

PRINCE EDWARD ISLAND

PAINT RECYCLING PROGRAM ANNUAL REPORT 2017

For submission to:
Prince Edward Island
Department of Communities,
Land and Environment

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1.0 About Product Care Association of Canada

PCA is a federally incorporated, not-for-profit product stewardship association formed in response to stewardship regulations and is governed by a multi-sector industry board of directors. PCA has developed and managed paint, household hazardous waste and special waste stewardship programs since 1994. Product Care Association of Canada ("PCA") administers and operates the PEI Paint Stewardship Program ("Program"). The Program is approved by the Prince Edward Island Department of Communities, Land and Environment under the PEI Materials Recycling Regulations ("Regulation") and has been in operation since September 2012. PCA, on behalf of its members, oversees the administration, collection, transportation, recycling and management of all designated consumer paints products. In addition, the Program is responsible for fostering consumer awareness of the Program.

PCA's members are the "brand owners" (manufacturers, distributors and retailers) obligated by the Regulation under the category of architectural paint. PCA operates paint product stewardship programs in three other provinces besides PEI: British Columbia (BC), Manitoba (MB), Saskatchewan (SK), Ontario (ON), New-Brunswick (NB), Nova Scotia (NS) and Newfoundland and Labrador (NL).

PCA also operates the stewardship program for lamps in Prince Edward Island.

1.1 Report Period

This report covers the Program from January 1, 2017 to December 31, 2017.

1.2 Program Summary

The Prince Edward Island Paint Recycling Program offers collection sites throughout the Province to which consumers can bring leftover household paint free of charge. Six collection sites are operated by Island Waste Management Corporation under contract with PCA.

The Program is funded by Environmental handling fees (EHFs) remitted by PCA's members based on the number of units of designated consumer paint products sold into the Province (see Appendix 1 for a list of current EHF rates).

PCA supplies collection sites with standard reusable collection containers, such as tubskids and drums. A hauler contracted by the Program collects the filled containers from the collection sites and drops off empty containers. The full collection containers are shipped to a processor for recycling. PCA also manages additional elements of the Program, including revenue management, communications and administration.



2.0 Brand Owner Sales Information

Program members reported an estimated liquid volume of 1,008,375 litres of program products sold in PEI from January 1 to December 31, 2017.

3.0 Collection

The following section provides the total amount of waste paint collected in PEI, as well as the location of the Program's collection sites.

3.1 Total Amount of Waste Paint Collected

Table 1 shows the number of collection containers collected and the amount of waste paint collected by the Program for the reporting period.

Table 1: Total Amount of Waste Paint Collected in 2017

	Number of Tubskids ¹	Residual Paint Volume ^{2,3}	Number of Aerosol Drums	Residual Aerosol Paint Volume ^{3,4}	Paint Reuse Volume (L)	Total Residual Paint Volume
Waste Paint Collected	791	87,457	72	1,760	1,049	90,266

Table 2 provides the Program's recovery rate, based on the volume of paint collected as a function of volume of paint sold in PEI in 2017.

¹ Each collection bin measures 42 x 30 x 48" and with a nominal capacity of 108 one gallon containers. The actual number of paint containers per bin varies depending on the mix of paint container sizes, ranging from 250ml – 18.9L capacity. The total number of tubskids reported also includes drums collected converted into tubskids and then rounded (one drum equals 0.25 tubskids).

² Based on a rounded conversion rate of 110.6 L per tubskid determined by the average volume of material generated during processing. Residual paint volume does not include paint handled through the Paint Reuse Program.

³ The values presented in Table 1 are rounded for presentation purposes. They are also generated from other values, some of which were rounded and others which were in raw form. Consequently, total residual volumes reported in Table 3 cannot be reproduced based on the other values as presented in the table.

⁴ Based on a rounded conversion of 97.8 L per tubskid determined by the average volume of material generated during processing. One drum equals to 0.25 tubskids. The final rounded conversion rate it therefore 24.5L



Table 2: 2017 Paint Sales, Residual Recovery Volume and Recovery Rate

	Total
Sales (litres)	1,008,375
Residual Recovery Volume (litres)	90,266
Recovery Rate	9.0%

3.2 Collection Sites

As of December 31, 2017, six collection sites participated in the Program. All six collection sites are operated and managed by Island Waste Management Corporation. See Table 3 for the list of collection sites. Appendix 2 contains a provincial map of the collection site locations.

