Manitoba Household Hazardous Waste Annual Report

2021

Submitted by: Product Care Association of Canada



productcare.org



1.	Program Outline	. 3
2.	Educational Materials and Strategies	.4
3.	Collection System	. 8
4.	Management of Collected Materials	.11
5.	Environmental Impacts	18
6.	Financial Information	21
7.	Appendix A: Recycling Locator Tool	22
8.	Appendix B: Advertising Materials	24
9.	Appendix C: 2021 Collection Sites	32
10.	Appendix D: Audited Financial Statements	37



1. Program Outline

The Manitoba Household Hazardous Waste Program ("Program") is operated and managed by Product Care Association of Canada ("Product Care"). Product Care 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.

This annual report is prepared in accordance with the requirements outlined in the <u>Manitoba Household Hazardous Material and Prescribed Material Stewardship</u> <u>Regulation (16/2010R)</u> ("Regulation") enacted pursuant to the <u>Waste Reduction and</u> <u>Prevention (WRAP) Act</u>, and the commitments set out in the Manitoba Household Hazardous Waste Stewardship Program Plan approved by the Manitoba Minister of Sustainable Development on July 26, 2018 ("Program Plan").

The members of the Program are the obligated "stewards" (manufacturers, distributors, and retailers) pursuant to Regulation with regard to the following product categories "Program Products":

- Paint
- Household Hazardous Waste "HHW" which includes:
 - o Flammables
 - o Corrosives
 - o Toxics
 - Physically hazardous materials
 - o Pesticides
- Fluorescent lighting tubes and compact fluorescent lights "fluorescent lights"

The Program's first phase launched on May 1, 2012, and included paint and fluorescent lights. The second phase launched on October 1, 2012, and included pesticides, flammables, corrosives, toxics, and physically hazardous materials. The third phase launched on January 1, 2020, and included fluorescent lights from ICI sources. The Program enables consumers to drop off unwanted Program Products at collection sites and collection events across the Province at no charge.

The Program is funded by membership fees, known as Environmental Handling Fees "EHFs", remitted to Product Care by its members based on the volume of sales of



designated Program Products in or into the Province. In some cases, retailers recover this expense as a separate visible EHF to consumers. The EHF rates are set by Product Care. Program revenues are applied to the operation of the Program, including administration, communication and outreach, collection, transport, and processing of collected Program Products, as well as the maintenance of a reserve fund.

Product Care operates product stewardship programs for paint in seven other Canadian provinces: British Columbia, Saskatchewan, Ontario, Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland & Labrador. Product Care also operates programs for household hazardous wastes in British Columbia, and Ontario; lamps in British Columbia, Quebec, and PEI; and smoke and carbon monoxide alarms in British Columbia. See the Product Care website at <u>www.ProductCare.org</u> for more information.

2. Educational Materials and Strategies

In 2021, the Program implemented a number of different methods to raise consumer awareness, in accordance with regulatory requirements. The following section provides details regarding communication and public education tactics implemented in 2021 to fulfill commitments outlined in the Program Plan.

2.1. Program Awareness

In fall 2021, an online survey was conducted among residents' representative of Manitoba's adult population. The survey revealed;

- 72% of residents are aware that they can recycle paint in the province, an increase of 12% over the 2019 awareness level (60%)
- 74% are aware they can recycle HHW, an increase of 16% over the 2019 awareness level (58%)

2.2. Website

The Product Care website includes the following content for the Manitoba program as outlined as a commitment in the program plan:

• Recycling locator (a map displaying the recycling locations and drop-off events) – see Appendix A



- Recycling location (collection sites) hours and operations
- Lists of accepted and not accepted products
- Program member support centre with news and updates
- Consumer videos showing the product management approach for program
 products
- Other information (e.g., a description of the PaintShare program, frequently asked questions, etc.)

An estimated 372,774 users accessed www.productcare.org during the 2021 calendar year. The Manitoba section (including sub-sections for accepted products, fee information, and Paint) received 43,820 total page views. In addition, there were a total of 12,256 page views to the recycling locator from consumers in Manitoba. Productcare.org was also crossed-linked with the Recycle Manitoba's website, www.recyclemanitoba.ca.

2.3. Program Hotline

Product Care continued to operate a toll-free, "hotline" for consumers to obtain information about the Program.

