



# Introduction to Hazardous Waste Management

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Hazardous Waste Management  
Unit

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

*Protecting Maine's Air, Land and Water*

# What Is Hazardous Waste?

## Introduction

- Maine's chapters 06-096 CMR 850 - 858
- RCRA is cradle to grave and includes generation, transportation, treatment and storage
- And includes universal wastes



# What Is Hazardous Waste?

## First It Is A Waste

- A useless, unwanted or discarded substance or material
  - Whether or not such substance has any other future use
- Includes spilled, leaked, pumped, poured, emitted, disposed, emptied or dumped material
  - Onto the land, into the water or into the ambient air



# What Is Hazardous Waste?

There are four questions to ask:

- Is it excluded?
- Is it listed in regulation?
- Does it exhibit hazardous characteristics?
- Is it a mixture of hazardous and non-hazardous?



# Is It Excluded?

There are a number of exclusions such as:

- Household waste (not small companies or schools). This doesn't mean that because it's from a household, it's no longer dangerous



# Is It Excluded?

- Scrap metal for recycling
- Other specific excluded wastes
  - See 06-096 CMR 850(4)(A)(4) for all the exclusions



# Is It Listed?

- “F” - substances from non-specific sources (includes solvents for painting & degreasing)
- “K” listed from specific production sources
- M002 - Maine specific waste code for PCBs
- “P” & “U” chemical products, typically unused, but includes residue or contaminated spill debris ( these are rather long lists)
- These lists can be found – 06-096 CMR 850(4)(C)



# Does It Have A Hazardous Characteristic?

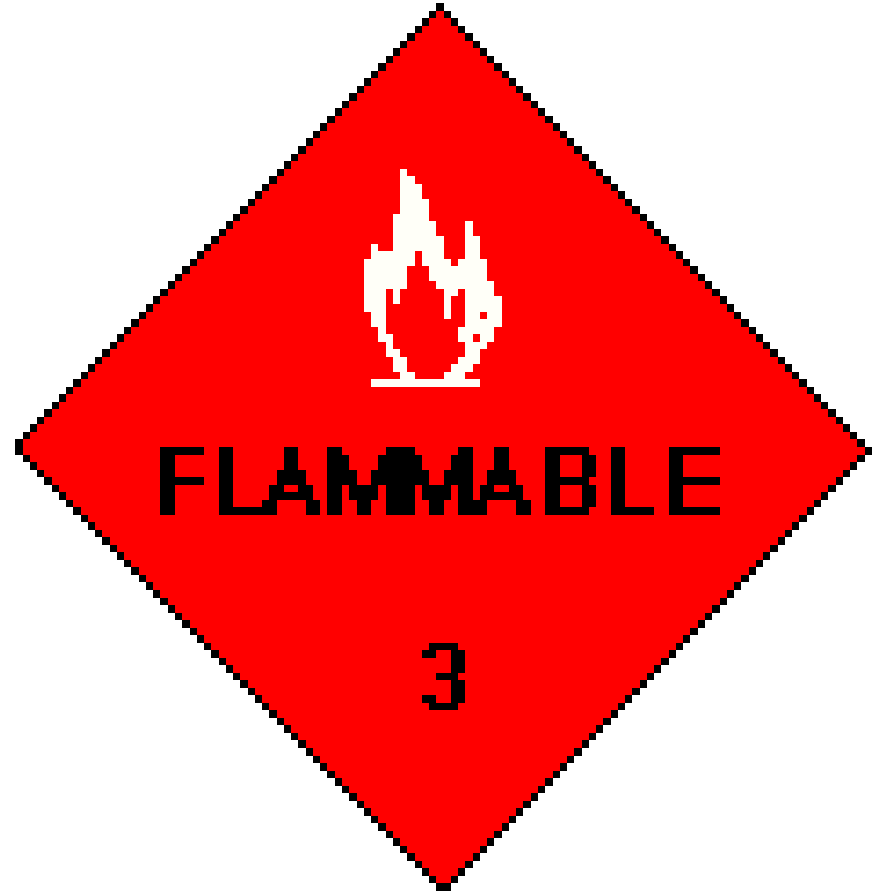
- Ignitability - catches fire
- Corrosivity - burns living tissue
- Reactivity - explosive, reacts violently or creates toxic gases when mixed with water
- Toxicity - causes injury/death through ingestion, inhalation, skin absorption, and may cause cancer or harm fetuses





