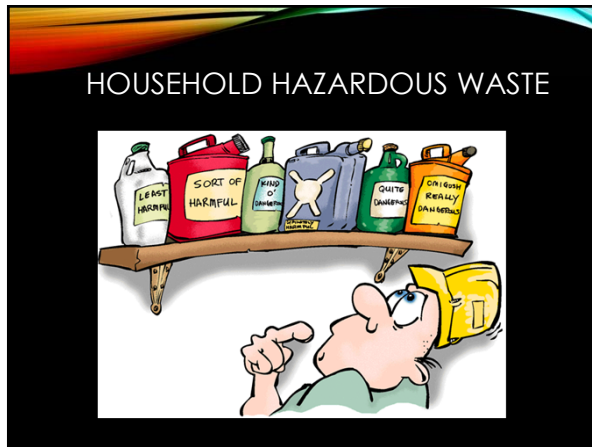


**HOUSEHOLD HAZARDOUS WASTE**

**COLLECTIONS**

TRADEBE

Mike Schroader, CHMM  
 Technical Services Specialist, Tradebe Environmental  
 President, Chicago Chapter AHMP



YOU PROBABLY DON'T THINK ABOUT THIS

**THE CONCERN**

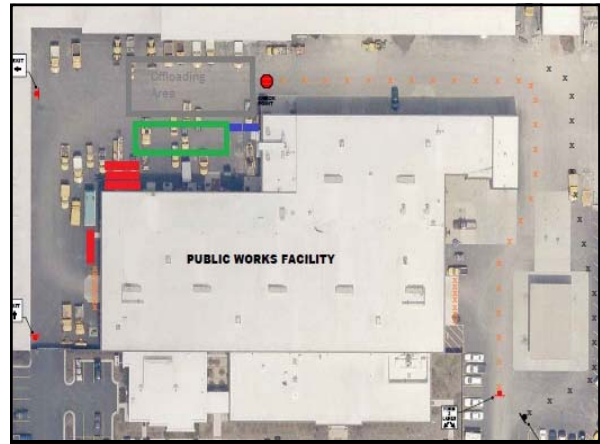
- The average household accumulates about 100 pounds of hazardous waste each year
- About 4 pounds per US citizen
- Left unmanaged, wastes can pose a potential health risk to individuals and wildlife
- Outdated HHW can represent a serious risk for individuals and communities

**MEETING THE NEED**

- Mount Prospect, IL
  - ILEPA discontinued the sponsorship of community one-day events
  - A local HHW collection had not been held in over 15 years
  - Residents continually asked the village on how to get rid of old and expired household products
  - The village budgeted for and planned a collection for its residents
  - An RFP was sent to area hazardous waste disposal companies to select a partner several months ahead of the planned event

## MEETING THE NEED

- Successful vendor meets with municipality
  - Discuss acceptable and non-acceptable items
  - Site walk to set layout and traffic flow
- Municipality is typically responsible for the location, date, times, promotion, traffic and security
- Vendor is typically responsible for all supplies and equipment



**HOUSEHOLD HAZARDOUS WASTE COLLECTION**  
**SATURDAY, JUNE 30**  
**8:00 A.M. - 2:30 P.M.**  
 Mount Prospect Public Works Facility  
 1700 W. Central Road  
 Please enter from northbound Central Road  
 This one-day event is for MOUNT PROSPECT RESIDENTS ONLY.  
 It will be checked for proof of residency.

