



2014 Nova Scotia Paint Stewardship Program Annual Report

Submitted to: Nova Scotia Environment

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1.0 About Product Care Association

Product Care Association (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. Product Care Association has managed paint and other household hazardous waste industry stewardship programs since 1994.

PCA's members are the "brand owners" (manufacturers, distributors and retailers) of "consumer paint products" as defined under the *Nova Scotia Solid Waste-Resource Management Regulations* under section 102 of the *Environment Act*.

Product Care, on behalf of its members, oversees the administration, handling, transportation and recycling of all collected post-consumer paints and aerosols and is also responsible for fostering consumer awareness of the program.

1.1 Program Summary

The Nova Scotia Paint Recycling Program was established in 2002, with PCA and Resource Recovery Fund Board of Nova Scotia (RRFB) both having separate approved stewardship plans. In July 2012, with Ministerial approval, the two existing program plans were replaced with a single plan submitted by Product Care on behalf of its brand owner members. PCA contracted with RRFB to manage the collection and transportation system, as well as additional program elements.

The program includes all latex, oil and solvent-based paints and stains, but does not apply to specifically formulated industrial, marine and automotive coatings. The program also includes all paint aerosols (industrial, commercial, automotive etc.), and marine paint (except those which are registered as a pesticide).

Environmental handling fees (EHFs) applied to each regulated container of paint and aerosols that is sold in or into the province provide funding to manage the program. The program allows residents of Nova Scotia to return leftover paint to any of the Enviro-Depots located throughout the province and a number of municipal waste management facilities, free of charge.





1.2 Report Period

This report covers the 2014 calendar year (January 1 to December 31, 2014). All content has been prepared in accordance with section 18F(1) of the *Nova Scotia Solid Waste-Resource Management Regulations* under section 102 of the *Environment Act*.

2.0 Brand Owner Sales Information

Program members reported the sale of 1,954,764 containers of program product in Nova Scotia from January 1 to December 31, 2014, for an estimated liquid volume sold of 5,766,905 litres.

3.0 Collection

The following section provides the total amount of waste paint collected in Nova Scotia, as well as the location of the return depots.

3.1 Total Amount of Waste Paint Collected

Table 1 below shows the total amount of waste paint collected by the program for the reporting period.

Table 1: Total Amount of Waste Paint Collected in 2014

Item	Number of Tubskids ¹	Residual Paint Volume (L) ²	Number of Aerosol Tubskids ¹	Residual Aerosol Paint Volume (L) ³	Total Residual Paint Volume (L)4
Volume Collected	2,868	387,180	25	1,555	388,735

⁽¹⁾ Tubskid dimensions (42" x 34" x 48") with a nominal capacity of 126 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.

⁽²⁾ Based on a conversion rate of 135L per collection bin derived from on the number of tubskids processed and the total residual volume of material generated.

⁽³⁾ Based on a conversion rate of 62.2L per tubskid derived from the number of tubskids processed.

⁽⁴⁾ Total residual paint volumes include Paint Exchange. Paint Exchange volume is based on the assumption that Paint Exchange cans are 75% full.





Table 2 provides the program's recovery rate in 2014 based on the volume of paint collected as a function of volume of paint sold.

Table 2: 2014 Paint Sales, Residual Recovery Volume and Recovery Rate

	Total
Sales (litres)	5,766,905
Residual Recovery Volume (litres)	388,735
Recovery Rate	6.74 %

3.2 Collection Sites

As of December 31, 2014, 98 collection sites were participating in the program. Appendix 1 provides details on the collection sites.

3.3 Process of Internal Accountability

The program provides collection site guidelines to all collection sites that sets out the operational procedures and various requirements for proper collection and handling of the paint. In addition, the program provides emergency spill kits and procedures to the collection sites.

To ensure the environmental effectiveness of the program, regular inspections of collection sites are conducted by RRFB staff to ensure the collection sites are fulfilling their role as a service provider and are adhering to all applicable program guidelines and requirements.

4.0 Processing

This section of the report sets out:

- 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 Waste Paint Processed

All paint collected through the Program is transported first from Enviro-Depots and municipal sites to one of the four Regional Processing Centres RPCs. The municipally operated or contracted RPCs in Lunenburg, Sydney and Kemptown ship the paint to the RRFB Nova Scotia operated RPC in Kemptown. Accumulated loads are then transported from RRFB Nova Scotia's facility to Laurentide Re-source's processing facility in Springhill.

