2011 SWANA Special Waste Excellence Award Program

Household Hazardous Waste

Waste Management Division

REGION OF PEEL
EXECUTIVE SUMMARY

The Region of Peel is a leader in the development, implementation and continued refinement of programs and initiatives designed to re-emphasize the importance of source reduction and recycling.

Peel's network of Community Recycling Centres (CRCs) offer Peel residents and small businesses an opportunity to dispose of hazardous waste, recyclable materials and reusable goods, in an efficient and environmentally sound manner. Peels network currently consists of five permanent CRCs. The Househould Hazardous Waste Centres program is a fundamental component of the services provided at the Community Recycling Centres and the Community Recycling Centre network. The Region of Peel is responsible for providing waste management services including curbside collection and waste disposal.

The Region of Peel, home to over 1.7 million residents, the Region of Peel is the second largest municipality in Ontario. Undergone a major transition during the past few decades. Rapid population growth and embracing the cities of Brampton and Mississauga as well as the town of Caledon. Peel has

and innovative aspects of the Household Hazardous Waste Program. The following application will highlight the operation of Peel's residents and customers. The Waste Management Division at the Region of Peel fulfills the role of reducing and reusing to the Region of Peel's residents and customers. The Waste Management Division at the Region of Peel fulfills the role of reducing and reusing to the Region of Peel's residents and customers.

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The Operational Design of the Region of Peel's HW Program

The Operational Design of the Region of Peel's HW Program

Electronic, confidential trade paper for shredding and reusable items that are in good condition.

In addition to the permanent facilities, the Region of Peel typically hosts two to three special events for collection and proper disposal of HW.

For collection and proper disposal of HW, residents are encouraged to drop off their household hazardous waste at a CWC. Residents are encouraged to drop off their household hazardous waste at a CWC.

Section I: Design of Collection Facility/Management System

Section I: Design of Collection Facility/Management System
day at any of Peel’s CRC’s, free of charge. The oil is put through a four stage conversion process to biodiesel. Fuel for the use in Regional Vehicles.

Oil to biodiesel fuel for the use in Regional Vehicles.

Innovative Aspects

Peel Region’s distinct advantages include the high demand for biodiesel and its cost-effectiveness when compared to traditional fuels. The conversion process is environmentally friendly, reducing greenhouse gas emissions and increasing the use of renewable energy sources.

Process

Peel Region’s process for converting oil to biodiesel involves several stages, ensuring that the final product meets the highest standards for fuel quality. The process begins with the collection of waste cooking oil from various sources, including restaurants and small businesses.

Collection

Waste cooking oil is collected from various locations, including restaurants, small businesses, and other sources. The oil is then transported to the conversion facility, where it undergoes a series of purification steps.

Conversion

The collected waste cooking oil is subjected to a four-stage conversion process, which involves the following steps:

1. **Preparation**: The oil is first heated to a specific temperature to remove any impurities.
2. **Fermentation**: The heated oil is then subjected to a fermentation process, where microorganisms convert the oil into biodiesel.
3. **Distillation**: The fermented oil is then distilled to remove any remaining impurities.
4. **Refinement**: The distilled oil is further refined to ensure it meets the required fuel standards.

Refining

The refined biodiesel is then analyzed to ensure it meets the necessary standards for use in vehicles. If it meets the standards, it is ready for use in Regional Vehicles.

Conclusion

Peel Region’s biodiesel program is a sustainable solution to the disposal of waste cooking oil, reducing environmental impacts and providing a valuable source of energy.
biodegradable alternatives. HWY staff distributes biodegradable containers free of charge to Peel residents.

The management team amended the program to only permit the collection of sharps in approved sharps disposal containers to minimize the potential risk to staff, residents and other that may come in contact with the sharps.