2.4. Television

Television ads were broadcasted on Global TV (CKND) according to each of the Program Product's key seasons:

- Paint and HHW 30" and 15" spots ran from August to October 2021, resulting in 10.9 million of impressions.
- Lights 30 second and 15 second spots ran on January and November, resulting in 4.6 million of impressions.

2.5. Print Advertising

A full-page inside cover print ad was featured in *CPCA Insight* Trade Publication with Seven thousand copies were distributed to industry members.

Two full page advertisements were placed in Summer and Fall issues of the *Municipal Leader* magazine.



2.6. Digital Advertising

All digital campaigns (excluding tactic targeted blog posts and organic social media posts via Product Care Recycling Facebook, Instagram, and Twitter feeds) reached the entire province.

2.6.1. Google Search Advertising Campaign

- A search advertising campaign served paint, HHW, and fluorescent lights ads to provincial residents based on an extensive list of keyword searches relevant to the Program.
- Manitoba's ads collectively generated 6,578 impressions and 1,141 clicks.

2.6.2. Google Display and Discovery Campaign

- A Manitoba-specific display advertising campaign served paint, HHW, and fluorescent lights related ads to provincial residents.
- These ads were shown across YouTube, Gmail, Google's Discovery section and the Google Display Network
- The ads received 4.9 million impressions and 18,004 clicks through to the website.
- Ads were specifically targeted to internet users who performed online searches related to paint, HHW and fluorescent lights purchasing, usage, and disposal in Manitoba. Secondary targeting focused on individuals searching for home improvement, moving house, and DIY-related terms, in order to reach a wider, but still relevant, population.

2.6.3. YouTube Video Advertising Campaign

- During summer months, paint and HHW explainer videos were run as pre-roll and skippable in-stream ads on YouTube.
- In fall and winter, the light explainer videos ran as pre-roll and skippable instream ads.
- In Manitoba, these ads received a total of 488,934 impressions and 102, 017 views.



2.6.4. Facebook and Instagram Content Strategy

Content on Facebook and Instagram focused on paint, HHW, and fluorescent light recycling, special waste and the recycling community in general. Content was shared specifically with Manitoba residents when appropriate.

2.6.5. Facebook Ads:

Most of our organic content as well as blog posts and explainer videos were promoted through Facebook, Instagram, and Facebook's Audience Network, resulting in 1.2 million impressions and 17,125 clicks.

2.6.6. The Weather Network Display Campaign

- Display ads for paint, HHW and fluorescent lights ran on the Weather Network app according to key seasons
- Paint & HHW ads ran from August to October 2021, while Fluorescent Lights ads ran from January to February and from October to December 2021.
- Manitoba's ads collectively generated 1,274,367 impressions and 2,578 clicks

See Appendix B for examples of digital advertising activities.

2.7. Point of Sale (PoS) and Point of Return (PoR) Materials

In 2021, Product Care offered both PoS and PoR materials to retailers and recycling locations. The following materials are available for reorder through the online order form:

- General paint, HHW, and fluorescent lights program awareness posters
- Return to Retail (R2R) and Return to Product Care posters
- Bifold paint and HHW brochures and a fluorescent lights rack card detailing accepted products and information on the program.



3. Collection System

Product Care does not directly own or manage any collection sites, but rather contracts with existing collection sites. Due to the hazardous nature of some Program Products and limited existing infrastructure, establishing permanent collection sites presents a significant challenge relative to other stewarded products. Typically, collection sites are co-located at facilities with collections for other stewardship programs, such as local government recycling centres (waste disposal ground or waste transfer stations), non-profit societies and private businesses.

3.1. Collection Sites

As of December 31, 2021, the Program had contracted with 79 permanent, year-round municipal and private collection sites and 44 return to retail collection sites, totalling 123, 4 more than 2020. Product Care continues to work on expanding the overall collection system.

As not all collection sites accept the same products, Table 1 provides a breakdown of the different types of collection sites and the number of each in operation. See Appendix C for a detailed list of all collection sites as of December 31, 2021.

Type of Collection Site	Retail	Private / Municipal / First Nations	Total
Paint only	8	4	12
Lights only	9	1	10
Both Paint and Lights	27	40	67
Full-service (All Program Products)	0	34	34
Total	44	79	123

Table 1: List of Participating Retail and Private / Municipal Collection Sites in Manitoba

Collection sites were typically open during regular business hours.

