New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Waste Reduction and Recycling

Managing and Disposing of Household Hazardous Waste

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Facts on Household Hazardous Waste

We like to think of our homes as our castles. But most of us are not thinking of what's stashed in the basement, garage or under the kitchen sink. Take a look sometime. Do you see old cans of cleansers, paint, bug spray and used motor oil? How long has it been since you used this stuff? How will you get rid of it? Those types of waste contain hazardous substances which can pose risks to the environment, wildlife and human health. Hazardous substances have one or more special characteristics which include:

- The potential to cause violent chemical reaction.
- The potential to be dangerously corrosive.
- The potential to ignite.
- The potential to be harmful to human health (toxic).

Every year in New York State, more than 100,000 tons of these household hazardous wastes are emptied into trash cans. They end up in landfills or incinerators, or may be dumped onto backyard soil or into small streams. Household hazardous wastes enter the environment from lawns, backyards, sewers, landfills and incinerators. When disposed improperly, those wastes can poison the air, soil, water, birds, fish, mammals and even people and pets in the following ways:

- Once in the landfill, liquid waste and rainwater can seep down through layers of trash picking up contam-inants along the way. This will cause leachate to be more difficult and expensive to treat.

- Streams and lakes, as well as groundwater, can become polluted where rain, melting snow and ice contact contaminated soil, sidewalks, streets and parking lots. Storm sewers drain directly into local waterways.

- Emissions from incinerators can contaminate air and the ash residues, which contain heavy metals, also present disposal problems.

As residents of New York State, we bear the responsibility to dispose of our household hazardous waste properly in order to protect and preserve the quality of our groundwater, streams and lakes. In the following pages, you will find instructions on how to SAFELY dispose of most of the household waste chemicals you may have at home right now. You will also learn how to REDUCE your use of these products by buying or making alternatives so you'll have less to throw out in the future. Follow these steps and you will be making your home, your neighborhood and all of New York State a cleaner, greener place to live. It's easy and it's good for the earth!

General Information

WASTE REDUCTION

- Use non-hazardous alternative products and materials when possible.
- Only buy as much as you need when purchasing hazardous substances.
- If you can't use it up, give it to someone who can. Schools and community groups may be especially grateful for donations of paint.

SAFE STORAGE

- Keep the product in its original container.
- Never mix different chemical products.
- Wrap the waste in newspaper and place in two layers of plastic garbage bags. Label the outside of the bag.
- Store in an out-of the-way location, away from heat and children or pets. Ignitable wastes should be stored away from the house if possible.

It is always best to avoid disposing of hazardous household products, Try to buy only what you need. Look for less toxic alternatives. Recycle when possible. Give unused products to someone else who can use them (unless the product is a pesticide which has been banned or restricted).

If you are left with a product which is unusable, banned, not recyclable, or which cannot be given away, look on the label for disposal information. Be aware, however, that older containers of pesticides and other wastes may give instructions which are no longer appropriate. In cases such as these, or if the label gives insufficient information, you may need to store the waste until a household hazardous waste collection program is held in your area.

Certain household hazardous wastes identified in the following pages can be safely dried out or solidified. Cat litter (clay type with no chemical additives), disposable diapers, vermiculite and other products specifically designed for use with chemicals do not react with chemical wastes and may be safely used as absorbents. Air drying should always be done in a well-ventilated area away from children and animals.

Explosive wastes usually cannot be handled through household hazardous waste collection programs. Explosives include not only ammunition, but certain chemicals, such as picric acid, ether, and concentrated hydrogen peroxide (household strength is not explosive). If you have any of these wastes, contact your local police department for further information.

This information is provided only for individuals who need to dispose of wastes derived from their residential use. Disposal of wastes which are the result of any commercial or industrial activity MUST comply with applicable hazardous waste regulations.

Acids and Bases

Both acids and bases are corrosive materials and may cause damage upon contact with the skin, eyes or respiratory system. They may also react violently if mixed with other substances, including water.

Acids are corrosive materials commonly found in toilet bowl and drain cleaners, swimming pool chemicals and a number of other home cleaning products. These are easily identifiable on ingredient labels because they usually contain the word "acid." Bases are also corrosive, and may be found in bleaches, oven and drain cleaners, disinfectants and other Household products. They may be listed on labels as lye, hydroxide, hypochlorite or a variety of other terms.

ALTERNATIVES

- Keep drains clean by using strainers and keeping grease, hair and coffee grounds out of the drain. Flush drains weekly with boiling water or a cup of warm vinegar. Use a plunger or snake to free blockage.

- To clean the oven, sprinkle baking soda or salt on spills with water and scrub with a steel wool pad.

