



A
Guide
on
Hazardous
Waste
Management
for Florida's
Printers

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 to 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.

With Support From:

David Struhs, FDEP Secretary
Alan Bedwell, FDEP Deputy Secretary
John Ruddell, FDEP Waste Division Director
Bill Hinkley, FDEP Bureau Chief, Solid and Hazardous Waste Section
U.S. Environmental Protection Agency, Region IV

Prepared by:

Florida Department of Environmental Protection, Hazardous Waste Compliance Assistance Program

Satish Kastury, Administrator
Janet Ashwood, Compliance Assistance Project Manager
Mike Redig, Tallahassee
Glen Perrigan, Tallahassee
Charlie Goddard, Northwest District
Bill Kellenberger, Northwest District
Ashwin Patel, Northeast District
Pamela Green, Northeast District
John White, Central District
Lu Burson, Central District
Beth Knauss, Southwest District
Jeff Smith, Southeast District
Charles Emery, South District
Karen Bayly, South District

Florida Center for Solid and Hazardous Waste Management

www.floridacenter.org

John Schert, Executive Director
Julie Lyons, Project Coordinator
Jon Powell, Research Assistant

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 links 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 page 16 of this document.

Revised 6/2002

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 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 health 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 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 140 degrees Fahrenheit or less, they are a hazardous waste. Examples include alcohol blanket washes, petroleum solvents and some contaminated rags.



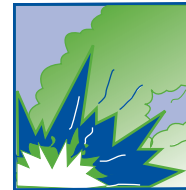
Corrosive

Corrosive wastes can burn the skin or corrode metals. Liquids with a pH of 2 or lower or 12.5 or higher are corrosive. Some corrosive liquids can have a more neutral pH, such as ferric chloride etchant or amine-based cleaners.



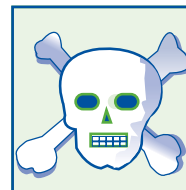
Reactive

Reactive wastes are unstable and may explode or react violently with water or other materials.



Toxic

Wastes are toxic if they contain certain heavy metals above specific concentrations, such as chromium, dichromate hardeners, lead or cadmium, or toxic organic chemicals. Examples include silver-bearing wastes with a Toxicity Characteristic Leaching Procedure value above 5.



Listed Wastes

Some industrial processes and chemical wastes are listed specifically as hazardous in the federal regulations under 40 CFR 261, Subpart D. Some spent solvent wastes used in the printing industry like methylene chloride and tetrachloroethene are listed. Copies of the rule can be found at many public libraries, on the Internet 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 under the hazardous waste rules.

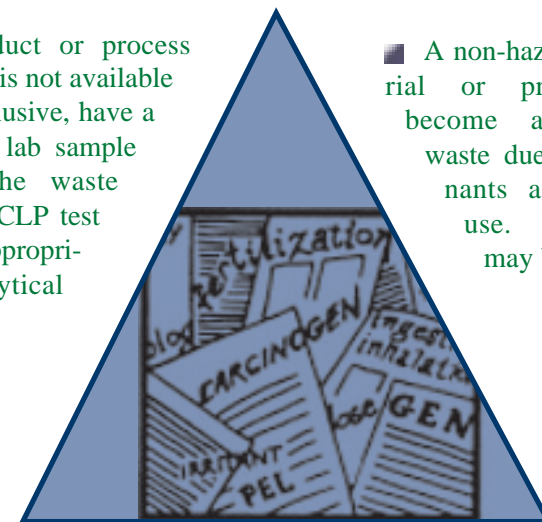
Identifying Your Hazardous Wastes

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

- Obtain and read Material Safety Data Sheets (MSDS).
- 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

Waste Inks

Determine whether waste inks are hazardous, or assume they are hazardous and dispose of them as hazardous wastes. Consider using less toxic inks with low metal concentrations, vegetable oil-based inks and water-based inks.

Spent Solvents

Many spent solvents are considered hazardous wastes because they are ignitable or toxic. Segregate spent solvents and recycle them. To reduce hazardous waste disposal costs and air emissions, use solvents that are less hazardous or non-hazardous.

Fixers

Untreated spent fixer is likely to be a hazardous waste and to exceed local sewer discharge limits for silver. Fixer should be treated on-site or off-site and should never be discharged to a septic tank unless you have a permit from FDEP.

Shop Towels and Wipes

Shop towels are hazardous wastes when they are contaminated with solvents that contain hazardous chemicals. They can be disposed as a hazardous waste, or a towel service may be used. If you use a towel service, make sure the company discharges its wastewater to a sanitary sewer. Used disposable wipes that are contaminated with listed spent solvents or substances that cause the wipes to be characteristically toxic should be disposed of as hazardous wastes.

Aerosol Cans

Spray cans used in screen printing may contain hazardous chemicals, such as 1,1,1-trichloroethane or toluene. Empty aerosol cans may be thrown in the trash only if all the contents have been removed completely.

Containers

Keep used ink containers covered to prevent skin formation and rag storage containers covered to reduce emissions.