The Program Plan specifies a performance target of increasing the number of fullservice collection sites to 24 by 2021. Table 1 displays that as of December 31, 2021, there were 34 full-service sites.

The Program Plan stipulates that Product Care will target specific regions based upon community interest, with the goal of providing a full-service collection site to each of



Manitoba's 11 regions. Table 2 shows a list of all the regions, the targeted number of fullservice collection sites and the number of collection sites as of 31 December 2021.

Region	Target in Program Plan	# Of Full-service collection sites
Brandon	1 or more by 2021	1
Burntwood	1 or more by 2021	2
Central	1 or more by 2021	5
Interlake	1 or more by 2021	11
Mid-West	1 or more by 2021	1
Nor-Man	1 or more by 2021	2
North Eastman	1 or more by 2021	4
Parkland	1 or more by 2021	2
South Eastman	1 or more by 2021	1
Western	1 or more by 2021	1
Winnipeg	1 or more by 2021	4
Total		34

Table 2: Number of full HHW collection sites per region, as of 31 December 2021

3.2. Collection Events

Product Care contracted with Miller Environmental to operate a number of one-day household hazardous waste (HHW) collection events to supplement the collection network. Table 3 provides a list of the 8 one day collection events held in 2021.



Table 3: Communities that held Household Hazardous Waste Collection Events In 2021

Event Location
RM Brokenhead/Beausejour
RM Springfield
RM Killarney – Turtle Mountain
Town of Virden
RM of Oakland - Wawanesa
Town of Russell
Town of Melita
Town of Snow Lake

In 2021 Product Care continued to partner with Manitoba Conservation and Climate (MCC) to collect and properly dispose of stockpiled household hazardous waste (HHW). Product Care worked with eight communities to provide one-time HHW stockpile clean ups and product management for Program Products. This initiative focused on cleanup of HHW in First Nation and Northern Communities and non-program compressed gas cylinders from municipalities in the Province. Table 4 lists the communities serviced.

Table 4: Stockpiled HHW Cleanups

Locations Serviced		
RM of Oakview Turtle Mountain		
St Jean	St Joseph	
Letellier	Moose Lake	
Rorketon	Helca/Grindestone	

3.3. First Nation Winter Road Collections

Product Care worked with a group of stewardship organizations operating in Manitoba to continue to provide services to remote First Nation communities, accessible by seasonal ice roads. In 2021 this group of stewardship organizations focused on the removal of designated stewardship material from eight remote First Nation Communities. Table 5 lists the First Nation communities serviced.



Through this initiative, in 2021, Product Care collected and removed 231 pails of Paint, 2 drums of HHW and 4 boxes of Lights.

Table 5: First Nations communities serviced through Winter Road Collections in 2021

First Nations communities serviced		
Barren Lands Bunibonibee		
Northlands	Garden Hill	
Gods Lake	Sayisi Dene	
St Theresa Point	Wasagamack	

This is an ongoing project that has seen positive results and growth. Product care continues to support this initiative by providing education, support materials, collection containers, and transportation to communities to remove and properly manage the end of life of Program Products from their environment.

Product Care is actively participating in the initiative with ISC and Green Action Center in developing a sustainable plan to provide diversion of Program Products for indigenous and remote communities.

3.4. Large Volume Generators (LVG)

Large Volume Generators are commercial, industrial, or institutional entities that generate Program Products. They differ from the regular collection sites, as they are not a collection site used by the public, but rather generate Program Products, typically in larger volumes, through the course of their business or operations. To qualify as LVG, the entity must meet certain requirements such as minimum volumes. In 2021, the program provided direct pickup service to 15 LVG sites. The total amount of Program Products collected from LVG's in 2021 is included in the totals in Section 4.2 Volumes Collected.

4. Management of Collected Materials

The objective of the Program is to minimize the improper disposal of Program Products, by providing an effective collection program and ensuring that the collected Program Products and containers are either recycled or disposed of in an environmentally responsible manner. Product Care strives to manage collected products in



accordance with the pollution prevention hierarchy as described and the application of the pollution prevention hierarchy varies by product.