- Scrub toilets with baking soda or borax.

- To polish metal, rub with a paste of baking soda and water; polish unlacquered brass, bronze or copper with a solution of equal parts of vinegar, flour and salt. Rinse and dry.

DISPOSAL

- If the acid or base is an ingredient in a useable consumer product, try to use it up or give it to someone else who can use it. Do not attempt to neutralize or treat the product yourself, as large amounts of heat may be generated and you could be burned. Never add water to an acid or base to dilute it, as this practice is dangerous. Acids and bases should be saved for a household hazardous waste collection program.

Aerosol Containers

Many hazardous materials, such as spray paints or degreasers, may be packaged in aerosol containers. This type of packaging can be dangerous because aerosol containers may explode under heat or pressure, spreading the hazardous contents and metal throughout the area. Also, the tiny particle size makes hazardous components easier to inhale and therefore more destructive.

ALTERNATIVES

- Use non-aerosol products, such as pump sprays.

- Keep indoor air clean-smelling by keeping an open box of baking soda in a room, or leaving a dish of vinegar or vanilla in a room for about an hour, or simmer in a saucepan of water pieces of orange, lemon or grapefruit to freshen air.

DISPOSAL

- Always try to use up the product or give it to someone else who can use it. The empty container can then be safely discarded with other household trash or recycled in some communities.

- If you cannot use the product for its original purpose and the material that it contains is not hazardous, you may be able to empty it by spraying it outdoors into an empty box or paper bag and allowing the contents to dry. This must be done very carefully in a well ventilated area because the aerosol produce very small particles which may pose a significant health threat if inhaled.

- If you cannot fully empty the aerosol container or if the materials it contains are hazardous, store it until a household hazardous waste collection program is held in your area.

Antifreeze and Brake Fluid

The primary component of new or used antifreeze is ethylene glycol, a toxic substance. Brake fluids are primarily propylene glycol, which is similar to and should be handled the same way as antifreeze. Pets and other animals are highly susceptible to antifreeze poisoning because they enjoy its sweet taste. Therefore it is very important that antifreeze never be allowed to form puddles in the work area. Antifreeze can also contaminate surface waters when improperly disposed.

DISPOSAL

- Clean, used antifreeze may be used as a substitute for the water that would normally be used to dilute the new antifreeze. Also. when replacing hoses, the antifreeze should be captured and reused. These actions reduce the volume of antifreeze requiring disposal.

- Antifreeze can be recycled. Check with a local garage, public works department or motor vehicle salvage yard to see if you can recycle your antifreeze with theirs.

- Never dispose of antifreeze down a storm sewer or on the ground.

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- [redacted]

Automotive Batteries

Automotive batteries, also known as lead acid batteries, contain sulfuric acid and lead. These components are highly toxic. Lead can threaten groundwater supplies, and acid can severely burn skin. Store these batteries in an out-of-the-way place.

DISPOSAL

- Lead acid batteries are recyclable, and the improper disposal of lead acid batteries is prohibited by New York State Law. All lead acid batteries must be recycled or disposed at a hazardous waste facility. Retailers and distributors are required to accept two batteries per person per month at no charge. A $5.00 charge will be imposed if you buy a new battery and do not return the old one. Other garages or scrap metal dealers may also be willing to accept batteries. Depending on the market price of lead, you may find that some dealers are willing to pay you for your old battery. Some landfills provide storage areas for used batteries, where they are accumulated for eventual recycling.

Electronics and Household Batteries

Industry experts estimate that U.S. consumers throw away 400 million units of electronic equipment per year. Recycling electronic waste protects human health and the environment by:

- Diverting thousands of pounds of waste from landfills and incinerators.

- Keeping toxins such as lead, mercury and cadmium from contaminating the air, water and soil.

- Conserving natural resources by allowing valuable materials to be reclaimed and reused, rather than using virgin materials.

Electronics include: computers, televisions, cathode ray tubes, small scale servers, computer peripherals, monitors, electronic keyboards, electronic mice or similar pointing devices, facsimile machines, document scanners, and printers, small electronic equipment VCRs, digital video recorders, portable digital music players, DVD players, digital converter boxes, cable or satellite receivers, electronic or video game consoles).

RECYCLING

- The NYS Electronic Equipment Recycling and Reuse Act requires manufacturers to provide free and convenient recycling of electronic waste to most consumers in the state. Check our website - http://www.dec.ny.gov/chemical/65583.html

There are many varieties of household batteries. Small "button" batteries, such as those used in cameras and hearing aids, may contain mercury, silver or lithium. Common flashlight batteries, which are usually carbon zinc or alkaline, may contain mercury if manufactured before 1992. Rechargeable batteries most often contain cadmium and nickel. Each of these metal components can pose health hazards. For example, mercury is highly toxic when inhaled, swallowed or absorbed through the skin.