**ACCEPTABLE CHEMICALS**

Automotive Fluids & Greases	Antifreeze	Car Wash Soap	Drain Cleaners	Gasoline	Household Bleach	Household Oil	Household Paint	Household Solvents	Household Stain Removers	Household Waxes	Household Window Cleaners	Household Antifreeze	Household Drain Cleaners	Household Degreasers	Household Disinfectants	Household Detergents	Household Floor Polishes	Household Glass Cleaners	Household Lubricants	Household Motor Oils	Household Rust Removers	Household Sealants	Household Solvents	Household Stain Removers	Household Waxes	Household Window Cleaners
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**THE FOLLOWING ITEMS WILL NOT BE ACCEPTED:**

Acrylonitrile Butadiene Styrene (ABS)	Asbestos	Automotive Air Conditioning	Automotive Compressed Gases	Automotive Tires	Automotive Waxes	Automotive Wheel Balancers	Automotive Wheel Hubs	Automotive Wheel Nuts	Automotive Wheel Spacers	Automotive Wheel Studs	Automotive Wheel Valves	Automotive Wheel Wrenches	Automotive Wheel Yokes	Automotive Wheel Hubs	Automotive Wheel Nuts	Automotive Wheel Spacers	Automotive Wheel Studs	Automotive Wheel Valves	Automotive Wheel Wrenches	Automotive Wheel Yokes
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For more information regarding this event, contact the Public Works Department at 847.376.3444 or visit [www.mountprospect.org](http://www.mountprospect.org)

# Hazard Properties

## HAZARD PROPERTIES

**4 characteristics:**

- Ignitable
- Corrosive
- Reactive
- Toxic

## WASTE IDENTIFICATION & CLASSIFICATION


**Ignitable**

- Liquids with flash point < 140°F
- Solids which readily ignite and burn
- Ignitable compressed gases
- Oxidizers
- Organic peroxides

## WASTE IDENTIFICATION & CLASSIFICATION

**Corrosive**


- Aqueous solutions with pH ≤ 2 or ≥ 12.5
- Liquids that can corrode steel



2 types of corrosives  
Acids – low pH  
Bases – high pH

14	Liquid drain cleaner, Caustic soda
13	bleaches, oven cleaner
12	Soapy water
11	Household Ammonia (11.5)
10	Milk of magnesium (10.5)
9	Toothpaste (9.9)
8	Baking soda (8.4), Seawater, EGW
7	"Pure" water (7)
6	Urine (6) Milk (6.6)
5	Acid rain (5.6) Black coffee (5)
4	Tomato juice (4.1)
3	Grapefruit & Orange Juice, Soft drink
2	Lemon juice (2.3) Vinegar (2.9)
1	Hydrochloric acid secreted from the stomach lining (1)
0	Battery Acid

## WASTE IDENTIFICATION & CLASSIFICATION



**Reactive**

- Capable of producing toxic vapors/fumes
- Explosive or capable of detonation
- React violently with water or air
- Are readily unstable

## WASTE IDENTIFICATION & CLASSIFICATION

**Toxicity**

- Materials that cause immediate physical harm
- Materials that cause long term physical harm
- Materials that can cause environmental harm or pollution
- Leach toxic contaminants when in a landfill



## WASTE IDENTIFICATION & CLASSIFICATION

### How to determine Hazardous Properties of chemicals?




- Container labeling
- DOT shipping descriptions
- NFPA
- HMIS
- Safety Data Sheets
- NIOSH Guide
- ERG



## CLASS 1 - EXPLOSIVES

Common Class 1 Items Brought to HHW

- Ammunition
- Fireworks

\*\*\*These items are not accepted at any HHW collection

## CLASS 1 - EXPLOSIVES







\*\*\*These items are not accepted at any HHW collection

### CLASS 2 - GASES

**3 Divisions**

- 2.1 (Flammable gas)
- 2.2 (Non-flammable gas)
- 2.3 (Poison gas)






### CLASS 2 - GASES




### CLASS 3 - FLAMMABLE LIQUIDS

Liquid having flash point LESS than 140°F



### CLASS 3 - FLAMMABLE LIQUIDS








### CLASS 4 - FLAMMABLE SOLIDS

**Three divisions**

- 4.1 (Flammable solid)
- 4.2 (Spontaneously combustible)
- 4.3 (Dangerous when wet)





### CLASS 4 - FLAMMABLE SOLIDS



4.3



4.1





4.2

### CLASS 5 - OXIDIZERS



**Two divisions**

- 5.1 (Oxidizer)
  - Causes or enhances combustion by yielding oxygen
- 5.2 (Organic peroxide)
  - Any organic compound containing oxygen that may be considered a hydrogen peroxide derivative.