4.1. Management in Accordance with the Pollution Prevention

Hierarchy

The Program continued to encourage consumers to buy the right amount of a product for their needs resulting in less being generated. This was achieved by promoting the "BUD" Rule through the Program website and promotional materials, which tells consumers to:

Buy no more than you need. Use all that you buy. Dispose of leftovers safely.

Processing and recycling options in Manitoba varied by Program Product as outlined below. Where possible and economically feasible, Product Care managed products according to the pollution prevention hierarchy.

The following section outlines the product management processes employed by the Program for each product category.

4.1.1. Paint

Leftover paint is managed by the Program in a number of ways, dependent on the type and quality of the paint

Paint

Water-based paint was sent to a recycling facility to be recycled into paint and coating products or to be used in the process of manufacturing cement. Unrecyclable waterbased paint was solidified and sent to landfill. Regulatory limits on Volatile Organic Compounds (VOC) and limited demand for solvent-based paints did not make recycling a viable option for this product category. Solvent based paint was consolidated and blended with other flammable liquids and sent for energy recovery at licensed facilities.



Aerosol Paints

The residual volumes recovered from paint aerosols were nominal compared to recovered liquid paint and represented a variety of product formulations that limited the options for recycling. Paint aerosol cans were punctured, and the contents drained. The propellant was absorbed by activated carbon; the residual paint blended with other flammable liquids destined for energy recovery.

4.1.2. Flammable Liquids

Given the varied nature of flammable products, material mix / composition and limited volumes, it was not economically viable or feasible to recycle flammable liquids. Since many flammable products are sold as fuels, leftover flammable liquids were blended and sent for energy recovery. Flammable aerosols were evacuated, and the flammable liquid and propellant treated in the same manner as paint aerosols.

4.1.3. Corrosives

Neither reuse nor recycling are currently options for corrosive materials. Corrosives were neutralized, treated, and stabilized with concrete for landfill. Corrosive aerosols were evacuated, the propellant absorbed by activated carbon, and the corrosive liquids were neutralized and stabilized.

4.1.4. Toxics

Due to the nature of toxic materials, there is no reuse or recycling option available. Toxic liquids were fuel blended and sent for energy recovery. Toxic solids were incinerated at high temperature in a government regulated and permitted incinerator.

4.1.5. Physically Hazardous Material (Fuel Cylinders)

Fuel recovered from fuel cylinders was either recovered and reused as fuel or sent for energy recovery.

4.1.6. Pesticides

Due to the nature of pesticides and aerosol pesticides, there was no reuse or recycling option available. All pesticides were incinerated at high temperature in a government



regulated and permitted incinerator. Pesticide aerosols were evacuated, propellants absorbed by carbon, and residual pesticides sent for incineration.

4.1.7. Paint and HHW Containers

All plastic and metal paint containers were recycled as scrap metal or plastic commodity. Metal HHW containers were either recycled as scrap metal or sent to landfill. All plastic HHW containers were sent to landfill.

4.1.8. Fluorescent Lights

Fluorescent lights were collected and shipped to a processor where they were broken down into their component parts (i.e., mercury / phosphor powder, glass, ceramics, electronic circuits, and metals) under a controlled environment. The metal end caps were sent to a scrap metal recycling facility. The glass, ceramics and electronic circuits were further processed and utilized as raw materials in various manufacturing processes. The mercury phosphor powder underwent further processing where it was chemically treated, stabilized, and sent to secure landfill.

4.1.9. Non-Program Material

Non-Program material that entered the collection system was segregated at the collection and processing stages. Depending on the material type, processing methods for Non-Program material included landfilling, physical / chemical treatment, energy recovery, and incineration.

4.2. Volume Collected

Residual recovery volume represents the estimated liquid volume, measured in litres, of liquid Program Products recovered by the Program¹. Table 6 shows the estimated residual recovery volume of paint, flammable, toxic and corrosive Program Products collected in 2021. Table 7 shows the number of units of pressurized Program Products collected. Table 8 shows the units of fluorescent lights collected in the same year.