Table 3: 2017 PEI Collection Sites

Collection Site	Address	City
GreenIsle	8 Superior Crescent	Charlottetown
Brockton	2202 Dock Road Rte # 150	Elmsdale
New London	10142 Rte #6	Green Gables
Murray River	378 Cape Bear Road Rte #18	Murray River
Dingwells Mills	100 Selkirk Road Rte #309	Souris
East Prince Waste Management Facility	29786 Rte #2	Wellington Station

4.0 Processing

This section of the report sets out the following:

- a) The total amount of waste paint processed or in storage;
- The percentage of waste paint collected that was reused, recycled, disposed of in an engineered landfill, recovered for energy, contained, or otherwise treated or disposed of;
- c) A description of the types of processes utilized to reuse, recycle, dispose of, recover energy from, contain, or otherwise treat or dispose of waste paint;
- d) A description of the efforts to redesign paint products to improve reusability and recyclability; and
- e) The location of processing or containment facilities for waste paint.





4.1 Location of Processing Facilities

The following is a list of facilities contracted by the Program to handle and process program products.

Laurentide Re-sources Atlantic Inc. 9322 Rue Main Richibucto, NB E4W	Storage Facility
Laurentide Resources Atlantic Inc. 100 Main Street Springhill, NS BOM 1X0	Processing Facility
Société Laurentide Inc. 345 Bulstrode Street Victoriaville, QC G6T 1P7	Processing Facility
Terrapure Environmental 17 Jones Court Sussex, NB E4E 2S2	Processing Facility

4.2 Waste Paint Processed

In 2017, a total of 765 paint tubskids, and 101 paint drums and 72 aerosols drums were shipped to Laurentide (Springhill) and Terrapure facilities for processing (see Table 4).

During the reporting period, Laurentide (Springhill) and Terrapure processed (i.e., opened, sorted and bulked into shipping containers) 707 tubskids 101 paint drums and 52 aerosols drums, including collection containers that remained in their inventory from 2016.

Volumes collected but not shipped, or shipped but not processed, were managed in the following program year.



Table 4: Total Amount Waste Paint Processed in 2017

Item	Number of Tubskids⁵	Residual Paint Volume ^{6,7}	Number of Aerosol Drums	Residual Aerosol Paint Volume ^{7,8}	Total Residual Paint Volume
Shipped to Processor	791	87,457	72	1,760	90,266
Processed	732	80,976	52	1,272	82,248

Information on the management of containers 2017 is found in Table 5.

Table 5: Container Management 2017

Container Type	Recycled (Tonnes)	Processor	Management Process
Metal	18.6	Tri-Province Recycling, NB	Mixed with other scrap metal and sold as a commodity, which is eventually sent for smelting
Plastic pails (HDPE 2)	1.0	Laurentide Re-sources Atlantic (Springhill)	Combined and baled with other plastics and managed as a commodity for plastics recycling or sent for reuse
Plastic paint cans (polypropylene)	5.5	Laurentide Re-sources Atlantic (Springhill)	Processed and managed as a commodity for plastics recycling

⁵ Each collection bin measures 42 x 30 x 48" and with a nominal capacity of 108 one gallon containers. The actual number of paint containers per bin varies depending on the mix of paint container sizes, ranging from 250ml – 18.9L capacity. This number includes drums converted into tubskids and then rounded.

⁶ Based on a rounded conversion factor of 110.6 L per tubskid determined by the average volume of material generated during processing. Residual paint volume does not included paint reuse volume.

⁷The values presented in Table 1 are rounded for presentation purposes. They are also generated from other values, some of which were rounded and others which were in raw form. Consequently, total residual volumes reported in Table 3 cannot be reproduced based on the other values as presented in the table.

⁸ Based on a rounded conversion of 97.8 L per drum determined by the average volume of material generated during processing. One drum equals to 0.25 tubskids. The final rounded conversion rate is therefore 24.5L.



4.3 Disposal Method Descriptions

The following sections describe each method the Program used to reuse, recycle, or otherwise treat or dispose of waste paint.

Reuse (Paint Reuse Program)

The Paint Reuse Program, previously "Paint Exchange", makes better quality paint returned to collection sites available to the public to take and use at no cost. The collection sites record and report the number of containers given away. This is a highly efficient way to achieve reuse as the paint does not require transportation and reprocessing. An estimated 1,049 litres of paint was given away to consumers in 2017 at no charge through the Paint Reuse Program. The reuse volume was estimated by assuming that each container was 75% full on average.