All products are unloaded and removed from the storage tubs, inspected and classified as latex, alkyd or non-program. Program material that is recyclable is further separated by colour, screened and consolidated in 205 litre drums. Drums of program recyclable material are then transported to the paint manufacturing facility in Victoriaville, Quebec for final processing.

In 2014, a total of 2,831 tubskids of leftover paint were delivered to Laurentide Re-source for processing, which includes residual tubskids collected in 2013 and held at Kemptown consolidation facility.

During the reporting period, Laurentide Re-source processed (i.e., opened, sorted and bulked into shipping containers) 2,824 tubskids, including additional tubskids that were in their inventory from 2013. As of December 31, 2014 a total of 431 tubskids remained unprocessed in storage.

Table 3 shows the volume of waste paint shipped to processors and the volume processed by collection container (tubskids and drums) and by residual volume (litres). Volumes collected but not shipped, or shipped but not processed, were managed in the following program year.





Table 3: Total Amount Waste Paint Processed in 2014

Item	Number of Tubskids ¹	Residual Paint Volume (L) ²	Number of Aerosol Tubskids ¹	Residual Aerosol Paint Volume (L) ³	Total Residual Paint Volume (L) ⁴
Volume Shipped to Processor	2,811	379,485	20	1,244	380,729
Volume Processed	2,824	377,754	39.5	2,457	380,211

⁽¹⁾ Tubskid dimensions (42" x 34" x 48") with a nominal capacity of 126 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.

Information on the number of paint containers processed in 2014 at Laurentide Re-sources and the percentage of non-program materials collected is found in Table 4.

Table 4: Number of Paint Containers Processed in 2014 at Laurentide Re-sources Atlantic Facility

	Total Containers (paint/non-program)	Total Containers (program paint)	Non-program Containers	% of Non-program Containers per Collection Bin
Program Totals	357,515	340,331	17,184	4.81%

The amount of metal and plastic containers that were recycled in 2014 and their respective processors is found in Table 5.

⁽²⁾ Based on a conversion rate of 135. L per collection bin derived from on the number of tubskids processed and the total residual volume of material generated. Reuse volume is not included in calculation.

⁽³⁾ Based on a conversion rate of 62.2L per tubskid derived from on the number of tubskids processedr.

⁽⁴⁾ Total residual paint volumes include Paint Exchange. Paint Exchange volume is based on the assumption that Paint Exchange cans are 75% full.





Table 5: Metal and Plastic Containers Collected and Recycled in 2014

Container Type	Collected and Recycled (tonnes)	Processor	Management Process
Metal	100.1	Tri-Province Recycling, NB	Mixed with other scrap metal and sold as a commodity that is eventually sent for smelting
Plastic pails (HDPE 2)	9.4	Little Forks Landfill, NS	Combined and baled with other plastics and sold as a commodity for plastics recycling
Plastic paint cans (polypropylene)	17.9	RPM Environmental (QC), Laurentid(NB)	Processed and sold as a commodity for plastics recycling Laurentide – temporary storage

4.2 Disposal Method Descriptions

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

Reuse (Paint Exchange Program)

Through the Paint Exchange Program, better quality paint returned to collections sites was made available for the public to take, free of charge, and use. Paint Exchange was offered at three collection sites in 2014. An estimated 3519 litres of paint was given away at no charge through the Paint Exchange program to consumers, a 218% increase over last year (1108 litres). Reuse volumes are estimated by assuming that each container is 75% full on average.

Recycling

At the Laurentide Re-sources facility, paint containers are removed from the collection bins, inspected, opened, sorted by type, colour and quality, and poured into shipping containers. The bulked paint of recyclable quality is then transferred to an affiliated processor, Peintures Recuperees du Quebec (PRQ) in Victoriaville, QC. Table 6 provides the quantity of latex paint and alkyd paint that was recycled. Due to a diminishing market for alkyd paint, it has become an increasing challenge to recycle. Consequently, limited amounts of alkyd paints continue to be recycled with the majority being sent for energy recovery.





Table 6: Quantity and Type of Paint Recycled

Туре	Litres	Percentage
Latex paint	263,059	86%
Alkyd paint	42,832	14%
Total	305,891	100%

Energy Recovery

Not all oil based paint collected is of suitable quality for recycling. In some cases the paint may be contaminated, not in liquid form, wrong colour or of the wrong chemistry for recycling. In addition, regulations such as the Federal VOC Regulations require tighter limits on certain chemical constituents, which tend to be higher in older paints, making it difficult to recycle oil based paint. The market for the recycled oil based paint is significantly smaller than that for the water based products and continues to diminish as water-based technology replaces oil based technology.