^{1.} Paint volumes based on a conversion rate of 93 liters per tubskid derived from the number of tubskids processed and the total residual paint volume processed



Table 6: Residual Recovery Volume of Paint, Flammable Liquids, Toxics and Corrosive Products Collected in 2021 (Litres)

Product Category	Total (litres)
Paint (non-aerosol) ¹	298,802
Flammable Liquids (incl. Gasoline) ²	86,498
Toxics (incl. Pesticides) ²	12,795
Corrosives ²	8,437
Total	406,532

Table 7: Number of Pressurized Program Products Collected in 2021 (Units)

Product Category ³	Total (units)
Paint Aerosol	80,677
Other Aerosol ⁴	60,200
Physically Hazardous	23,739
Total	164,616

Table 8: Fluorescent Lights Collected in 2021 (Units)

Product Category	Total (units)
Compact Fluorescent Lamps (CFLs)	40,396
Fluorescent Tubes	267,805
Total	308,201

As a performance target the Program Plan specifies a 10% increase of total paint collection volumes by 2021, as compared to 2015 volumes. As the Program does not have direct control over the amount of residual paint left in the collected paint containers and the Program also accepts already empty paint containers, a more appropriate measure of Program success would be the number of tubskids⁵ collected,

^{2.} The residual recovery volume is calculated by taking the weight of materials provided by the processor and removing container weights (based on standard container weights determined by Product Care). The weight of the material is multiplied by the average estimated density of the specific materials obtained from SDS specifications. Additionally, flammable liquids, toxic and corrosive aerosol products are comingled during processing and therefore those products have been subsumed under the "other aerosol" category in Table 7

^{3.} Paint aerosol, other aerosols and physically hazardous material categories are based on average units per drum.

^{4. &}quot;Other aerosol" includes flammable, corrosive, and toxic aerosols.

^{5.} A tubskid is a collection container used for collecting and transporting paint. It measures 48" x 42" x 30" 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.



as opposed to residual volume. Table 9 shows total paint collection volume for 2021, as compared to 2015 in residual volume and by number of tubskids. In both measures the Program has exceeded its targets.

Year	Paint (Residual litres)	Change from 2015 (%) (Residual Litres)	Paint (# Tubskids)	Change from 2015 (%) (Tubskids)
2015	235,175	-	2,123	-
2021	298,802	27.1%	3,209	51.1%

Table 9: Paint Volumes Collected in 2021 compared to 2015

As a performance target the Program Plan specifies a total volume increase of 20-28% for collection of fluorescent lights by 2021, as compared to 2015 volumes. Table 10 shows total collection units of fluorescent lights for 2021 versus 2015. With an increase of 219.1%, the Program has exceeded its targets.

Table 10: Fluorescent Lights Collected in 2021 compared to 2015 (Units)

Category	2015 Volume (units)	2021 Volume (units)
Fluorescent Lights	96,589	308,201
Percentage Change	-	219.1%

4.3. Product Sales

The quantity of Program Products sold annually varies according to market conditions. Table 11, Table 12, and Table 13 show the quantities of Program Products sold in 2021. For Table 11, volumes were calculated using typical container size volumes.



Table 11: Approximate Sales Volume of Paint, Flammable Liquids, Toxics and Corrosive Program Products in 2021 (Liters)⁶

Product Category	Litres Sold
Paint (non-aerosol)	7,205,697
Flammable Liquids ^{7,8}	918,928
Toxics ⁷	221,335
Corrosives ⁷	170,038
Pesticides	49,064
Total	8,565,062

Table 12: Sales Volume of Pressurized Program Products in 2021 (Units)

Product Category	Units Sold
Paint Aerosol	977,735
Physically Hazardous	220,911
Total	1,198,646

Table 13: Sales of Fluorescent Lights in 2021 (Units)

Product Category	Units Sold
Compact Fluorescent Lamps (CFLs)	88,604
Fluorescent Tubes	386,928
Total	475,532

4.4. Recovery Rates

Recovery rate represents the volume collected as a function of the volume sold in that year. It is important to keep in mind that the recovery rate is affected by factors outside of the Program's control. Since the recovery rate uses the volume of products sold in a year as the denominator, fluctuations in the volume of products sold affect the recovery rate, which can easily change depending on economic conditions. In addition,

^{6.} Sales data is reported to Product Care in units. For the purpose of this report, sales units are converted to litres sold using coefficients based on the volume of the most common container size in each product category.

 ^{7.} Excludes gasoline sales.
 8. Includes aerosols.



Program Products can be stored for long periods of time, and most are designed to be fully consumed.

Table 14 shows the volume collected, volume sold and recovery rate of Program Products, excluding lights.