Recycling

At the Laurentide Re-sources facility, paint containers are removed from the collection containers, inspected, opened, sorted by type, colour and quality, and poured into shipping containers. Bulked paint of recyclable quality is then transferred to Laurentide Re-sources, Richibucto storage facility, where it is distributed to an affiliated processor, Peintures Recuperées du Quebec (PRQ) in Victoriaville, QC, or transferred to other international recyclers. Table 6 provides the quantity of latex paint and alkyd paint that was recycled. The diminishing market for alkyd paint has made it increasingly difficult to recycle. Consequently, the majority of alkyd paint was sent for energy recovery and limited amounts of alkyd paints were recycled.

Table 6: Quantity and Type of Paint Recycled

Туре	Litres	Percentages
Latex Paint	45,833	85.7%
Alkyd Paint	7,670	14.3%
Total	53,503	100%

Aerosol Paint Management

Paint aerosol containers are punctured, the propellant is filtered through activated carbon, and the contents drained. The residual volumes of paint recovered from paint aerosols are very small and represent a variety of product formulations that limit the options for recycling. Consequently, the residual paint is used for energy recovery.



Energy Recovery

Not all oil-based paint collected is of suitable quality for recycling. In some cases the paint may be in the form of skins or sludge, of an undesirable color, contaminated or of the wrong chemistry for paint recycling. In addition, regulations, such as the Federal VOC Regulations, require more stringent limits on certain chemical constituents, which tend to be found in higher concentrations in older paints, making it difficult to recycle. Finally, the market for recycled solvent-based paint is significantly smaller than that for water-based products with demand continuing to decline.

Due to the high solvent content of oil-based paints, these products are suitable for energy recovery. Through the process of fuel blending, some of the oil-based paint collected by the Program that is not suitable for paint recycling is used as an alternative energy source in applications such as permitted incinerators. During the reporting period, 8,498 litres of alkyd paint and paint from paint aerosols were blended with other fuels and utilized for energy value at licensed facilities.

Incineration

During the reporting period, no material went for incineration.

Landfill

The sorting and bulking of the latex paint by Laurentide Re-sources and Terrapure Environmental generated 20,248 litres of non-recyclable latex sludge/solid, which were solidified and disposed of at a synthetic-lined landfill cell with leachate collection.



Table 7 below shows the breakdown of waste paint managed by the different product management methods.

Table 7: Waste Paint by Disposal Method

Method	Volume (litres)	Percentage	
Reuse	1,049	1.3%	
Recycle	53,503	64.2%	
Energy Recovery	8,498	10.2%	
Landfill	20,248	24.3%	
Incineration	0	0.0%	
Total	83,298	100%	

4.4 Design for Environment

The paint and coatings industry is continually pursuing innovations in product formulations that strike a balance between sustainability, health and safety and product performance. This is done working in concert with key agencies such as Health Canada, Environment Canada and numerous standard-setting organizations. An example of industry's sustainability initiatives includes involvement with the federal government's Chemicals Management Plan, assessing chemicals in commerce for all industry sectors including paint and coatings. This comprehensive federal government initiative evaluates risks associated with substances contained in products and intended uses or applications of the product. These risk assessments are done with a view to banning the highly toxic substances that are considered dangerous to human health and the environment or managing the risks in the ones that are deemed to be less harmful.

Where toxicity in chemicals is considered potentially harmful to human health or the environment, a risk management approach is required to permit continued use of the substances contained in products like paint and coatings. This may result in regulations, pollution prevention plans, codes of practice or compliance agreements and ultimately reformulation or re-design of products for the marketplace, which reduces or eliminates negative impacts. In some cases this has led less toxic and more environmentally friendly alternatives or substitutes for product formulations that still ensure product performance demands of the customer. We have seen these measures lead to important benefits such as the reduction of low-level emissions from Volatile Organic Compounds (VOC) in paints with most paints now containing low or no VOC content.



