

**Annual Household Hazardous Waste Collection for the  
City of Maple Ridge c/o Ridge Meadows Recycling  
Society**

**September 19, 2020**

**Prepared for:**

Ridge Meadows Recycling Society

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September 30, 2020

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## Collection Overview

The Ridge Meadows Recycling Society collects year round, paints, aerosols, oil, oil filters and antifreeze. This year, they have decided to hold a Household Hazardous Waste (HHW) collection for the residents of Maple Ridge. The concept is to collect other household waste not covered by any of the BC Stewardship Programs; these items would include, corrosive, toxic and other such wastes not collected by the stewardship programs.

This event took place on the Weekend of September 19, 2020. The City of Maple Ridge decided to try a registration program to organize the time frame the resident can show up to drop off their waste. Registration showed 125 residents were planning on passing through to drop off their Household Hazardous Waste. A total of 6076 kilograms of household waste was collected by Terrapure Environmental.

The objective is to:

1. Provide residents with a one-stop-drop for:
  - a. HHW Products collected by Terrapure Environmental not covered under BC Product Stewardship Programs
2. Ensure products brought to the event are recycled or disposed of in a safe and environmentally safe manner.
3. Provide residents with an education opportunity and inform them about reducing waste, environmentally friendly alternatives and proper disposal practices.

## Methodology

The location of the HHW event took place at the Ridge Meadows Recycling site at 10092-236 Street. Upon arrival, the residents are required to produce proof of residency and provide a brief description of their wastes that they are dropping off.

As the recycling center was also open for normal business; the residents are asked if they were attending the HHW Event or just had waste normally accepted by the recycling center. Residents with waste were to drive their vehicles into the unload area where their waste was collected by Terrapure Environmental.

Terrapure Environmental collects all other wastes, except waste that is explosive, biohazardous or radioactive. In addition, all e-waste, white goods, municipal waste and municipal recyclables will be collected by Ridge Meadows Recycling., The waste is separated into the waste streams, as described in the proceeding section. Once containers of each waste stream are packed, the container is sealed, labeled and inventoried then placed into a trailer for transport back to the Terrapure facility at 9 – 7483 Progress Way, Delta.

# Waste Streams

## ***Corrosives Materials***

Corrosive is the name given to materials that can cause severe burns to skin and other human tissues such as the eye or lung, and can attack clothes and other materials including metal. Corrosives are grouped in this special class because their effects are permanent. Common corrosives include acids such as [sulfuric](#) and muriatic acids, bases such as ammonium hydroxide and caustic soda. They can be subdivided into two primary compatibility groups: Basic material, which dissolves organic substances (skin, grease) and acidic material, which dissolves inorganic materials (minerals, metal). Any chemicals deemed to be corrosive are marked with a Workplace Hazardous Material Information System (WHMIS) classification E, or a TDG classification 8.

Acids and caustics are consolidated into 200 liter drums and sent for physical treatment (acid/base neutralization).

Mercury and Mercury debris are sent for recovery.

## ***Toxic Materials***

Chemicals are categorized as toxic by the TDG if their toxicity is at a specific level, as outlined in the regulations. This toxicity makes them useful as pesticides. Substances with a WHMIS designation of D or a TDG classification of 6.1 are considered toxic. Some examples of toxic items include weed and feed fertilizers, rodent killer, slug bait, and rose dust.

Once pesticide liquids and solids are consolidated into 200 liter drums, they are sent for incineration.

Household pharmaceuticals are not collected at the HHW event, as there is a program in place where residents can dispose of old or expired medicines through the local pharmacy outlets.

## ***Oxidizing Materials***

An oxidizer is any item that chemically adds oxygen to a reaction. This property makes this material reactive with many other chemicals. Substances with a WHMIS designation of C or a TDG classification of 5 are considered oxidizers. There are two classes of oxidizers, organic and inorganic. The HHW collection recovered oxidizers, as well as organic peroxides. Some examples of oxidizing material include chlorinating pool chemicals, bleach and resin catalysts.

All oxidizers are packed into 200 liter drums and sent to 3<sup>rd</sup> Party Disposal where material is consolidated, solids are dissolved into water and the solutions are reduced and neutralized. Organic oxidizers are packed into 200 liter drums and sent to the Swan Hills Treatment Center for incineration.

## ***Compressed Gases***

These particular materials are under pressure. They can easily be identified by a WHMIS designation of A or TDG classification of 2. The following are examples of Class 2 cylinders that have been dropped off at previous HHW Events: aerosol cans (toxic and flammable), acetylene cylinders, carbon dioxide cylinders, propane cylinders (disposable and refillables), Halon cylinder – R22, methylacetylene / propadiene cylinder, fire extinguishers, lighters, oxygen and helium cylinders.

Cylinders and gases are sent to the Recycle Systems Company, where the gases are removed and incinerated, and then the empty cylinders are sent for metal salvage. In addition, Freon and Halon is recovered into the national Freon / Halon bank at Recycle Systems Company.

## ***Flammable Material***

Substances that catch fire in the presence of a spark at 32 degrees Celsius or lower, are considered flammable by the TDG regulations. Items that have a flash point greater than this are categorized as combustible, and still have similar properties. WHMIS designates flammables under class B, and the TDG uses classification 3.

Once back at the Terrapure - Delta Facility, flammable liquids and paint related materials are separated into flammable fuel (diesel, gas), flammable liquids and combustible liquids, where they are consolidated into 200 liter drums. Flammable fuel (Diesel and gasoline) are sent for blending. All other Class 3 non-recyclable items (solid paint, resins, adhesives) are sent for incineration.

## **Reactive materials**

Reactive materials are identified by a WHMIS designation of F and a TDG classification of 4. The Township has divided reactives into mixed reactives, water reactive chemicals, self heating solids and flammable solids. Some examples of reactives include activated carbon and zinc dust.

Most reactives are packed into drums and then sent for reactive incineration in small quantities, due to their high hazard.

## **Appendix I: Household Hazardous Waste Collection Data**

**Table 1 - Maple Ridge Household Hazardous Waste Collection Data**