2021	Paint	Paint Aerosol ⁹	Flammable Liquids (incl. Gasoline) ¹⁰	Toxics (incl. Pesticides)™	Corrosives	Physically Hazardous ⁸
Litres Collected	298,802	80,677	86,498	12,795	8,437	23,739
Litres Sold ¹¹	7,205,697	977,735	589,552	183,161	152,882	220,911
Recovery Rate	4.1%	8.3%	14.7%	7.0%	5.5%	10.7%

Table 14: Volumes Collected, Volumes Sold and Recovery Rates - Program Products in 2021

5. Environmental Impacts

5.1. Product Environmental Impact Reduction, Reusability and

Recyclability

The paint and coatings industry is proud to provide products that protect, sustain, and add value to buildings, infrastructure, vehicles, and the objects we depend on every day. This is achieved with products that are safe to handle and increasingly ecoefficient. The industry evaluates the impacts of products along their entire life cycle and continuously develops offerings to reflect the latest available science. At the same time, the industry works hard to ensure sustainable production processes, which includes the health and safety of their workforce. Beyond their basic feature of protecting our built infrastructure, coatings are essential components to the production processes of many different industries. Functional coatings can provide additional properties to materials, paving the way to upgraded infrastructure, innovative products, and resource efficiency.

Recovery rates for paint aerosols and physically hazardous materials were calculated as units recovered / units sold.
 Aerosols containing flammable, toxic, and corrosive liquids were not included in recovery rate calculations because these products were comingled during processing.

^{11.} Does not include aerosols unless otherwise specified



The move towards a circular economy is a central concern and opportunity for the paint and coatings industry. Compliance with regulations on the management of chemicals and waste is considered a basis for doing business.

According to industry members, the paint and coatings industry has been working to reduce the use of volatile organic compounds (VOC) and associated emissions in paint production. Over the past decade, the industry has seen a significant drop in VOCs used within the industry, with a 75% decrease reported in VOC emissions. Many paint products today contain either zero VOCs or a very low percentage. High-percentage solids coatings ensure that almost no gas emission is produced during the drying process and lasts for a very long time after application.

Additionally, companies are increasingly evaluating resource efficiency along the entire life cycle of their products, starting from the raw materials that serve as ingredients for the industry's products to the management of water, energy, and waste in production processes. A waste management practice observed in the manufacturing of paint is to reuse wash water to reduce the amount of make-up water needed in the process. Wash water and wash solvent can be redirected into low-grade products and paint can also be reworked into new batches, reducing waste and the usage of raw materials in the manufacturing process.

In terms of packaging, many paint manufacturers today are continuously researching more sustainable alternatives. As a result, we are more frequently seeing packaging on the market that is made up of up to 100% post-consumer materials.

Many companies have set sustainable goals to be achieved within the next 10 years, while some manufacturers have aligned their goals with the targets set out in the UN Sustainable Development Goals. For example, one manufacturer has reported a 24% reduction in GHG emissions in paint and coatings manufacturing since 2017. Some manufacturers are setting renewable energy goals and are exploring a variety of renewable energy mechanisms, such as onsite renewable energy production and the use of renewable energy credits. Overall, continued innovation in manufacturing processes has led to energy and material efficiency in production.

5.2. Sustainability in the Industry

Many CPCA members are increasingly challenging themselves to achieve multiple sustainability objectives and align with the targets outlined in the United Nations



Sustainable Development Goals (SDGs). All UN member states adopted the SDGs to guide global action on the urgent environmental, political, and economic challenges facing our planet. They set ambitious targets to build a more sustainable, safe, and prosperous world for all humanity by 2030. Some key performance indicators (KPIs) are being used by multiple CPCA members to align with the UN SDGs:

- Tracking of Nitrogen oxides (NOx), Sulfur oxides (SOx), and Volatile organics (VOC) and other significant air emissions from architectural and industrial coatings
- Materials used by weight or volume related to packaging
- Water consumption from manufacturing activities
- Direct greenhouse gas emissions (GHGs)
- Waste generated in raw tonnage and proportion diverted from disposal by circular economy approaches

5.3. Opportunities for R&D for Improved Circularity

Historically, raw materials used in coatings were fully sourced from bio-based feedstocks. Advances in manufacturing processes over the last few decades have led to the current environment where the majority of coating materials are derived from fossil fuels and petrochemicals. Recently, the industry has again begun to incorporate materials sourced from renewables such as starch, corn oil, and bio-based polyols into a wide range of products. However, the choice of renewable coating 21 materials is still quite limited and for some applications, such as polyacrylates or phenolic resins, no bio-based alternatives exist.