Due to the high solvent content of oil based paints, oil based paints 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, 28,196 litres of alkyd paint and paint from paint aerosols were blended with other fuels and utilized for energy value at licensed facilities.

Landfill

The sorting and bulking of the latex paint by Laurentide Re-sources generated 46,125 litres of non-recyclable latex sludge/solid which were solidified and disposed of at a synthetic-lined landfill cell with leachate collection.

Incineration

During the reporting period, no material went for incineration.

4.3 Percentage of Waste Paint by Disposal Method

Table 7 shows the breakdown of waste paint collected that was reused, recycled, recovered for energy, disposed of in an engineered landfill, contained, or otherwise treated or disposed of. Each amount is shown in litres and in a percentage.





Table 7: Waste Paint by Disposal Method

Method	Volume (litres)	Percentage
Reuse	3,519	0.9%
Recycle	305,891	79.7%
Energy Recovery	28,196	12.0%
Landfill	46,125	7.4%
Total	383,731	100%

4.4 Design for Environment

The paint and coating industry is continually pursuing innovations in product formulations that strike a balance between sustainability, health & safety and 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 is the industry's involvement with the federal Chemicals Management Plan, assessing chemicals in commerce for all industry sectors including paint and coatings, to assess risks associated with product use. This is done with a view to banning the highly toxic substances or managing them in some way, when they are considered harmful for the environment, either from a human health or ecological perspective.

Where toxicity in chemicals is considered potentially harmful to human health, 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 to human health and the environment.

The manufacturing of paint continues to shift from oil-based paints to water-based paints due to a number of factors, including:

- Consumer preference for more environmentally friendly products.
- Advanced water based coating technology providing similar product performance as oil based technology.
- Regulatory influences such as Environment Canada's Volatile Organic Compound (VOC)
 Concentration Limits for Architectural Coatings Regulations (P.C. 2009-1535) which sets





limits for VOC for a number of coatings including architectural coatings. These new regulations require coatings manufacturers to switch to low-VOC formulations.

Waterborne paints now make-up more than 90 percent of paint products on the market. In addition, the Program utilizes the following tools to increase the amount of reuse of leftover paint and minimize the environmental impact of residual paint where possible:

- Recovery and recycling of 10 percent of the paint that is available for recovery.
- Variable eco fees aligned with container size in some jurisdictions.
- Operation of a paint exchange program whereby leftover paint is made available to the public free of charge.

4.5 Location of RPC and Processing Facilities

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

Green Island Recycling	
345 Gulf Crescent	Containment Facility
North Sydney, NS B2A 4V2	
Municipality of the County of Colchester	
185 Mingo Road	Containment Facility
Kemptown, NS BON 2P0	
Lunenburg Regional Recycling & Composting	
Facility	Containment Facility
908 Mullock Road	Containment Facility
Kemptown, NS B4V 3J5	
RRFB Kemptown Facility	
119 Mingo Road	Containment Facility
Kemptown, NS B6L 2K4	
Laurentide Resources Atlantic Inc.	
100 Main Street	Processing Facility
Springhill, NS BOM 1X0	
Société Laurentide Inc.	
345 Bulstrode Street	Processing Facility
Victoriaville, QC G6T 1P7	





5.0 Communication and Education

Product Care Association implemented a communication and education program to educate consumers in accordance with the Regulation. The following sections provide details regarding the communication and education program for 2014.

5.1 Website

A new website was developed with a view to improving consumer engagement efforts and making Product Care more accessible, friendlier and intuitive for all audiences, with the ultimate goal of increasing program awareness and collection volumes. The site includes the following bilingual content:

- Depot finder (a map displaying locations of the collection sites see Appendix 2)
- Depot hours and operations
- Information for trade painters (list of collection sites that can accept large volumes);
- Program product lists

An estimated 68,090 unique visitors utilized the website during the 2014 calendar year. The collection site finder page specifically had an estimated 28,160 unique page views.

5.2 Purchased Media

PCA launched an Atlantic Canada targeted digital campaign via YP Group, including syndicated Facebook posts, targeted digital display ads, and smart digital display (re-serving impressions to pre-qualified audiences). Digital ads were specifically targeted to internet users who performed online searches related to the purchase, use and disposal of paint products in Nova Scotia. Additionally, our Facebook advertising campaign pursued a "gated" strategy, which is to say, relevant content was viewable by residents of Nova Scotia only and not seen by audiences in other provinces.