# Ignitability Characteristic

- **Ignitability - D001**
- It is a liquid and has a flash point of  $< 140^{\circ}\text{F}$
- Not a liquid and can cause fire
- Ignitable compressed gases



# Ignitability Examples

- Solvents and degreasers
- Oil or enamel based paints and thinners
- Lighter fluid
- Some aerosols
- Old gasoline or oil and gasoline mixtures
- Starter fluid
- Alcohol



# Corrosivity Characteristic



- **Corrosivity - D002**
- $\text{pH} \leq 2$  or  $\geq 12.5$
- These items can cause chemical burns to skin and metal



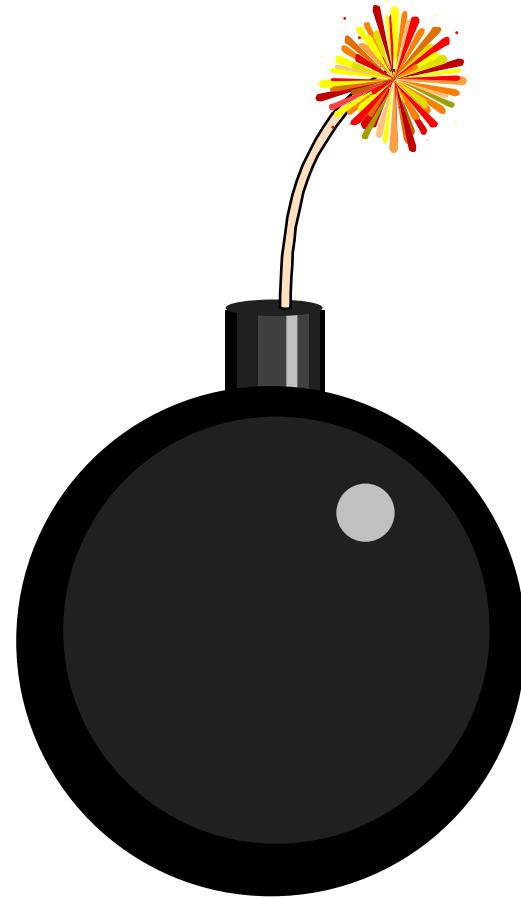
# Corrosivity Examples

- Chlorine Bleach
- Engine Degreaser (potassium hydroxide)
- Some Paint Strippers
- Gasket Remover
- Broken or Leaking Batteries (sulfuric acid)
- Muriatic Acid
- Pool chemicals



# Reactivity Characteristic

- **Reactivity – D003**
- Unstable materials
- Explosives
- Reacts violently or creates toxic gases when mixed with water



# Reactivity Examples

- Old Ethers
- Peroxides
- Cyanides
- Ammunition
- Fireworks
- Calcium carbide (when mixed with water forms acetylene gas)



# Toxicity Characteristic

- Toxicity – D004 through D017 (State)
- Includes certain heavy metals, pesticides, herbicides and volatile and semi-volatile chemicals.
- Part of the list of chemicals in 06-096 CMR 850(4)(C)



# Toxicity Examples

- Solvents
- Insect Sprays
- Silver (silver polish & used photo fixer)
- Weed and feed chemicals
- Metals (lead, mercury, arsenic, barium...)
- Acetone (nail polish remover)





# Is It A Mixture?

A mixture of non-hazardous and one or more hazardous wastes

- Mixture of listed and non-hazardous = listed HW
- Mixture of characteristic and non-hazardous = need to sample



# So Why Is This Important To Transfer Stations?

- Improperly managed hazardous waste may impact your health, the local area, and the environment
- About 1 - 2 % of municipal solid waste in the US is hazardous
- The average American generates about 20 pounds of hazardous waste per year
- Because household hazardous waste is exempt from the rules, it often ends up in the trash



# So Why Is This Important To Transfer Stations?

- In addition to household hazardous waste some businesses will try to avoid the rules and bring in their hazardous waste.



# This Is Why It Is Important To Transfer Stations



To save doing this at  
a high expense to  
you and your  
community!



# What Does This Mean To You?

- You need to determine if the waste is hazardous waste
- Manage those wastes properly
- Call DEP for guidance after you find something hazardous or take something to prevent improper disposal.