5.4. Fluorescent Lights

Lighting product producers continue working to reduce the environmental impact of lighting products through innovative product design and technology. New design and technology have addressed environmental concerns by reducing material use, increasing lamp life, increasing energy efficiency, and increasing recycling rates.

Over the past couple of years, the primary focus has been on increasing the use of energy efficient, and long-life LED lamp technology. The advancement of LED lighting technology is having a significant impact on the lighting market as a whole. Manufacturers are focusing most of their efforts in this area and no longer spending research energy on expanding any of the traditional product lines of CFL, Linear



Fluorescent, HID, incandescent or halogen. Acceptance of LED technologies has greatly increased as prices decreased. In fact, the acceptance and adaptation to LED technology has been much more rapid and widespread than most industry experts would have forecasted some years ago.

Due to the significantly longer lifespan of LED lights, sales have decreased for other traditional lighting technologies, such as halogen, incandescent, fluorescent, and HID lights. A review of lamp sales trends from the past 3 years reveals declining sales in all lamp categories, with the exception of LED lamp categories. According to members of Product Care's Light Recycling Advisory Committee, it can be expected that declining sales trends will continue for mercury containing lamps. In particular, sales of CFLs have experienced a decline at a faster rate than anticipated. The Advisory Committee foresees that CFLs will likely be eliminated from the market within the next 2 to 3 years. Furthermore, it is anticipated that fluorescent tubes will follow CFLs and likely be eliminated from the market in the next 5 to 10 years. As older lighting technologies are eliminated from the market, the Advisory Committee expects that they will be replaced by LED lamp technologies. LEDs contain no mercury and have an even longer life of about 15 000-20 000 hours. Most CFLs, in comparison, only have an average life of 10,000 hours. It is expected that we will also likely see more and more integration of LEDs into fixtures.

The shift to more energy efficient and longer lasting lighting technology is clear. Most LED lamps are more than 50% more efficient than CFL lamps, reducing electricity use and reducing pollution from power generation¹². These changes all help to decrease the impact on the environment, with longer life lamps helping to reduce waste, make lamps less hazardous and reducing the size of lamps thereby reducing the number of materials required to manufacture them and minimizing waste.

6. Financial Information

Product Care's independently audited financial statements for the Program's revenues and expenses can be found in Appendix D.

^{12.} Personal Communication with representative of GE.



Appendix A: Recycling Locator Tool

<complex-block>

Below is a snapshot of the recycling locator tool found at ProductCare.org:

Program Pages









Appendix B: Advertising Materials

PoR/PoS Posters



Recycle it for free! Visit productcare.org to find a recycling location near you.

Product care

Drop off household hazardous waste for free! Visit productcare.org to find a recycling location near you.

productcare.org

Product care

Page 24 of 37





PoR/PoS Brochures and rack cards











Website Blog posts



Google Search Ads



Google Display Ads



*Display dynamic are use a mix of headlines, descriptions, images, and videos to configure hundreds of different versions that adapt to a wide variety of placements and according to users' behaviour. Some variations examples:



Google Display Ads



YouTube Video Ads





Facebook /Instagram Ads





CPCA



Since 1994, Product Care Recycling has worked with coatings manufacturers, fulfilling their paint recycling obligations in 8 provinces.

Website: productcare.org/cpca Toll Free: 1–877–592–2972 Email: contact@productcare.org