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

In 2014, Product Care distributed both PoS and PoR materials as requested by retailers and collection sites. The following materials were available for reorder through our online order form (see Appendix 3 for PoS and PoR examples):

- Rack cards identifying accepted/not accepted products
- "Recycle Your Paint" can stickers
- Posters





6.0 Financial Information

Product Care Association's audited financial statements are attached in Appendix 4.





Appendix 1 – NS PaintRecycle Collection Site Details as of December 31, 2014

Region	Collection Site	City
	Admiral Recycling Ltd.	Port Hood
	Birds Eye View Recycling Ltd.	Sydney Mines
	Burke's Recycling Depot Ltd	Louisbourg
	Cheticamp Recycling	Cheticamp
	Glace Bay Recycling Ltd.	Glace Bay
	Green Island Recycling	North Sydney
	Inverness Recycling	Inverness
	Isle Madame Bottle Exchange	Arichat
Comp Durates Design	Keltic Recycling Inc	Sydney River
Cape Breton Region	Municipality of C. of Victoria-Baddeck Landfill	Baddeck
	New Waterford Recyclers	River Ryan
	Neils Harbour New Haven Recycling Depot	Neils Harbour
	North Sydney Recycling	North Sydney
	St. Peter's Bottle Exchange	St. Peter's
	Strait Bottle Exchange	Port Hawkesbury
	Total Recycling Ltd.	Sydney
	Total Recycling Ltd. (Sub-Depot)	Sydney
	Triple B Recycling Depot	Sydney
	Beech Hill Waste Management Site (County of Antigonish)	Antigonish
	Bill Stewart Metal & Bottle Ltd.	New Glasgow
	Golden Penny Ent. Ltd	Stellarton
	John's Bottle & Recycling Depot	Pictou
	MacMillian's Service Center Ltd	Lower South River
Eastern Region	St. Mary's Transfer Station	Sherbrooke
	Mason's Recycling Centre	Canso
	Mount William Waste Management Site (Pictou County SWM)	Mount William
	Municipality of the District of Guysborough	Guysborough
	Floss Bottle Exchange	Monastery
	Floss Bottle Exchange - Boylston	Boylston
	3K Enviro Depot (3006877 NS Ltd)	Sheet Harbour
	Beaver Redemption & Recycling	Halifax
	Bluenose Bottle Exchange	Dartmouth
	Bluewater Recycling Corp. (Bedford)	Bedford
	Bluewater Recycling Corp. (Goodwood)	Goodwood
	Burnside Recycling	Dartmouth
	Canadian Recycling Limited	Dartmouth
	Clifton Recycling Centre	Halifax
	E.T. Bottle Exchange	Dartmouth
Halifax Region	Faders Bottle Exchange Ltd.	Lower Sackville
	Friends Depot (Lady Beth Enterprises Ltd)	Ingram Port
	Green Tree Recycling Depot	Lower Sackville
	Greenleaf Recycling Limited	Porter's Lake
	Halifax Regional Municipality	Lakeside
	John Ross & Sons Ltd. (Halifax)	Halifax
	Karen's Recycling Ltd.	Halifax
	Matt's Bottle Exchange	Eastern Passage
	Preston Recycling	East Preston
	Sackville Bottle Exchange	Lower Sackville
	Sackville Dottle Excitative	LOWEI JACKVIIIE





