation start date (the date when waste was first placed in the container).
- ◆ Include your company name and address.
- ◆ Include federal waste code numbers.

### Transport and Disposal

- ◆ Make sure your transport and disposal facilities have US EPA identification numbers.
- ◆ Use manifests for all hazardous wastes shipped off-site. Keep the manifests on-site.

### Inspections and Recordkeeping

- ◆ Inspect containers at least once a week and keep a written log of container inspections.
- ◆ Keep a record of larger spills and use this information to identify the spill prevention options that might help your company.
- ◆ Keep training and inspection records for three years.
- ◆ Keep manifests and shipping receipts for three years.
- ◆ Keep records of lab tests for three years.
- ◆ Keep land disposal restriction forms for three years from the date the waste was last shipped.

## How can I reduce hazardous wastes?

Reducing hazardous wastes in your shop makes good business sense. Benefits include:

- ◆ Saving money on waste management costs.
- ◆ Reducing concerns about penalties and liability.
- ◆ Creating a safer, healthier workplace.
- ◆ Promoting positive public relations with clients, customers and the local community.

### How do I begin?

- ◆ Make a commitment to reducing wastes in every area of your business.
- ◆ Evaluate your shop's wastes and identify areas where changes can be made.
- ◆ Encourage the participation of all employees through education, training and incentives.

### Solvents

- ◆ Reduce or eliminate solvent use by determining whether cleaning is really necessary.
- ◆ Use a multi-purpose solvent to reduce the types of hazardous waste that need to be managed.
- ◆ Find less hazardous substitutes for solvents, such as citrus-based, water-based or detergent-based cleaners.
- ◆ Replace solvents only when necessary.
- ◆ Use spigots and pumps to transfer thinners from storage drums to containers.
- ◆ Use drip pans under drum spigots.
- ◆ Use a two-stage cleaning process (dirty solvent followed by clean rinse) to reduce solvent usage.
- ◆ Contract with recycling services for thinners and other solvents.
- ◆ Use self-closing funnels to add waste to containers.



### Finishes



- ◆ Replace hazardous finishes with non-hazardous or less hazardous finishes.
- ◆ Use mechanical stripping methods, such as sanding or heat guns, instead of stripping chemicals.
- ◆ Drain unused paints or stains back into the original containers for reuse, filtering if necessary.
- ◆ In high volume painting operations, use HVLP spray guns to reduce paint overspray and paint usage.

### Shop Practices

- ◆ Minimize inventory and use a "first-in, first-out" system to prevent the need for disposal of old unused materials.
- ◆ Store raw materials and wastes in closed containers in a covered area protected from rain and sunlight.
- ◆ Prevent leaks and spills. Keep floors clean.
- ◆ Strip in a contained area to prevent discharges of potentially hazardous waste.
- ◆ For dirty rags, use an approved linen service that discharges its water to a publicly owned sewer system.
- ◆ Do not discharge wastes to the ground surface or to floor drains.

### Training

- ◆ Train all personnel to identify, reduce and properly handle wastes.
- ◆ Train employees to use solvents, finishes and other chemicals efficiently, using minimal amounts to get the job done.
- ◆ Train new employees before they handle hazardous wastes.
- ◆ Training must cover hazardous waste management; OSHA and Right-to-Know training alone are not sufficient.
- ◆ Training must be documented. Some ways to document include the use of sign-in sheets and completion certificates.
- ◆ Make pollution prevention everyone's responsibility.

## Tips from Inspectors

### Drums



- ◆ You cannot have any mystery drums. All drums must be labeled and have a “birthdate” on them.
- ◆ Evaporation of hazardous waste is a serious violation. Do not allow the hazardous waste to evaporate. When you are not in

the process of putting waste into the drum, you must keep it closed.

- ◆ You also are required to keep the top of the drum clean.
- ◆ Do not store old drums outside. If they get stormwater inside them, you will have to sample the stormwater and determine whether the water in the drum is hazardous. Insist that the person who sold you the drum and its contents takes the drum back when you are done with it.
- ◆ Inspectors go into dumpsters and walk the entire property line of a business. They go back into trees looking for orphan drums and distressed/dead vegetation.



### Spills

- ◆ Clean up your spills at the time of the spill.

### Transport

- ◆ The only generators who are allowed to transport their own waste are conditionally exempt small quantity generators. All other generators must use a hazardous waste hauler that has registered with the FDEP and the US EPA.

### Waste

- ◆ The most common violation occurs with waste determination.
- ◆ Abandoned products are wastes.
- ◆ If you throw away containers, make sure the container is completely empty before you place it in a waste receptacle. Aerosol cans may be disposed of as hazardous waste in lab pack containers. You may also purchase a device which allows the cans to be punctured and drained safely. Empty cans may then be disposed of in the trash, while the contents may either be used or disposed of as waste.