VOC Emissions Reductions in the Paint and Coatings Industry

Almost all ground-level ozone and about two-thirds of particulate matter are formed in the atmosphere through the reactions of precursor substances, with VOCs being one of the most significant. Consequently, Canada's approach to reduce atmospheric levels of particulate matter and ozone is to reduce the precursor emissions, including VOCs. In 2009 the federal government implemented VOC Concentration Limits for Architectural Coatings Regulations for all architectural and automotive paint and coatings in 54 product categories. Since that time there has been tremendous success in the emissions reduced in all paint and coatings used in Canada as follows:

- 93 per cent of the sales volume of all architectural coatings in Canada is now water-based, up from less than 50 percent ten years ago.
- In 2015, based on comprehensive and random testing conducted by Environment an Climate Change Canada (ECCC), 99+ per cent of the sales volume for architectural waterborne coatings in Canada, traditionally associated with high VOC content, are now fully compliant with the lower VOC limits required by the VOC Concentration Limits for Architectural Coatings Regulations.
- Compared with 2002 levels, the architectural paint and coatings sector has achieved 74 per cent reduction in overall VOC emissions due to lowering of the VOC content in waterborne products and by eliminating most of the solvent borne product lines completely. These industry efforts greatly exceeded the government's own expectations, which was projected to be a 28 per cent reduction.

Industry Leadership

Many companies now have sustainability goals and targets. Those are put in place for environmental reasons, but they also make good business sense as efficient use of natural resources has been shown to reduce operating costs. As a result, many firms now have regular sustainability reporting as an ongoing part of their business planning, allowing them to integrate the addressing of environmental challenges into their long-term development strategy. Some of the ways in which paint and coatings companies address the alignment of sustainability with capital allocation decisions include:

• Setting and updating long-term greenhouse gas reduction targets and linking those with environmental compensation and sustainable product innovation



- Using life cycle assessment to set business goals when expanding product offerings and risks management
- Developing metrics to factor in the social and environmental impact of their suppliers along the supply chain to determine true business costs
- Making investments in new environmental research and innovation
- Ensuring R&Ds projects are aligned with the sustainability policy of the company
- Some companies now have Chief Sustainability Officers, who are one of the decision makers for large internal capital budget requests, signing-off with the controller on capital budget requests to ensure sustainability is evaluated and included in decision making

Customer preference

Many initiatives are also driven by customer preferences. Companies now focus attention on answering consumer preferences regarding product manufacturing that reduce fuel use, limit real estate footprints, improve water and wastewater management while ensuring customers get the same product performance. Paint and coatings companies develop products that help businesses and their customers to reduce their environmental footprint, while creating value. These product lines include architectural paints which are now more durable, last longer and better protect valuable assets.

5.0 Communications and Education

PCA continued its communication and public outreach in 2017 to educate consumers about the Program in accordance with regulatory requirements. The following describes the various communication and education tactics that were employed.

5.1 Websites

PCA employs a consumer-facing brand, ReGeneration, across numerous communications platforms through which it engages Program end-users. The central consumer information hub for ReGeneration is the website, ReGeneration.ca, home to the following content for the Program:

- Collection site locator
- Tips for storing and buying the correct amount of paint
- Collection sites hours of operations
- Accepted and non-accepted products



- Consumer videos showing the product management approach for paint
- A fillable form for ordering promotional materials like rack cards and floor decals
- Other information (e.g., a description of the Paint Reuse Program).

An estimated 89,576 unique visitors accessed regeneration.ca during the 2017 calendar year. The Program page specific to PEI received 822 page views.

<u>Productcare.org</u> provided program members and service partners with information on:

- Products accepted and not accepted by the Program
- Environmental handling fees associated with the Program products
- Contact information
- Membership-related documents
- Program plan and annual reports
- Program policies, guidelines, forms and related documents
- An online portal for ordering promotional materials

5.2 Telephone Hotline

PCA continued to operate a toll-free "hotline" through which consumers were able to obtain information about the Program.

5.3 Point of Sale (PoS) and Point of Return (PoR) Material

PCA provided an online ordering system on its website that allowed collection sites and retailers to order or reorder promotional materials on demand at no cost. Appendix 3 lists the materials that were available, including:

- Rack Cards
- Posters
- Depot signage
- Floor decals
- Paint Can stickers

5.4 Digital Advertising

PCA ran a PEI targeted digital campaign under the organization's primary brand -- ReGeneration - including syndicated Facebook posts, targeted digital display ads, and smart digital display (i.e., retargeting or re-serving ads to pre-qualified users who had engaged with ReGeneration's website at some previous point in time).



Digital ads were specifically targeted at internet users who performed online searches related to paint purchasing, use, and disposal of paint products in PEI. Additionally, our Facebook advertising campaign pursued a "gated" strategy, meaning content viewable by residents of PEI was relevant to that audience specifically, and was not disseminated to audiences in other provinces. An example of a Facebook post is displayed in Appendix 3.