# Important Phone Numbers

- Maine DEP Hazardous Waste Regulatory Help: 287-7688
- Maine DEP Office of Assistance Hotline: (800) 789-9802
- Regional Offices: Portland 822-6300,  
Presque Isle 764-0477 and Bangor 941-4570
- Reporting an Oil Spill: (800) 482-0777
- Reporting a Chemical Spill: (800) 452-4664

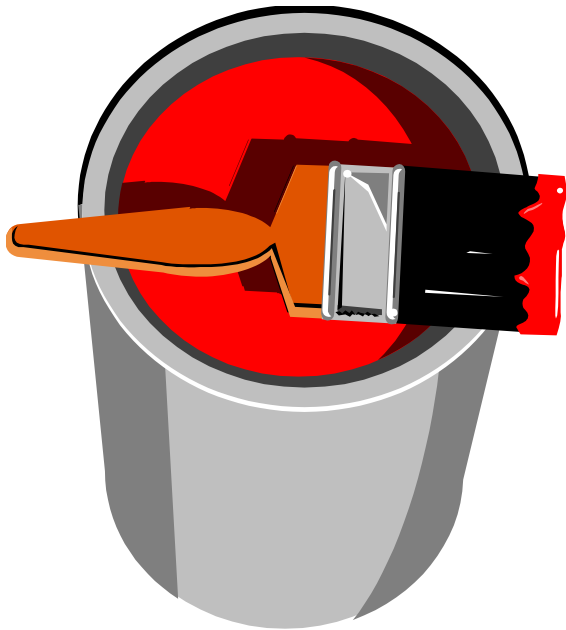


# Important Safety Information

- Always remember to wear your personal protective equipment (PPE) when dealing with potentially hazardous materials
  - Nitrile gloves under your leather gloves for safe handling
  - Safety glasses in case of splashes from containers
  - Protect your skin from getting hazardous chemicals on you
  - Do not purposely smell containers of hazardous materials, some chemicals do not have an odor you can detect
  - Washing your hands after handling hazardous materials and before smoking or eating



# Determine If The Wastes Are Hazardous



- Labels with “Danger, Warning, Caution, Toxic, Corrosive, Flammable, Poison may be hazardous
- However, many household size containers don’t have all the information on the label





# Some Solutions

- Use your hazardous waste exclusion plan to turn away hazardous waste
- Have customers call DEP for help locating disposal options
- Have customers take it home until there is a household hazardous waste collection
- Pesticides collection every fall - call 287-2731
- Customers can call a contractor
- Businesses are required to call a contractor



# Some Solutions

- Direct people to the Western Maine **Environmental Depot** – Lewiston
  - AVCOG towns have vouchers
  - Will take hazardous waste from out of town residents for a fee (\$29 for 5-gal. liquid or 20 lbs. solid)
  - Open 1<sup>st</sup> and 3<sup>rd</sup> Saturdays May through November – 8 a.m. to Noon



# Some Solutions

- Direct people to the **Riverside Recycling Facility** – Portland
  - Will take household hazardous waste from out of town residents for a fee
  - Open 1<sup>st</sup> Saturday April through November
    - 8 a.m. to 2 p.m.
  - \$6.50/gallon for liquid waste and \$3.50/pound for solid waste



# Some Solutions

- If the transfer station accepts or receives HW, it must be managed it as if it was the transfer station's hazardous waste
- If you do get some hazardous waste manage it appropriately
- Use gloves, and don't touch materials which may be hazardous
- Keep containers closed
- Call the Maine DEP for assistance!



# Some Solutions

- If you sometimes take small quantities of household hazardous waste that were dropped off at the transfer station, be sure to turn away whole boxes
- If you accept oils, or antifreeze, ask if anything else was mixed with it. Gasoline and solvents may make the oil or antifreeze hazardous
- The town can require businesses to sample waste oil to prove the oil is non-hazardous