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 an 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 there are hazardous wastes 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.

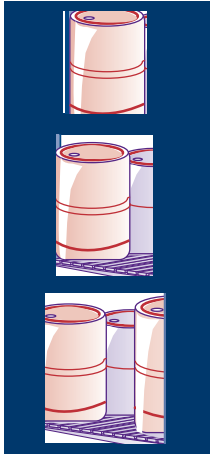
Develop a contingency plan

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

- * Emergency response arrangements with police, fire, 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.

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 (100 kilograms or about half a drum): you are a “Conditionally Exempt Small Quantity Generator.”

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

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

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.
- 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. Elementary neutralization is okay (e.g., acids and cyanides).

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.

Labels

HAZARDOUS WASTE Federal Law Prohibits Improper Disposal

If found, please contact the nearest police, public safety authority or the U.S. EPA

(Your business name, address and manifest document number)

- The above label represents proper wording for a hazardous waste label. You must also comply with DOT.
- Label every container with the type of waste and whether it is hazardous or non-hazardous or used oil.
- Include the accumulation start date (the date when waste was first placed in the drum).

Transport and Disposal

- Make sure your transporter and disposal facility have EPA identification numbers.
- Use manifests for all hazardous wastes shipped off-site. Keep the manifests on-site.
- Include your business name and address.
- Include federal waste code numbers.

Inspections and Recordkeeping

- Inspect containers at least once a week and keep a written log of container inspections.
- Keep training and inspection records for three years.
- Keep manifests and shipping receipts for three years.
- Keep records of tests for three years.
- Keep land disposal restriction forms for three years from the date the waste was last shipped.

Training

- Train all employees to identify and reduce waste streams and how to properly handle wastes.
- Train new employees before they handle hazardous wastes.
- Employees should be made aware of the importance of pollution prevention.

How can I reduce hazardous wastes?

Reducing hazardous wastes 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

- Use washout booths to collect spent solvents from cleaning.
- Use filtration systems to remove waste and increase recycling.
- Use distillation units to facilitate recycling and reuse of spent solvents.
- Store solvents away from heat.
- Install a solvent ink filter to prolong the life of a solvent.
- Limit the amount of solvent that can be applied to cleaning rags.
- Develop a procedure for removing solvent from rags before disposal.
- Use properly fitting pumps on solvent containers to minimize spills and evaporation.
- Use a two-stage cleaning process, using dirty solvent followed by a clean rinse to reduce solvent usage.
- Avoid using listed solvents (EPA wastes F001 to F005) with disposable wipes.
- Consider replacing solvent-based platemaking system with a water-based platemaking system.
- Use a non-site system that recovers silver from photoprocessing waste.
- Consider using UV-based inks.
- Use soap or detergents in lieu of solvents whenever possible.

Purchasing

- Reject free samples to reduce extra disposal costs.
- Purchase inks in containers that can be refilled by the supplier.
- Look for substitutes for toxic solvents.
- Avoid inks containing heavy metal pigments.

Chemical Management

- Follow manufacturers' directions on storing chemicals that are sensitive to light and temperature.
- Avoid overstocking to reduce expired materials.
- Ask vendors for non-hazardous developers and finishers and non-hazardous chemical substitutes for intensifiers and reducers that contain mercury or cyanide salts.
- Recycle or reduce paper wastes as much as possible.
- Segregate wastes to increase recyclability.

Inventory

- Minimize inventory and use a "first-in, first-out" system to prevent the need for disposal of old unused materials.
- Maintain accurate logs of chemicals and materials in stock.
- Keep containers clearly marked.



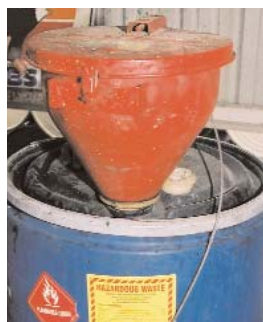
Checklist

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

- Identify and record quantities of hazardous waste monthly.
- Obtain an EPA identification number, if needed.
- Use proper containers to collect and store wastes or products.
- Label all containers whether product or waste as to their contents.
- Keep all hazardous waste or products containing regulated solvents closed at all times unless actively removing from or adding to it.
- Inspect all regulated management areas.
- Designate an emergency coordinator.
- 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.



Dos and Don'ts



DO
Keep containers closed



DON'T
Leave containers open



DO
Keep accurate inspection logs



DO
Label all containers



DON'T
Leave containers unlabeled

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 wastes to evaporate. You must keep the drum closed when you are not in the process of putting waste into the drum. 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 or not 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.

Oil

- You cannot use used motor oil for weed control. Used oil containers must not leak and must be in good condition. You must retain your used oil filter records for three years. The inspectors spend a lot of time on used oil inspections.

Spills

- You must clean up your spills at the time of the spill.
- Be sure to store old automotive batteries on a floor that is under a roof. Do not stack batteries. If they fall over, they will leak acid and create a spill problem.