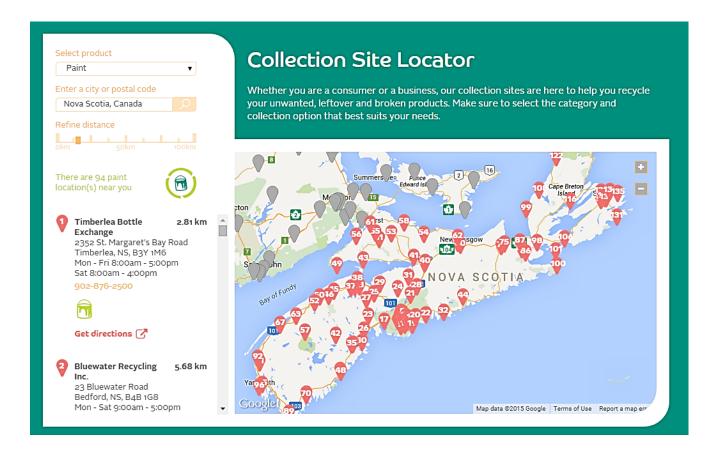
	Tanner's Transfer	Halifax
	The Recycle Market	Lake Charlotte
	Timberlea Bottle Exchange	Timberlea
	Youth L.I.V.E. Recycling	Halifax
	A & J Superette	Joggins
	Cumberland Joint Services Management	Little Forks
	Durant's Enviro Depot	Parrsboro
	East Hants Waste Management Centre	Georgefield
	Elmsdale Recycling Ltd	Elmsdale
	John Ross & Sons Ltd (Truro)	Truro
	Keep Garbage Beneficial	Pugwash
	M&R Recycling	Springhill
Northern Region	Meehan's Recycling	Upper Rawdon
	Moore Nickels & Dimes for You Recycling	Oxford
	Atlantic Industrial Services (Municipality of the County of	
	Colchester)	Debert
	Nova 4 Enviro Ltd.	Amherst
	Subway Bottle Exchange	Truro
	Tatamagouche Recycling Depot	Tatamagouche
	T'N'T Recycling	Shubenacadie East
	Two Capes Recycling (Advocate Country Store Inc.)	Advocate Harbour
	Adam's Bottle Exchange Limited	Gold River
	Clyde's Trucking & Recycling	Liverpool
	Cogmagun Landfill Site (Municipality of West Hants)	Cogmagun
	Corkum Recycling Limited	Lunenburg
	Harlow Construction Limited (King St Depot)	Shelburne
	Municipality of Barrington	Barrington
	Municipality of Shelburne	Shelburne
South Shore/West Hants	Municipality of the District of Chester - Kaizer Meadow Landfill	Sherwood
Region	Municipality of the District of Lunenburg	Whynotts Settlement
	Municipality of the Region of Queens	Milton
	O'Leary's Bottle Depot	Windsor
	Ridge Road Recycling-Depot Ltd	Barrington
	Victor & Douglas Oickle's Bottle Exchange	Bridgewater
	Wentzell's Bottle Recycling Ltd	New Germany
	Windsor Recycling Depot	Windsor
	Beehive Adult Service Center	Alyesford
	C.N. Orde & Sons (aka Lequille Enviro Depot)	Annapolis Royal
	Greenwood Recycling Centre	Greenwood
	Hankinson Salvage & Recycling Ltd	Middleton
Valley Region	L.W. Layton Salvage	Canning
valley Region	New Minas Recycling	New Minas
	Valley Recycling	Greenwich
	Valley Waste - Eastern Waste Management Centre	Kentville
	Valley Waste - Western Waste Management Centre	Lawrencetown
	Comeau's Bottle Exchange	Meteghan Centre
	Digby Salvage & Disposal	_
	Municipality of Clare	Digby Meteghan
Western Region	Paperchase Bottle Exchange Ltd.	Yarmouth
	Town of Yarmouth	
		Ohio
	Webber's Bottle Exchange	Digby





Appendix 2 - Product Care Association's Collection Site Map

Below is a snap shot of what the new collection site locator tool found on the PCA website looks like.







Appendix 3 – PoS & PoR Materials

Nova Scotia Poster







Nova Scotia Rack Card



REDUCE - REUSE - RECYCLE

What products are accepted by the program? Most types of household paints and erchitectural coatings are accepted. See list of acceptable products on the reverse side of this card. For a full list of acceptable and unacceptable products, please visit www.productcare.org/NS or call 1-586-772-9772.

How do I store my products for later use?

- Store in original, securely-sealed, labelled containers.
- Store paint away from extreme heat or cold.
- Avoid freezing paint.
- Clean the rim for a good seal, pour 3mm (1/8°) of paint thinner on top of oil-based paint, or 3mm (1/8") of water on latex paint, or store with container upside down.

How is this program funded?

Like other recycling programs in Nova Scotia, this program is funded by a recycling fee applied to the sale of new products to cover the cost of collection, transportation and recycling. Some retailers show the recycling fee separately at point of purchase and some may include it in the product price. The recycling fee is subject to sales tax because it is considered to be a part of the product price. The recycling fee is not a tax.

Nova Scotia Paint Fees

100 ml to 250 ml	\$0.20
251 ml to 1 litre	\$0.35
1.01 litre to 5 litres	\$0.70
5.01 litres to 23 litres	\$1.50
Acrosol paint (all sizes)	\$0.20

About Product Care

The Nova Scotia Paint Recycling Program is managed by Product Care Association on behalf of the manufacturers, distributors and retailers of paint products. Product Care is a not-for-profit industry association that manages product stewardship programs for leftover paint and other household hazardous and special waste across

REMEMBER THE B.U.D. RULE!

- Use what you buy



Product Care
Product Stewardship Solutions





Appendix 4 – Financial Statements