Sharps (needles and lancets) from residential sources are accepted in the HWY program. To

Sustainable Community for Recognition of Excellence in Green Fleet Management

The Peel Environmental Excellence and Engineering Award from Peel Environmental Excellence and Engineering Magazine. The National Post and has been featured on coverage since its inception in 2008. The program has received coverage in local papers. The Peel's biodegradable program has received substantial media

A front-end loader, roll-off truck and trailer used in equipment to operate the Biodegradable CRG including

in addition to the car and light truck fleet, biodegradable is also mix during the winter months,

use in even mix of biodegradable and petroleum in winter temperature, and a 20 cent biodegradable
given a new look and is cleanly identified with Powered By Peel Biodegradable decals. The vehicle is

The biodegradable is used in the Waste Management Division's car and light truck fleet, which has been

Biodiesel Processing Unit

The fuel involves transethenification, separation, cleaning and filtering, before the final product is

Working for you

Region of Peel

Canada

Leadership

Excellence Award

Region of Peel

Public Works

Telephone: 905-791-7800 / WWWW.publicworks.on.ca
The items and the Region who does not need to pay for disposal time. The program provides a cost saving benefit to both residents who do not need to purchase very popular with residents! Materials sent around the reuse area are in reuse for any significant amount of products are placed in reuse area and are available for residents to take and use. The program is
products is dropped off for disposal. If the material is reusable and meets the five mentioned criteria, the
contains must be in good condition and labels must be legible. HHW still inspected material that
each HHW drop-off has a reusable area. Reusable items must be in their original containers, the

Release Program

Amount that the Region is charged by its vendor for disposal. Business Hazardous Waste program is a cost recovery program but businesses only pay the dollar cost effective and accessible means for businesses to dispose of hazardous wastes. The
documentation and with a date and time to drop off their material. This program provides a
program. If all criteria are met the businesses are provided with a letter agreement, shipping labels
businesses generating small quantities of hazardous waste must apply to participate in the

Business Hazardous Waste Program

Advertised on Regional Vehicles. Similar to the household program the Shoppers Drug Mart program is also
resistant! Similar to the household program the Shoppers Drug Mart program is also
and accept all containers in return. The hazardous containers are visibly

Leadership Award Excellence Award for Canada 2006
Working for you for Peel region

Telephone: 905-791-7800 / www.peelregion.ca
10 Peel Centre Drive, Suite A, Brampton, ON L6T 4B9
C.R.C.'s and promote the green alternative to hazardous products.

The Region of Peel's Public Education and Outreach team through educational events.

Source Reduction/Waste Division

Certifications of Approvals.

The vendors are in compliance with their contractual obligations as well as their provincial

inspections and inspections for downstream processes are periodically conducted by Peel staff to ensure

accomplished during a thorough trending procedure for processing and disposal services. Feasibility

The Region of Peel is diligent in ensuring regulatory compliance from collection to disposal. This is

offer for transport hazardous wastes.

have been trained and certified in the transportation of Dangerous Goods to be able to handle and

and track incoming and stored material to ensure that special limits are not exceeded. HW, staff

teams and conditions set forth in these governing documents. Staff conduct daily site inspections

issued by the Ministry of the Environment. The Region of Peel operates in compliance with all the

The C.R.C.'s including the HW, drop-offs operated under the Provisional Certificates of Approvals

Regulatory Compliance

run a program.

remediate the environmental impacts or not managing HW, for exceeding the cost to manage and

accessible and free disposal service for hazardous wastes at the C.R.C.'s. The cost to address and

educating residents on proper disposal via promotional and educational material and by providing

The goal of the HW program is minimize environmental impacts by keeping hazardous wastes

Environmental Benefits

Section II: Environmental Benefits and Regulatory Compliance
At the CRC’s 3R HW Reuse Initiative, divers material from disposal and waste material is converted to a usable fuel source in the biodiesel program (see section 1).

### Recipes for Your Home Include:

<table>
<thead>
<tr>
<th>Recipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 tablespoon of cayenne pepper</td>
</tr>
<tr>
<td>2 tablespoons of oil</td>
</tr>
<tr>
<td>4 litres (16 cups) of warm water</td>
</tr>
<tr>
<td>1 pressure spray bottle</td>
</tr>
</tbody>
</table>

(for use on aphids or munching beetles)

### Organic Pesticide

Surfaces and leave to dry.

Fill spray bottle with water. Add tea and lavender oil.

- ½ cups water
- ¼ tsp tea tree oil
- 2 cups water

Nilldey and Germ Killer

Warm water.

Re-use one or twice. Then let sit overnight. In the morning, wipe the mess away with a ltitle sprinkling baking soda or cover the messy area in the oven. Spray with water until very damp and baking soda and water.

### Oven Cleaner

Favourite Essential Oils (Tea Tree Oil, Lavender, etc.)