5.5 IWMC Partnership

PCA continued to contract with Island Waste Management Corporation (IWMC) to promote the Program to the public through the following methods on an ongoing basis:

1. Waste Watch News

Newsletters were distributed to Island residences (including seasonal dwellings and apartment units) in June and in December through Canada Post. These newsletters were available in both PEI's official languages, English and French. French speaking individuals could either print them off the IWMC website or call Customer Services for a copy to be mailed out. To supplement the unaddressed mail delivery, copies of newsletters were available at all Access PEI locations (central government service locations), and at city and town halls across the Island.

2. Interactive Sorting Guide

The IWMC website's Interactive Sorting Guide provided information on specific products, including how to place materials to be disposed of in the correct stream and links to the Program's website for more information. There were 140,741 recorded visits to the website in 2017.

3. New Residential Customers

New residential customers were provided with a set of carts, a kitchen mini bin, a Residential Participant Guide and a Sorting Guide. French Participant Guides were available upon request.

4. Business Customers

Business Guides help the industry, commercial and institutional sectors manage waste. IWMC included Sorting Guides when distributing the Business Participant Guide.

5. Waste Watch Program for Tenants

A brochure developed for the rental sector was available to landlords upon request and was also posted on the IWMC website. The Sorting Guide was placed inside this brochure when distributed to tenants.

6. Call Center

The Customer Service Center receives inbound calls on a multitude of issues, including from customers requiring disposal information. IWMC receives on average 50,000 calls every year.



7. Corporate Annual Report

Information on paint recycling was highlighted in the IWMC Annual Report. This report is tabled in Legislature, and the most current report is available on the IWMC website⁹. Reports were also distributed to government officials and made available by special request at the Head Office.

8. Newspaper Columns

In 2017, three newspaper columns were prepared where paints were discussed, and these appear in Appendix 5.

9. Sorting Game

A bilingual sorting game consists of panels with Velcro icons. Paint and bulb icons are visible on the Special Disposal panel (see Appendix 2). This game was widely used by audiences of every age (day care, schools, community college, English as a Second Language sessions, community groups). The game was used at community events, when doing presentations, and lent out to organizations wanting to enhance the waste skills of their membership. IWMC has 5 sets of the game and uses this tool approximately 50-60 times per year (potential reach of 1000-1500 people).

10. Presentations & Tours

IWMC is invited to make presentations to conferences, learning institutions, special events and to visitors at their collection sites. In almost every case, the presentation has a sorting component. IWMC explains how its Stewardship Programs work as part of Waste Watch and has slides to capture the highlights of each program. See Appendix 2 to see slides used in a typical presentation. An average of 30 presentations occur every year.

11. ReGeneration Posters & Pamphlets

Information about the Program was available at all IWMC disposal facilities and offices. Where room permits, posters were displayed. Posters and pamphlets were also distributed as part of IWMC displays and IWMC presentations.

12. Website Linkage

A link to Regeneration.ca is available through IWMC's website.

⁹ The IWMC website is https://www.iwmc.pe.ca.



6.0 Financial Information

Table 8 identifies the key 2017 financial performance indicators for the Program.

Table 8: PEI Paint Recycling Program 2017 Financial Information

(\$'000s)	2017
Revenues	420
Program Expenses	
Collection	30
Transportation	66
Processing	194
Communications	10
Regulatory	10
Administration	19
Total Program Expenses	329
Excess / (Deficiency) of revenues over expenses for the year	91
Accumulated Surplus / (Deficit)	(127)



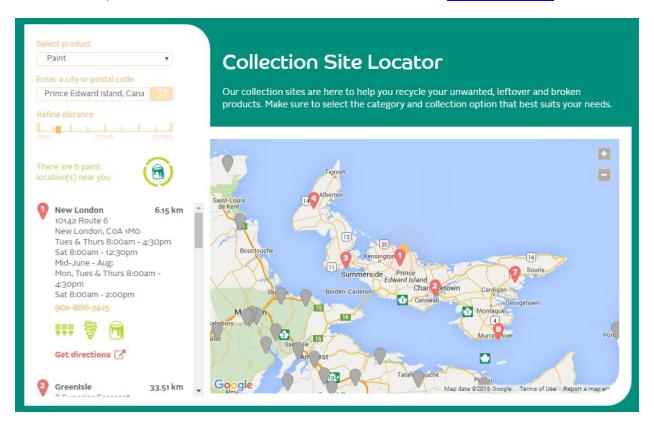
Appendix 1 – Environmental Handling Fee Rates

Paint Container Size	Current Rates
100ml to 250ml	\$0.25
251ml to 1 litre	\$0.50
1.01 litres to 5 litres	\$1.00
5.01 litres to 23 litres	\$1.95
Aerosol paint (any size)	\$0.30



Appendix 2 - Collection Site Locator

Below is a snap shot of the collection site locator tool available on regeneration.ca.