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 who has a permit from the FDEP and the US EPA.

Waste

- The most common violation is the non-determination of whether or not something is a waste.
- Abandoned products are a waste.
- If you throw away containers, make sure the container is completely empty before you place it in a waste receptacle. If you throw away aerosol cans, make sure the can has a hole in it, and that you have drained the liquids out of the can. If you are throwing away paint containers, be sure to drain all the paint out of the container.

Water

- If you discharge any waste that could be construed as a hazardous waste into a city sewer, you must have the 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 a hazardous waste.
- Know where your drains go. All drains that lead from a hazardous materials area to a stormwater area should be sealed shut.

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.

Hazardous Waste Compliance Assistance Program

Phone: (800) 741-4DEP
(850) 245-8707
Fax: (850) 245-8810

Information about the Universal Waste rule can be found at:
<http://www.dep.state.fl.us/waste/categories/mercury/pages/laws.htm>
or by calling (800) 741-4DEP

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 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

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



Florida Printers' Compliance Alliance

The Florida Printers' Compliance Alliance is a proposed partnership of industry and government. The Compliance Alliance Program (CAP) is being designed to provide printers with assistance in understanding environmental requirements and implementing pollution prevention techniques. CAP has developed a workbook to help printers incorporate cheaper, cleaner and smarter practices in their daily operations. For a copy of the workbook or for additional information call:

■ Printing Association of Florida (800) 331-0461

Your Trade Associations

Many trade associations have published guides to help you find solutions to your hazardous waste management problems. Information is available from the following organizations:

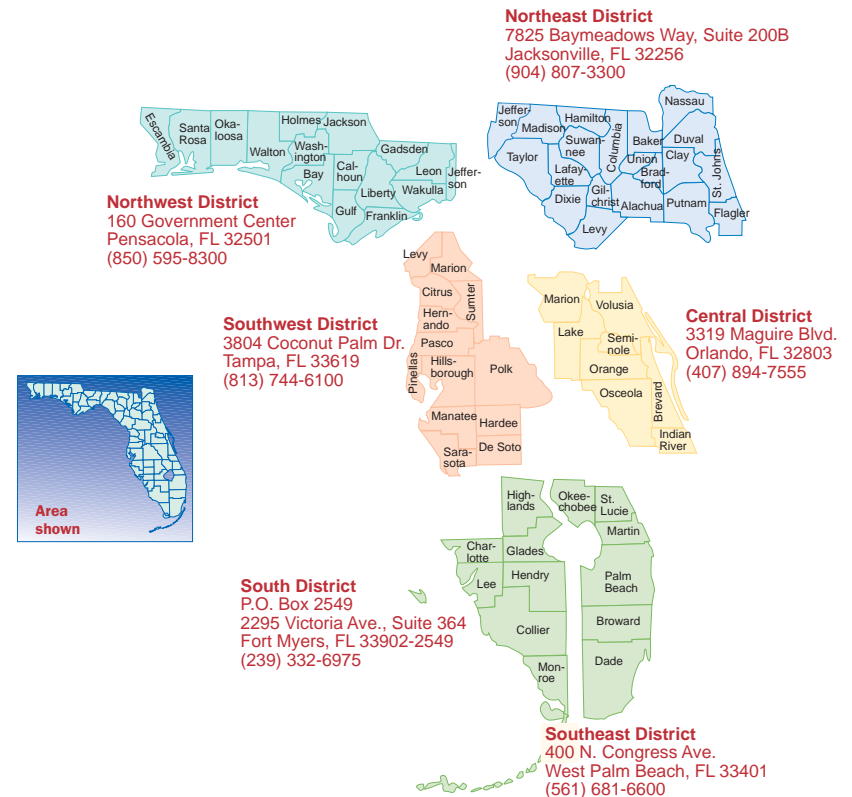
- Flexographic Technical Association (FTA)
(631) 737-6020
www.fta-ffta.org
- Graphic Arts Technical Foundation (GATF)
(800) 910-GATF
www.gatf.lm.com
- Gravure Association of America (GAA)
(716) 436-2150
www.gaa.org
- Printing Association of Florida (PAF)
(800) 331-0461
www.pafgraf.org
- Screenprinting and Graphic Imaging Association International (SGIA)
(888) 385-3588
www.sgia.org

This project and the preparation of this brochure was 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 Management Section of the Florida Department of Environmental Protection. The total cost of the project was \$60,000, of which \$45,000 or 75 percent was provided by the US EPA.

Offices of the Florida Department of Environmental Protection



Hazardous Waste Regulation Section
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400
(800) 741-4DEP



University of Florida
**Florida Center for Solid and
Hazardous Waste Management**
2207-D N.W. 13th Street
Gainesville, FL 32609
(352) 392-6264
Fax: (352) 846-0183

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For additional information contact:

Janet Ashwood

**Florida Department of Environmental Protection
Hazardous Waste Compliance Assistance Program**
Tallahassee, FL
Phone: (800) 741-4337
(850) 245-8707