- Citrus Fruit (Lemon, Lime and Orange)
- Olive Oil
- White Distilled Vinegar
- Coffee
- Baking Soda
- Non-Degreaser Soap
- Cabbage Pepper
- Tofu shortest

Few of the green alternatives recommended include:

Homemade cleaning alternatives use natural ingredients that cause less damage to the environment by reducing household cleaners that contain harsh chemicals. Residents can reduce the amount of chemicals they put into the water system, dispose in landfills or release to the air.

Working for you

Region of Peel
Section III: Program Planning

Working for you - Region of Peel
2010 Monthly HWW Users

Utilized by 80,15 residents and diverted 2438.26 tons of HWW from landfill.

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derivalled by 80,15 residents and diverted 2438.26 tons of HWW from landfill. In the 2010 operating year, the per-perso

and motor oil.) These revenues help to offset the cost to manage the program.

The HWY program does receive revenues from some of the materials collected (well cell barriers
the household hazardous waste and乐趣) and offset the overall program expenses. A comprehensive budgeting process for the disposal contracts of
provide cost-effective services. A comprehensive budgeting process for the disposal contracts of
Sound financial management and careful planning are key elements in the Region's mandate to

Program Budget:

Population:

develop their skills in delivering an exceptional level of service to a growing culturally diverse
level of customer service across all facilities. Staff is trained annually to customer service to further
management. All CRCs are operated by multi-potential staff. This ensures a consistent and effective
justify the decision and willingness to be accountable, the role of the support from upper
decision supports Region policies and values, is beneficial for the customer, and the employee can
encourages and empowers staff to make on-the-spot decisions to better serve the customer. If the

in 2004, management introduced the 'You Can Do It!' campaign to frontline staff. The campaign

Customer Service

Excellence Award Recipient

Customer Service Excellence Award Recipient

Leadership

Region of Peel

Working for you
Chemical Storage Shed

Collection and Storage Equipment

HHW Receiving Area / PPE

- Protective covers
- Safety boots
- Protective gloves
- Safety glasses
- Safety vest
- Hard hat

Hazardous waste areas have been provided with and must contain the following safety apparel:

- Protective covers
- Safety boots
- Protective gloves
- Safety glasses
- Safety vest
- Hard hat

In accordance with the Region of Peel’s safety policy, all employees working in the household hazardous waste area have been provided with and must contain the following safety apparel.

Personal Protective Equipment

Following equipment in the HHW program:

- Protect the worker, public, and the environment.
- The region of Peel uses employed the use of the collection, handling, storage and shipping of these materials are done with the utmost caution.

To in view of the fact that the HHW Program involves hazardous materials, it is essential that:

Section V: Utilization of Equipment/Systems and Technologies

Working for you

Region of Peel
The Region of Peel provides hand held units as well as a mobile trailer that is unique and designed specifically for the portable hand held units as well as a mobile trailer that is unique and designed specifically for the portable hand held units. The Region of Peel also has a mobile unit that is used for the portable hand held units. The mobile unit includes equipment to recover refrigerants. The equipment includes:

- Refrigerant Recovery Equipment
- Trucks and a fork lift
- Move materials from the receiving to storage areas. This equipment includes dollies, carts, pumps to minimize body stress and strains.
- HWY safety with a variety of material handling equipment to areas of the HWY drop-off to collect any spilled or leaking material.
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- Trucks and a fork lift
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- Safety Equipment
- Sheds for transport:
- Transport is the responsibility of Peel's collection contractor to load the material in the storage containers may break and a potential for hazardous chemicals to mix if packed in a drum for transport in order to protect the HWY workers. There is a risk of a fire, explosion, and chemical spillage at 10 percent of the lower explosion limit. Hazardous materials are placed in the storage shed and with a gas monitoring system. The hazardous storage is equipped with a mechanical ventilation explosion proof lighting, set.
- Each individual compartment is equipped with mechanical ventilation, explosion proof lighting, set.
- Containers are placed on shelves in a compartmentalized chemical storage shed. There are four compartments in the storage shed, one for flammables, corrosives, poisons, and oxidizers.
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The mobile extraction trailer is capable of extracting fourappliances simultaneously.
response, the transportation of dangerous goods and have attended the SWANA HWY course.