Appendix 3 - PoS and PoR Materials

Rack Card Front and Back - 5"x 8"





ReGeneration.ca







Depot Sign - 4'x 3'



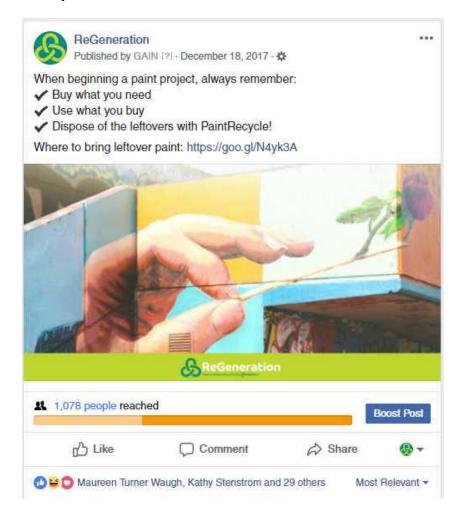
Floor Decal Paint can sticker







Appendix 4 – Sample Facebook Post





Appendix 5 – IWMC Partnership

Sorting Game



Presentation Slides





IWMC Special Recycling Guide

SPECIAL DISPOSAL FREE

DO NOT PLACE IN CARTS, BLUE BAGS OR IN DUMPSTERS:

ITEM	DESCRIPTION	DISPOSAL
Batteries	Rechargeable and non-rechargable batteries (i.e. AAA, AA, C, D, button type, lithium, etc.) and items such as disposable flashlights where the battery cannot be removed.	Place in battery recycling containers found at most grocery stores or Waste Watch Drop-Off Center
Cell Phones	Any type 😘 🔊	Visit www.recyclemycell.ca for drop-off locations or take to a Waste Watch Drop-Off Center
Household Hazardous Waste (HHW)	fuel (gasoline, kerosene, etc.) silicone, caulking, adhesives pesticides, herbicides, insecticides items with mercury pet medications	Waste Watch Drop-Off Center - Must be in sealed original container. Jerry cans (or other containers) used for transporting must be left behind with contents
Ink Cartridges	Laser or ink jet 👸	Accepted at most electronic retailers or Waste Watch Drop-Off Center
Large Bulky Furniture	Material larger than 4 ft. or heavier than 50 lb. such as sofas, tables, china cabinets, mattresses, patio furniture, etc.	Waste Watch Drop-Off Center
Propane Tanks	30 lb. or less Over 30 lb	Propane dealer OR Waste Watch Drop-Off Center
Tires	Must be removed from rims	Propane dealer Waste Watch Drop-Off Center
White Goods	Appliances (stoves, washers, dishwashers, hot water heating tanks, etc.)	Waste Watch Drop-Off Center
Electronics	Televisions, computers, audio equipment, cameras, etc.	Visit www.epra.ca for drop off locations or take to a Waste Watch Drop-Off Center
Automotive Lead Acid Batteries	Any size	Accepted at place of purchase, scrap metal dealers or at Waste Watch Drop-Off Center
Light Bulbs	All lights that can be removed from fixture, i.e. Fluorescent (CFLs, linear, u-tubes, etc.), high intensity bulbs, LEDs, halogens, incandescents	Waste Watch Drop-Off Center / 🕏 🗑 📗
Medications	Prescriptions, over-the-counter drugs (pain & cold medications, etc.), natural health products (vitamins & mineral supplements, etc.)	Participating pharmacies (see www.healthsteward.ca)
Motor Oil / Automotive Antifreeze	Oil fluids, containers, & oil filters; automotive antifreeze fluids and containers, aerosol containers for propelled lubricant and brake cleaner	Return to a collection facility (see www.soghuoma.com) or to a Waste Watch Drop-Off Center
Needles / Syringes	Needles, syringes, needle tips, lancets, insulin pens, and other sharps	Pick up free sharps container at participating pharmacies (www.healthsteward.ca). When container is full, return to pharmacy for disposal
Paint Products	Paints, stains, etc. AND empty paint containers	Waste Watch Drop-Off Center
ADDITIONAL	SORTING INFORMATION: www.iwmo	c.pe.ca or 1-888-280-8111



Newspaper Articles