*\*\*\*CAUTION: Some 5.2 material may be explosive or temperature controlled and cannot be accepted at an HHW collection*

### CLASS 5 - OXIDIZERS






*\*\*\*CAUTION: Some 5.2 material may be explosive or temperature controlled and cannot be accepted at an HHW collection*

### Class 6 - Poisons

**Two divisions**

- 6.1 (Poison)
  - Presumed toxic to humans, causes a health hazard during transport, & extreme irritation similar to tear gas.
- 6.2 (Infectious substance)
  - May cause disease in humans or animals
  - Blood, viruses, bodily fluid, body parts






*\*\*\* 6.2 Material is not accepted at HHW collections*

### Class 6 - Poisons

**Common Class 6.1 & 6.2 items Brought to HHW's**


- Pesticides
- Insulin Needles (6.2)\*\*\*

*\*\*\*Class 6.2 Material is not accepted at HHW collections (DO NOT ACCEPT NEEDLES)*

### Class 7 - Radioactives

- Specific activity greater than 0.002 microcuries per gram
  - Radioactive Elements
    - Technetium – atomic number 43
    - Promethium – atomic number 61
    - All elements atomic number >=84
  - Most common radioactive elements you will encounter
    - Uranium, Thorium



*\*\*\*Class 7 Material is not accepted at HHW collections*

### Class 7 - Radioactives

**Common Class 7 Items brought to HHW's**


- Smoke Detectors\*\*\*



*\*\*\*Class 7 Material is not accepted at HHW collections*

### Class 8 - Corrosive

- Includes both acids and bases
- Liquid or solid that causes full thickness destruction of human skin at the site of contact within a specified period of time.
- A liquid that has a severe corrosion rate on steel or aluminum.

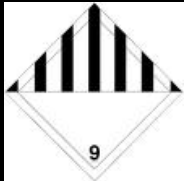


### Class 8 - Corrosive



### Class 9 - Miscellaneous

- Material which presents a hazard during transportation but which does not meet the definition of any other hazard class.



### Class 9 - Miscellaneous

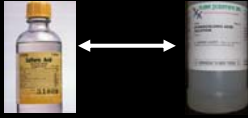


# Segregating Hazardous Waste

### SEGREGATION

**Likes go with Likes**

- Flammable Liquids go with Flammable liquids
- Acids go with Acids
- Bases go with Bases
- Poisons go with Poisons
- Reactives go by themselves





### MOUNT PROSPECT WASTE COLLECTED

- Flammable Aerosols – 5%
- Flammable Liquids (non-bulkable) – 8%
- Oil-based Paint – 36%
- Bulked Solvents – 4%
- Pesticide Solids – 3%
- Pesticide Liquids – 9%
- Latex Paint – 28%
- Used Oil / Antifreeze – 2%
- Other Wastes - 5%

# Hazardous Materials Disposal

### HHW WASTE

*HHW waste is an excluded waste in that the EPA says regular Hazardous waste laws do not apply*



### HHW WASTE

HHW waste, although it's excluded from MOST Hazardous Waste Regulations it is still required to be disposed of in an environmentally responsible manner



## HHW WASTE

- Methods of Disposal
  - Thermal Treatment
    - Oil-based paint cans; poisons/pesticides; non-bulkable flammable solids; poison aerosols; other reactives; expired pharmaceuticals
  - Treatment
    - Acids/caustics; mercury compounds
  - Fuel Blending
    - Solvents; flammable aerosols; bulkable flammable liquids, oil-based paint cans
  - Reduction
    - Oxidizers
  - Recycle/Reuse
    - Oil; antifreeze, elemental mercury; batteries; fluorescent lamps
  - Solidification/Landfill
    - Asbestos; alkaline batteries; latex paint cans



## QUESTIONS?