Hazardous Materials Information System (WHMIS). HWY staff also receive training in basic spill

All staff that work at the CRC's are trained in First Aid, Emergency Response and the Workplace

Training.


workplace rules, workplace safety legislation are posted and made available to staff.

and Safety Bulletin board where information such as the minutes from the JHES meetings, health

are provided with training opportunities to become a certified member. Every facility has a Health

Employees are encouraged to participate in the Joint Health and Safety Committee (JHSC) and

ask questions and raise any safety concerns.

workplace practices. Safety takes provide a forum for supervisors to educate staff and for staff to

regulations by conducting the inspections provided by Health and Safety. Supervisors ensure that staff complies with the act and

in accordance with the Occupational Health and Safety Act. Region of Peel provides employees

the overall well-being of employees.

employees help to create a healthy work environment and a healthy work environment enhances

providing the employees with a healthy and safe workplace and supports the notion that health

Worker health and safety are of paramount importance to the Region of Peel. It is committed to

Section VI: Worker Health and Safety
and immediately be informed of how and where to properly dispose of the material.

Peels services and departments or can visit www.peelwasteinfo.ca, enter the waste to be disposed of on phone. Residents who have online access can visit Peels website to find information on all of customer service. Customer service associates provide helpful information on services to residents over the phone. Residents have consistent and up to date information on the Region's waste management services. The Region's waste management guide is mailed to residents to ensure they have consistent and up to date information on the Region's waste management services. The Region's waste management guide is mailed to residents to ensure they have consistent and up to date information on the Region's waste management services.

The HWY program is promoted through public education. The Region of Peel website, front line staff ensures trust and confidence in the services provided and pays the way towards customer loyalty, appealing and accessible to residents. The exceptional customer service provided by front line staff.

The fact that residents can have access to all of these services above all one stop makes it

A Household Hazardous Waste (HWY) Drop-off Area and Reuse Centre

A Reusable Goods Donation and Retail Centre

cardboard, glass, shingles, large appliances and yard waste

A Public Drop-off Area for materials including waste, wood, scrap metal, drywall.

Features of each facility include:

Materials. They are strategically located to be accessible to the residents of Peel.

pecially designed to accept and accommodate a wide range of recyclable and non-recyclable materials. They serve as one stop shops for waste management services. The CRCS are unique facilities which receive as one stop shops for waste management services.

The Region of Peel's HWY drop-offs are a vital part of the community's recycling efforts.

SECTION VII: PUBLIC ACCEPTANCE, APPEARANCE AND AESTHETICS
SHARP SMARTS
CARE AND BE AWARE
DO
• Pick up your FREE biohazard container at a Community Recycling Centre.
• Dispose of all sharps (used needles, syringes and lancets) in your biohazard container.

DON'T
• Throw away your sharps with regular outside waste.
• Bring sharps to Community Recycling Centres unless stored in approved biohazard containers.

Visit www.peelregion.ca/waste or in person at areas of
Peel's Community Recycling Centres (except residential household hazardous waste only. No industrial, commercial or institutional waste (including professional medical waste)) is permitted.

905-791-9499 or call 905-584-2216, free of charge.

For more information, call the Region of Peel at

Featherstone Community Recycling Centre
175 Queen Dr, Caledon
Hours: Mon. – Sat. 8 a.m. – 4:30 p.m.
(Open to September only)

Bolton Community Recycling Centre
1199 Industrial Rd. E. Bolton
Hours: Mon. – Sat. 8 a.m. – 6 p.m.
(Open to September only)

Brampton Community Recycling Centre
175 Queen Dr., Brampton
Hours: Mon. – Sat. 8 a.m. – 4:30 p.m.

Coldbrook Community Recycling Centre
2355 Bantford Rd. E., Mississauga
Hours: Mon. – Sat. 8 a.m. – 4:30 p.m.
(Open to September only)

Get Your FREE Biohazard Container at Community Recycling Centres
Peel's Community Recycling Centres only
What are your choices?

Whether cleaning or adding a new coat of paint to your home, you can control the products that you choose, the quantity that you use, and the impact that you and your products have on the environment.

When starting a project that involves HHW, ask yourself:

- Do I really need to use this?
- How much do I really need?
- How will I dispose of this when finished?