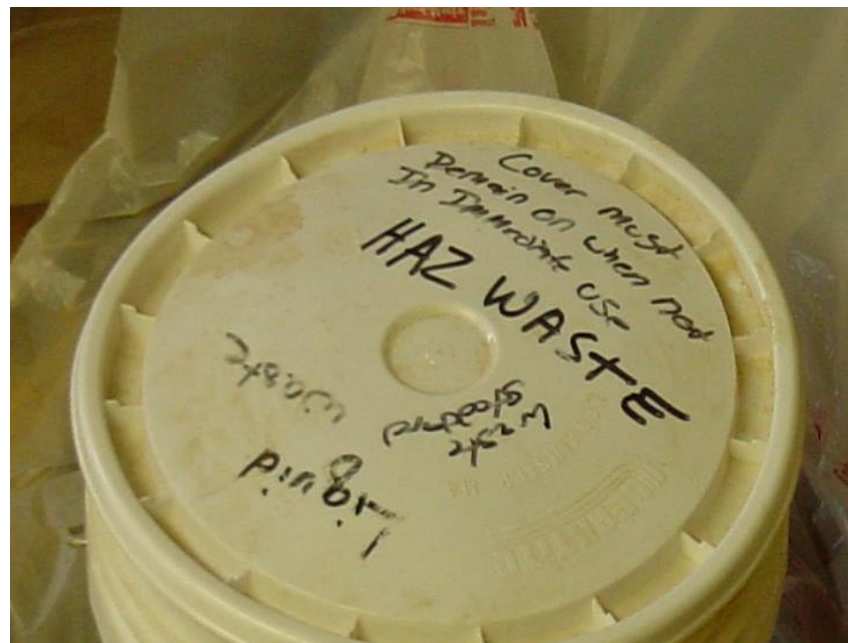
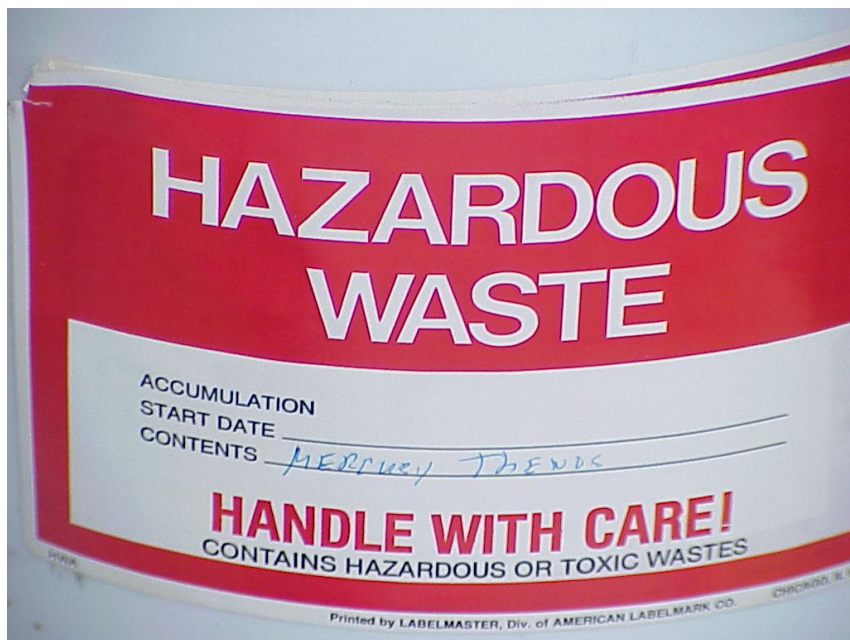


# Store Hazardous Waste In Exclusion Area and Follow Instructions For Isolating





# Label The Waste With The Words “Hazardous Waste”



# Report Hazardous Waste and Hazardous Matter Discharges to DEP @ 1-800-452-4664





# Document Disposal By Using A Hazardous Waste Manifest

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved: OMB No. 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		2. Page 1 of		3. Emergency Response Phone		4. Manifest Tracking Number	
1. Generator ID Number		5. Generator's Name and Mailing Address					
		Generator's Site Address (if different than mailing address)					
Generator's Phone:							
6. Transporter 1 Company Name		U.S. EPA ID Number					
7. Transporter 2 Company Name		U.S. EPA ID Number					
8. Designated Facility Name and Site Address		U.S. EPA ID Number					
Facility's Phone:							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit WT./Vol.	13. Waste Codes	
1.							
2.							
3.							
4.							
14. Special Handling Instructions and Additional Information							
15. GENERATOR/SOFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Officer's Printed/Typed Name		Signature		Month		Day	Year
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit:		Date leaving U.S.:			
Transporter signature (for exports only):							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name		Signature		Month		Day	Year
Transporter 2 Printed/Typed Name		Signature		Month		Day	Year
18. Discrepancy							
18a. Discrepancy indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
18b. Alternate Facility (or Generator)		Manifest Reference Number:		U.S. EPA ID Number			
Facility's Phone:							
18c. Signature of Alternate Facility (or Generator)		Signature		Month		Day	Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1.	2.	3.	4.				
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a							
Printed/Typed Name		Signature		Month		Day	Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

# Shipping Hazardous Waste

- Use a Hazardous Waste Transporter that is licensed by the Maine DEP
- Ship to a Hazardous Waste Facility that is licensed and permitted in the state where the waste is going
  - Transporters and Waste Facilities are licensed, permitted and will have an EPA ID number.