RECYCLING

- The NYS Rechargeable Battery Recycling Act was signed into law on December 10, 2010. The law requires manufacturers of covered rechargeable batteries to collect and recycle the batteries statewide in a manufacturer-funded program at no cost to consumers. Check our website - http://www.dec.ny.gov/chemical/72065.html

Household Cleaners and Personal Products

Household cleaners and personal products include a very wide range of products found around the home, with an equally wide range of environmental and health risks.

ALTERNATIVES

- Clean windows with a soft rag or newspaper. Use 1/4 cup of vinegar in 1 quart of water or try 1/4 cup rubbing alcohol in 1 quart of water (use 2 teaspoons detergent for heavy soil). Spray it on and wipe dry.

- Polish wood with a mixture of one tablespoon lemon oil and 1 quart mineral oil. Spray it on and rub in with cloth or just dip a cloth in olive, soybean or raw linseed oil.

- Clean porcelain using a nylon pad or net that has been rubbed with a cut lemon or dabbed with baking soda paste or cream of tartar paste.

- For bathroom and oven cleaners, see the information for *Acids and Bases.*

DISPOSAL

- It is always best to use up the product according to directions. If you can't use it, give it to someone who can. For products that must be disposed, check the label for instructions.

- Never mix household cleaners. Bleach and ammonia. for example, react to form a deadly gas.

- If a product is normally flushed down the drain during use, as most cleaners and detergents are, the product can usually be disposed by pouring it down the drain slowly, with water running. Do not dispose of highly toxic or corrosive materials this way. These materials should be saved for a household hazardous waste collection day.

- Metal polishes, wood polishes and waxes, and other solvent-based cleaners should be used up or safely stored for a household hazardous waste collection program.

- Mothballs are flammable and toxic. Unusable mothballs should be safely stored until a household hazardous waste program is held in your area.

- Avoid the use of septic tank cleaners or drain openers containing tetrachloroethylene, 1,1,1 -trichloroethane or dichlorobenzene. Any product that contain any halogenated hydrocarbon, aromatic hydrocarbon, or halogenated phenol in an amount greater than one part per hundred by weight are prohibited from sale and/or use in Nassau and Suffolk Counties (Long Island) due to their potential to contaminate groundwater. If you have any of these products, do not use them up. They should be saved for a household hazardous waste collection program.

Medicines

Until recently, consumers have been told to flush unwanted drugs. With technological advances and research, low levels of drugs are being found in our surface waters. We know that some drugs pass largely unaltered through our wastewater treatment plants and enter rivers and other waters. Drugs from heath care facilities, pharmaceutical manufacturing facilities and farms can also find their way into the water.

DISPOSAL

- Check our website for the proper disposal of unwanted drugs - www.dec.ny.gov/chemical/45083.html

Mercury

Mercury is commonly found in older thermometers and some batteries. This substance is readily absorbed through the skin and is highly toxic. Mercury vapors can also be toxic when inhaled.

DISPOSAL

- Mercury can be recycled. Mercury not recycled, should be saved for a household hazardous waste collection program. When storing and transporting mercury, however, be very careful to avoid any contact by keeping it well wrapped in a tightly sealed rigid container. Check our website - http://www.dec.ny.gov/chemical/285.html
- Mercury Thermostats can be recycled – check this website for locations that will accept them - http://www.thermostat-recycle.org/

Motor Oil & Automobile Products

Used motor oil may contain toxic metals and organic compounds. Motor oil that is disposed on the ground or put into storm sewers may seep into groundwater and may contaminate drinking water supplies.

DISPOSAL

- Do not dispose of motor oil in the ground or sewers. New York State Law requires all service stations that change oil for their customers and retailers who sell more than 1000 gallons of oil per year to accept up to five gallons of used motor oil free of charge from members of the public (unless their storage tanks

are temporarily full). This service may not be limited to customers of the establishment, so you may bring your oil to another station if the one you normally use is full. Some landfills also have used oil storage facilities available for public use.

- Used motor oil can be recycled and service stations generally store used oil in tanks until it is collected by a recycler. Motor oil that is brought in to a service station will be recycled or otherwise handled properly. Your used motor oil can be easily transported by placing it in a clean plastic milk carton or similar container.

- Service stations may also be able to accept transmission fluid, brake fluid, diesel fuel or kerosene. Do not mix these products together or with your used motor oil.