### Water

- ◆ If you discharge any waste that could be construed as a hazardous waste into a city sewer, you must have written permission of the city sewer system. The city sewer system must be a Publicly Owned Treatment Works (POTW). It cannot be a privately owned package plant.
- ◆ If you use rags, you should send the rags to a linen service that is served by a publicly-owned sewage treatment plant. If you use paper towels, you must make a determination as to whether the used paper towels are hazardous waste.
- ◆ Know where your drains go. All drains that lead from a hazardous materials area to a stormwater area should be sealed shut.





## Who needs to know if my business generates hazardous waste?

### Post Emergency Information

Post the following information near every telephone:

- ◆ Fire department phone number.
- ◆ Emergency coordinator's name and phone number.
- ◆ Locations of fire alarms and extinguishers.
- ◆ Locations of spill control materials.

### Notify FDEP

If your business is a small or large quantity generator, notify FDEP to obtain a US EPA identification number. Local environmental agencies also should be notified.

### Notify local authorities

Police and fire departments and local hospitals that would respond to an emergency need to know that hazardous wastes are on your property.

### Designate an emergency coordinator

This person must know what to do in case of fire, spill or other emergency and must be on the premises or on call 24 hours a day.

### Develop a contingency plan

Guidance on contingency plans is available from FDEP. Large quantity generators must have a written plan that includes:

- ◆ Emergency response arrangements with police and fire departments, hospitals and emergency response contractors.
- ◆ Emergency coordinator's address and phone number.
- ◆ On-site emergency equipment descriptions and locations.
- ◆ Evacuation plan and routes, including a site diagram.
- ◆ Spill reporting procedures.

Smaller generators (SQGs and CESQGs) should also have a contingency plan.

## Checklist

This checklist will help you prevent the most common hazardous waste violations. For more detailed information on hazardous waste management requirements, contact FDEP.

- Each month, identify and record types and quantities of hazardous wastes.
- Notify FDEP and obtain a US EPA identification number.
- Use proper containers to collect and store wastes.
- Label all containers, whether product or waste, as to their contents.
- Include accumulation start dates on labels for each container.
- Keep all containers of hazardous waste or products containing regulated solvents closed at all times unless actively removing from or adding to them.
- Maintain aisle space between containers for inspection.
- Inspect containers weekly for rust, leaks or damage and keep a log.
- Never discharge hazardous wastes to a septic tank.
- Train employees to properly handle hazardous wastes.
- Designate an emergency coordinator.
- Notify police, hospitals and fire department.
- Post emergency information near each phone.
- Develop a contingency plan for emergencies.
- Use manifests for all waste transported for disposal.
- Keep all records for at least three years.

## Where can I get more information?

Additional information on hazardous waste reduction and regulations is available from many sources.

## Florida Department of Environmental Protection

District offices and the Tallahassee office offer technical assistance, fact sheets and other publications on hazardous waste regulations.

### DEP Information Line

Phone: (800) 741-4DEP  
Fax: (850) 245-8810

### Bureau of Solid and Hazardous Waste

Phone: (850) 245-8707



Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400  
<http://www.dep.state.fl.us/waste/>

**Northeast District**  
7825 Baymeadows Way, Suite 200B  
Jacksonville, FL 32256  
(904) 807-3300

**Northwest District**  
160 Governmental Center, Room 308  
Pensacola, FL 32502  
(850) 595-8300

**Southwest District**  
3804 Coconut Palm Dr.  
Tampa, FL 33619  
(813) 744-6100

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3319 Maguire Blvd., Suite 232  
Orlando, FL 32803  
(407) 894-7555

**South District**  
P.O. Box 33902-2549  
2295 Victoria Ave., Suite 364  
Fort Myers, FL 33901  
(239) 332-6975

**Southeast District**  
400 N. Congress Ave., Suite 200  
West Palm Beach, FL 33401  
(561) 681-6600



Available publications include:

Summary of Hazardous Waste Regulations  
Requirements for Conditionally Exempt Small Quantity Generators  
Requirements for Small Quantity Generators  
Handbook for Small Quantity Generators of Hazardous Waste

## U.S. Environmental Protection Agency

The US EPA has published a series of industry-specific guidelines and handbooks on preventing pollution and complying with hazardous waste regulations. RCRA Hotline: (800) 424-9346

## Your Trade Associations

Many trade associations have published guides to help you find solutions to your hazardous waste management problems.

## Florida Small Business Assistance Program



The Small Business Assistance Program helps businesses with environmental concerns and problems related to compliance with air regulations. Assistance is confidential and staff experts have business experience.

Phone: (800) 722-7457  
<http://www.dep.state.fl.us/air/programs/sbap.htm>

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This project and the preparation of this booklet were funded in part by a Section 3011 Hazardous Waste Management State Program grant from the U.S. Environmental Protection Agency (US EPA) through a contract with the Hazardous Waste Regulation Section of the Florida Department of Environmental Protection. The total cost of the project was \$50,000, of which \$50,000 or 100 percent was provided by the US EPA.

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