# Manage The Waste Properly

- Use the EPA ID number assigned to your site, if you have one
- Use the generic ID number MEX0200000000 or call the DEP for temporary number
- Must ship waste ASAP!



# Do Not Treat Waste Unless Licensed To Do So By The Department

- Burning, and evaporation are illegal
- Dilution is not the solution

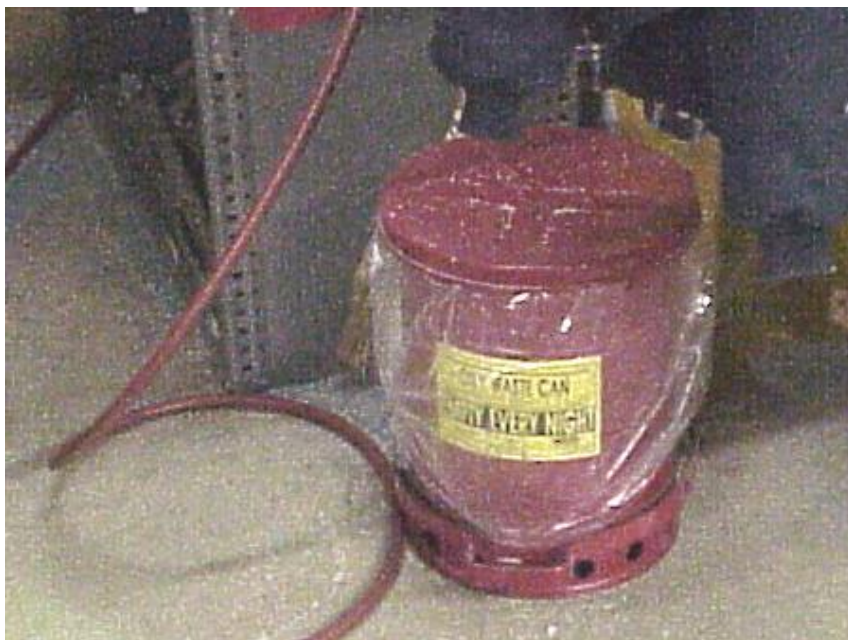


# Solutions

- Don't touch the container without gloves, knowing what it is, and that it is safe to move
- Put the material in a second container with a secure lid and with sorbent, such as vermiculite or kitty litter to contain it if it leaks, or falls



## Some Examples of Storage Containers You Could Have Ready In Your Exclusion Area For Storing Containers At Risk Of Leaking Or Spilling



# Common Problems and Solutions

- Incompatibles - things that are dangerous to mix together. For example bleach and ammonia when mixed release chlorine gas
- A transfer station operator went to the hospital when these things were crushed together in a compactor



# Solutions

- Don't mix things. Keep them in their own containers.
- Keep flammables and acids in separate containers and areas.
- You can isolate materials by making a new exclusion area for that material until you get assistance.





# Common Problems and Solutions

- Suspected hazardous waste in with ordinary trash in larger quantities or from a business  
Try to determine where and who it's coming from and make them come and take it back.
- Call the Maine DEP for assistance in determining if the waste is hazardous and help in determining where the waste came from



# Some Solutions

Encourage your town to have a household hazardous waste collection so there are choices out there for your town residents!



# What Have You Seen?



# Questions?



# References

- Maine Law 38 MRSA 1301 et seq. and 1317 et seq.
- Maine Rules 06-096 Chapters 850 -858
- Maine Rules 06-096 Chapters 800 and 801
- Code of Federal Regulations Parts 260 - 273
- Handbook for Hazardous Waste Generators
- Universal Waste Handbook
- [www.maine.gov/dep/waste/hazardouswaste](http://www.maine.gov/dep/waste/hazardouswaste)





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