- Gasoline is toxic and extremely flammable and should never be used as a cleaner. If small amounts of impurities are present in leftover gasoline, they may be filtered out using a strainer or coffee filter. Water may be eliminated by adding dry gas. It may then be diluted with fresh gasoline and used as fuel. If the gasoline cannot be used, bring it to a service station or save it in a proper gasoline storage container for a household hazardous waste collection program.

Paint

Most paints in use today are either latex or oil-based. Oil-based paints, including enamel, varnish and lacquer, contain solvents which can damage groundwater supplies unless precautions are taken. Latex paint manufactured before August 1990 may contain mercury, which may cause nerve and kidney damage. Also, some older paints may contain high levels of lead and can cause serious health problems if ingested directly or through contamination of drinking water supplies.

ALTERNATIVES

- Mix up your own whitewash for some jobs. The following recipe is for wood, glass or metal surfaces: Dissolve 15 pounds of salt or 5 pounds of dry calcium chloride in 5 gallons of water. In a separate container soak 50 pounds of hydrated lime in 6 gallons of water. Combine the mixtures, stir and thin with water until it is the consistency of whole milk. Yields 10 gallons and proportions can be reduced.

DISPOSAL

- To avoid disposal problems, try to buy only as much paint as you need. When you have leftover paint, try to use it up on a smaller project or give it away to someone else who can use it. Community groups, theater groups or schools may be able to put your leftover paint to good use. Latex paint which contains mercury should only be used outdoors.

- Some communities now recycle latex paint. If yours does, keep the paint well covered and protected from freezing until the next collection day.

- Paints that are too old or in too small quantities to be reused should be disposed of properly. Nonmercury-containing latex paint can be allowed to dry out and harden. This should be done outdoors in an area with very good ventilation and away from children, animals or heat. This process may be quickened by stirring the paint frequently, pouring the paint in layers into a cardboard box, or "painting" old pieces of wood or other materials. Cans containing hardened paint can then be disposed with other household trash, however, the lids should remain off. The paint may also be solidified by pouring it over clay cat litter and letting it dry out.

- Mercury-containing latex or oil-base paint or paint containing lead should be saved for a household hazardous waste collection program. Different colors of paint may be combined for easier storage, provided that the paints are of the same type (latex or oil-based). Make sure that the label clearly states the type of paint inside.

- Artist paints often contain much higher levels of toxic metals than other paints and should not be handled as ordinary paint. These paints should be saved for a collection program. Aerosol paints must also receive special handling and should be saved for a collection program.

Thinners, Strippers & Other Solvents

Solvents may cause serious health effects if they come into contact with the skin or eyes or are inhaled. Excessive solvent exposure can cause a wide range of symptoms, many quite serious. The most damaging are the halogenated solvents, which are often found in paint strippers, spot removers and degreasers.

USING SOLVENTS SAFELY

- Read labels carefully.
- Use gloves, goggles and respiratory mask when appropriate.
- Never smoke when using solvents and never use them near fires.
- Use excellent ventilation and work outside when possible. Don't use solvents on hot, muggy days.
- Use water-based products where possible - they require less cleanup and less solvent.
- Never eat or drink where solvents are being used - fumes can be absorbed by food or utensils and you may accidentally ingest them.

DISPOSAL

- Most solvents are recyclable, although this is not always practical to do at home. Always try to use up the product in its intended manner. Paint thinners that have paint mixed into them can be reused by capping the container tightly and allowing the paint to settle to the bottom of the container (this process may take several months for large volumes). The clean solvent may then be poured off the top and reused and the sludge that is left can be allowed to dry out (preferably outdoors) and then discarded. Paint thinners can also be used up by mixing them into oil-based paints or can be reused after filtering them through a coffee filter.

- Solvents which contain chlor-, chloro-, or a similar phrase in their chemical name are chlorinated, which is one type of halogenated solvent. Other types may include such phrases as fluoro-, bromo-, or variations of these. These halogenated solvents should be handled carefully.

- Waste solvents should be stored until a household hazardous waste collection program is held in your area. If the solvents must be disposed immediately, then very small amounts (less than one cup) of nonhalogenated solvents can be evaporated by mixing the solvent with an absorbent and leaving the solvent mixture outdoors. When the absorbent is fully dried, it should be wrapped in a plastic bag and placed with other trash. This should be done carefully so that children or animals cannot come into contact with the chemical. Always ensure proper ventilation when evaporating solvents.

Wood preservatives

Wood preservatives are generally a combination of a solvent and a pesticide. These mixtures are highly toxic and must be handled very carefully. Pentachlorophenol and creosote should only be used by individuals who have had training in their safe use. Finally, wood that has been treated with any of these products should never be used as firewood since toxic air contaminants could be emitted during burning.