When buying commercial products, try to buy just enough to finish the job. If you must buy a large quantity, share what is left with a friend or neighbour, or bring it to your nearest HHW facility for safe disposal or reuse.

Household hazardous waste must not be disposed of in your garbage or recycling containers, or poured down the drain.

Bring your HHW material to any of Peel’s Community Recycling Centres for safe disposal, free of charge.

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**Your Guide to**

**Household Hazardous Waste**

**Fewster Community Recycling Centre**

1126 Fewster Dr, Mississauga L4W 2X4

**Hours:**

- Mon. to Sun., 8:30 a.m. - 4:30 p.m.
- Evening Hours: Thurs. until 8 p.m. (May to September only)

**Battleford Community Recycling Centre**

2255 Battleford Rd., Mississauga L5H 8P6

**Hours:**

- Mon. to Sun., 8:30 a.m. - 4:30 p.m.
- Evening Hours: Thurs. until 8 p.m. (May to September only)

**Brampton Community Recycling Centre**

395 Chrysler Dr, Brampton L6S 6G3

**Hours:**

- Mon. to Sun., 8:30 a.m. - 4:30 p.m.
- Evening Hours: Thurs. until 8 p.m. (May to September only)

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**Bolton Community Recycling Centre**

109 Industrial Rd., Bolton L7E 1K5

**Hours:**

- Tues. to Sat., 8:30 a.m. - 4:30 p.m.

**Caledon Community Recycling Centre**

1795 Quarry Dr, Caledon L7K 1R9

**Hours:**

- Mon. to Sat., 9 a.m. - 4:30 p.m.

For more information on the Region of Peel’s waste management programs and services, call 905-791-9499 or in long-distance areas of Caledon call 905-584-2216, free of charge. Visit www.peelregion.ca/waste.
Household Hazardous Waste (HHW) is a substance that:
- may be harmful to you, animals or the environment when not handled properly;
- can be in the form of a solid, liquid or gas; and
- can result in the pollution of groundwater, lakes, rivers and soil when disposed of improperly.

Look for these danger signs on HHW products in your home:

**Toxic**: A product labelled with this symbol is poisonous or lethal if swallowed or inhaled, even in small amounts. Examples include:
- cleaners
- medication (expired, or when not taken as directed by a health care professional)
- motor oil
- paint cans/containers (full or partially full)
- pesticides

**Corrosive**: A product labelled with this symbol can cause burns to your skin and eyes and can eat away at other materials. Examples include:
- acids
- drain openers
- oven cleaners
- photographic solutions

**Explosive**: A product labelled with this symbol should be kept away from sources of heat and should never be punctured. Examples include:
- aerosol cans (full or partially full)
- barbecue propane tanks maximum 18 kg (40 lbs.)

**Flammable**: A product labelled with this symbol must be kept away from all sources of spark and flame. Examples include:
- barbecue starter fluid
- deck stains
- gasoline
- motor oil
- nail polish
- varnish and other solvents

What can you do to keep your home safe?
- Read all product labels carefully
- Never mix chemical products
- Store all chemical products in their original containers and out of the reach of children
- Keep containers securely sealed
- Store substances in a cool, dry and well-ventilated location
- Store incompatible substances (e.g. bleach and ammonia) separately
- Regularly check containers to make sure they are not damaged or leaking
- If damaged or leaking, pour contents into a clean, sealable container that is clearly labelled

HHW cannot be treated like other waste.
- If burned, HHW can emit chemicals, through smoke and vapours, over a large area
- If sent to a landfill, HHW can leak and filter down through the soil and contaminate groundwater
- If poured onto the ground or into a drain, HHW can poison soil, plants and water; damage pipes and plumbing; clog storm sewers; and overburden septic systems

Use your SHARP SMARTS when disposing used needles, syringes and lancets.

Sharps (needles, syringes and lancets) can pose a risk to you and others if not disposed of properly — and must never be disposed of in your garbage or recycling containers. Sharps are dangerous because once used, they become biomedical waste with the potential to harm anyone who comes in contact with them.

Peel’s Community Recycling Centres distribute biohazard containers and offer sharps disposal services to Peel residents — free of charge.

The biohazard containers are visibly labelled with a biohazard symbol, and will protect family members, waste collectors, pets and others who may come in contact with your sharps. Visit any Community Recycling Centre to pick up or drop off your biohazard container.