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PRODUCTS OF HOUSEHOLD HAZARDOUS WASTE MANAGEMENT TO PREVENT ENVIRONMENTAL CONTAMINATION

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Introduction – What is Household waste [HHW] ?

Potentially many products in a kitchen, bathroom and garage are household products. These products that we use everyday - the utility of which shed hazardous waste substances. Because of their chemical nature they are often poisonous and can corrode metals, explode or burst into flames when handled improperly. Motor oil, paints, cosmetics, pesticides, batteries are examples of such products that may contain solvents, petroleum products, heavy metals, or other toxic chemicals. When these products are placed into the trash or poured down the drain, they contaminate the environment. HHW can always be identified by using common sense and by looking at the labels for significant signal words.

How it is hazardous ?

We all know that if we swallow a cleaning product or pesticide it would be harmful to us. But we do not know that the same, if put in the drain, causes contamination to the environment. When we dump things down the drain we usually do not think about how the waste will affect us. Where does the waste go when flushed down the drain? If chemicals are put into a septic system, they may not be properly treated and hence make their way into the ground water. Ground waters are used to manufacture drinking water. Hence environmental problems arise when there is low quality water being supplied.

Why it should be a concern :

HHW presents serious problems for everyone associated with municipalities, including the municipalities, local residents, workers in a factory etc. The majority of HHW ends up in land fill areas or in the sanitary sewer system. The magnitude of HHW should not be underestimated. The wastage represents significant liability for garbage handlers. Moreover, household hazardous wastes are difficult to treat at wastewater treatment plants because they are in diluted form. All the chemicals may not be treated,

and then they go into a lake or a stream which is used as drinking water. Strong chemicals may corrode pipes over time and leak directly into the ground water, This also causes a problem to the ground water which in turn is to be used for the manufacture of drinking water.

Problems faced through HHW :

When we throw waste in the garbage, the trash collector is the first person to come into contact with it. Many workers are injured by hazardous products that have been placed in the trash. For example, articles such as disposable syringes could puncture the skin of the garbage collector; disposing of household chemicals in the trash may explode, injuring sanitary workers. Throwing away hazardous household products by putting them in the garbage or down the drain may seem like the easiest way to get rid of them, but it could be the most dangerous. Many of the products commonly thrown away can pose a serious threat to human health and the environment. Therefore the safest way to solve this problem is to find a way to dispose the household hazardous waste properly.

How to identify that they are household hazardous waste ?

Read the label – The first thing to do is to read the label. Many product labels give instructions for disposal of the empty container. Look at what is on the label of the product – The labels we see on the store shelves do look more attractive so we look into the key words used such as “**toxic**” – The word toxic on a label means that the product may cause death, cancer, or birth defects if swallowed, inhaled, or absorbed through the skin. “**Flammable**” – The word flammable on a label means that the product will burn or explode if it is exposed to certain conditions or temperatures. Some floor polishes, turpentine, nail polish are flammable. “**Corrosive**” – The word corrosive on a label indicates that the product can cause serious damage if it comes in contact with the skin. Corrosive products will eat through certain containers if stored improperly. Oven cleaners, drain openers, and bleach are corrosive.

Signal words and symbols may be used to give information about the product. It is important to know what these words mean, so you can know the risks associated with using a hazardous household product. The words ‘Danger’ may mean that the product is highly toxic and could be deadly to human if it is consumed. The symbol on the container is a skull and crossbones with the word ‘Danger’ used. Similarly the word ‘warning’ means the product is moderately toxic and can be deadly to humans if consumed. The word ‘caution’ on a label means the product is low in toxicity and may even be non-toxic but if even a pint is ingested it may cause illness.

What can you do to prevent environmental contamination :

Before you buy, think whether you really need the product - ask yourself the following questions:

Do I really need the product ? Does it contain an ingredient that is hazardous to people or pets ? Could I use a less hazardous substance? Will I be able to store it properly in my home ? Am I buying only as much as I will use ? Am I storing too many chemicals at home ? Analyze how it is hazardous to health and how to dispose of it so that it prevents environmental contamination.

Discriminate the products that you buy. Whenever they are available, follow the label directions for proper use, storage, handling, and its disposal. These give the best results and minimize the hazards associated with the product. However, sometimes directions for storage and disposal may be unclear. In such a case, buy products without hazardous chemical. Use the product only in the manner directed by the manufacturer on the label. Use common sense to avoid creating hazards. Use all hazardous products with adequate ventilation. Avoid splashing the products in the eyes and on skin or breathing fumes. Do not overuse a product. Do not mix different chemicals together for use. Plan ways to store the product. Make sure that the label is not torn and they are stored in their original containers. Keep the products away from the reach of children. Do not allow liquid hazardous materials to freeze. Therefore storing is also one of the important steps in preventing contamination.

Important guidelines to be followed :Trash after treatment –

Some wastes can be thrown into the trash after special treatment . Things like shoe polish, nail polish can be thrown in the trash after they are evaporated. Leave these products out in a safe, ventilated area until they have become hard and dry. Wrap them in a newspaper and place them in the trash. When these products are in solid form, they are less likely to mix with other chemicals.

Recycle and Reuse – Some wastes like motor oil, lead acid, alkaline batteries, and paint thinners can be recycled. Paint thinners can even be recycled at home. Place the used thinner in a jar and let it set for a few days. The solids will settle at the bottom and the paint thinner can be poured off the top and reused. Many gas stations will accept old car batteries and used automotive products for recycling. Certain items like paints could be passed on to the community for reuse like painting of temples, city parks etc., rather than pouring it into the drains.

Arrangement of separate dumpsters for hazardous and non – hazardous substances can be made. Dumpsters for non-hazardous waste like empty cardboard boxes, empty oil cans, empty paint cans, etc. can be made.

Think safety to the public before disposing. Plan the waste collection in your area. Establish a hazardous waste education program in your community so that all know about household hazardous waste management.

Fire dangers – Hazardous products can spill at waste facilities and can cause fires or dangerous spills. When products are burned any place other than at a place in which it

should be burnt, they can release some dangerous gases which potentially cause health problems. Not only for people in the surrounding area but also to pet animals.

Alternatives suggested :

- Instead of naphthalene balls, lavender flowers can be used.
- Instead of toilet cleaners or bathroom cleaner, four tablespoons of baking soda dissolved in warm water can be used.
- Glass cleaner may be made at home by mixing one-fourth cup of vinegar with one-fourth cup of warm water.
- Furniture polish can be substituted by natural oil such as almond oil or olive oil
- Non-abrasive cleaner toothpaste is a great jewellery cleaner.
- Plant sprays can be replaced by wiping leaves with a mild soap and water mix, then rinsing.
- Traps can be used for rodents like mice.
- Boil spices in water on stove for a fresh scent instead of room freshener.