ALTERNATIVES

- Use wood that is naturally weather -and insect- resistant such as cedar, honey locust or oak. As an alternative, use plastic lumber.

- Employ construction techniques that protect wood from dampness or insects

DISPOSAL

- For more information on creosote wood check our website - http://www.dec.ny.gov/chemical/42394.html

- Wood preservatives that do not contain creosote or pentachlorophenol should be used up. If you can't use them, give them to someone who can. Leftover creosote, pentachlorophenol or other unusable products should be left in their original containers, placed in a double plastic bag, stored out-of-the-way and saved for a household hazardous waste collection program. If there is no such program held in your area, then very small quantities (less than one cup) of wood preservatives other than pentachlorophenol or creosote may be solidified with clay cat litter and discarded with your household trash.

Pesticides

Pesticides are chemicals that are intended to kill unwanted insects, animals, plants or microorganisms. These products may also be toxic to humans or pets. Many pesticides are not biodegradable; they accumulate in the environment and could eventually contaminate groundwater and food supplies. Pesticides include not only commonly recognized insecticides and herbicides but also products such as wood preservatives, flea products and some insect repellents.

DISPOSAL

- Many pesticides have been banned from use by both homeowners and licensed applicators within New York State because they pose high risks to human health or to the environment. Others are restricted to use by licensed applicators. These products should not be used by citizens or carelessly thrown away, but should be saved for a household hazardous waste collection program. If the pesticide is not banned or restricted, however, it is best to use the product up according to label directions or give the product to someone else who can use it for its intended purpose. Otherwise, it should be stored until a household hazardous waste collection program is held in your area.

- To safely store pesticides, keep them in their original container, wrap them in newspaper and place them inside a double layer of plastic garbage bags. Always keep them out of the reach of children and away from heat and pets.

- Empty pesticide containers should be triple rinsed before being thrown away. The rinse water should be saved and used as a pesticide. The empty container should then be wrapped in newspaper and discarded with household trash.

For pesticides that are banned or restricted in New York State and should not be used or thrown away (as of November, 1998) check our website - http://www.dec.ny.gov/chemical/298.html

Other Chemicals

PHOTOGRAPHIC CHEMICALS may contain a number of toxic or corrosive ingredients and should be handled very carefully. Photographic chemicals that contain silver, such as photographic fixer solutions, can be

reclaimed. Ask a local photographer or photo finishing lab if they can recycle your wastes. Otherwise, the chemicals are best brought to a household hazardous waste collection program. Small amounts (less than one pint) of photographic chemicals may be poured down the drain, if necessary, provided that they do not contain silver, hexavalent chromium or ferrocyanide.

SWIMMING POOL CHEMICALS contain chlorine, acids, or calcium hypochlorite an oxidizer). These materials are corrosive and may cause burns or injury on contact or if swallowed or inhaled. They may also pose a fire hazard. They should be stored carefully, away from any source of heat or spark, and saved for a household hazardous waste collection program.

SMOKE DETECTORS may be either photoelectric or ionizing. The ionizing variety is radioactive and may pose hazards to human health if large quantities are accumulated. However, single detectors may be safely discarded with household trash. Some smoke detectors can be returned to the manufacturer. Check the package of the new smoke detector to see if they offer a return service.

TRANSFORMERS & FLUORESCENT LIGHTS manufactured before 1978 may contain polychlorinated biphenyls (PCBs). These materials are highly toxic and should be safely stored until they can be taken to a household hazardous waste collection program. Fluorescent light bulbs may also contain mercury, and should be brought to a recycling program or a household hazardous waste collection if one is available in your area. Compact fluorescent light bulbs can be recycled at Home Depot or Lowes retail stores.

ASBESTOS has been shown to be dangerous when inhaled. If your home contains asbestos products, do not attempt to remove them yourself. Improperly removing asbestos may be more dangerous to your health than leaving it undisturbed. If the asbestos is encased or appears to be in a solid mass (not easily crushed), then it may not pose any significant health hazards. If you have any questions regarding asbestos removal, you should consult your local Health Department or a professional asbestos contractor.

GAS CYLINDERS can often be refilled and many retailers will accept used gas cylinders. Cylinders which are completely empty and have the valve removed may be recycled.

For More Information

- Write or call your NYSDEC Regional Office. For your local regional office check our website - http://www.dec.ny.gov/about/50230.html
- Contact the NYSDEC Division of Materials Management at 518-402-8706

For Information On Household Hazardous Waste Collection Programs In Your Area

- Contact your local Department of Public Works or Solid Waste Management Authority.