Page 30 of 37





Municipal Leader Print Advertisements



Appendix C: 2021 Collection Sites

Paint	Lights	Full- service	Collection Sites	City
Υ	Υ		Bloodvein Community Landfill	Bloodvein
	Υ	Υ	Peguis Landfill	Peguis
Υ	Υ		Alonsa - The Rural Municipality of Alonsa	Alonsa
Υ	Υ	Υ	B.A.R. Waste Authority Co-op Inc - Bifrost	Arborg
Υ	Υ		Baldur Waste Disposal Grounds	Baldur
Y	Y		Binscarth Waste Disposal Ground (RM	Binscarth
			Russel-Binscorth)	
Y	Y		Prairie View)	Birtie
Y	Y		Boissevain-Morton, Municipality of	Boissevain
	Y	Y	Brady Road 4R Depot	Winnipeg
	Υ	Υ	Brandon Eastview Landfill (City Of)	Brandon
Υ	Υ		Brenda Waskada, Municipality of	Waskada
Υ			Carberry Transfer Station	Carberry
Y	Υ		Carman Transfer Station	Carman
	Υ	Υ	Cartwright Roblin Waste Transfer Station	Cartwright
	Υ	Υ	CEWDG - Eriksdale	Eriksdale
	Υ	Υ	Churchill, The Town Of	Churchill
Υ	Y		Coca Cola Falls Waste Disposal Grounds	Lac Du Bonnet
	Υ	Υ	Dauphin, City of	Dauphin
Υ	Υ		De Salaberry (RM)	St. Pierre
Υ	Y		Deloraine-Winchester (RM)	Deloraine
	Υ	Υ	Earl Grey Waste Disposal Grounds	St. Andrews
	Υ	Υ	Evergreen Environmental Tech	Minnedosa
	Y	Y	Flin Flon Landfill	Flin Flon
Υ	Υ		Flin Flon Recycling Centre	Flin Flon
Υ	Y		Gilbert Plains Regional WDS	Gilbert Plains
	Y	Y	Gimli (RM) (Gimli Industrial Park)	Gimli
Y	Υ		Glenboro South Cypress (Municipality of)	Glenboro
Y	Y		Grandview Waste Disposal Ground	Grandview
Y			Grindstone Waste Transfer Station	Riverton



Paint	Lights	Full- service	Collection Sites	City
Y			Hecla Waste Transfer Station	Riverton
Υ	Υ		Hillside Transfer Station	Oakbank
Υ	Υ		Holland Waste Disposal Grounds	Holland
	Υ	Y	Lac du Bonnet Transfer Station	Lac Du Bonnet
	Υ	Υ	Lorette Solid Waste Management Facility	Lorette
	Υ	Υ	Louise Integrated Waste Management	Pilot Mound
Υ	Υ		McCreary (Municipality of)	McCreary
Υ	Υ		Meleb Waste Disposal Grounds	Meleb
Υ	Υ		Miniota (RM of Prairie View) Waste	Miniota
			Disposal Grounds	
Υ	Υ		Moosehorn Waste Disposal Grounds	Moosehorn
	Υ	Υ	North Norfolk - Normac Landfill	MacGregor
Υ	Υ		Oakwood Transfer Station	Anola
Υ	Υ		Onanole Waste Management Site	Onanole
	Υ	Υ	Pacific 4R Depot	Winnipeg
	Υ	Υ	Panet Road 4R Depot	Winnipeg
Υ	Υ		Pierson / Edward Landfill	Pierson
	Υ	Υ	Pinawa LGD	Pinawa
	Υ	Υ	Portage & District Recycling Inc (PDRI) -	Portage la
			Portage la Prairie	Prairie
Y	Υ		Prairie Lakes (RM) Belmont	Belmont
Y	Υ		Reston Landfill & Recycling	Reston
Y	Υ		RM of Thompson, (Miami)	Miami
Y	Υ		RM of Woodlands Waste Disposal Site	Woodlands
Y	Υ		Roblin/Shell River Waste Disposal	Roblin
Y	Υ		Rosser Transfer Station	Rosser
Y	Υ		Rural Municipality of Piney Public Works	Vassar
Υ	Υ		Russell/Binscarth Riding Mountain West	Russell
			Waste Disposal	
Υ	Y	Y	Selkirk Waste Transfer Station	Selkirk
Υ	Υ		Shoal Lake Recycling Center (RM)	Shoal Lake
	Y	Y	South Whiteshell Provincial Park (Falcon Lake TS)	Falcon Lake



Paint	Lights	Full- service	Collection Sites	City
	Y	Y	St Clements, Rural Municipality of (Libau Landfill)	Libau
Y	Y		St Georges WDG	St. Georges
Y	Y		St. Francois Xavier Waste Transfer Station,	St. Francois
			RM of	Xavier
	Υ	Υ	St. Laurent Waste Transfer Site	St. Laurent
	Υ	Υ	Steinbach Landfill (City Of)	Steinbach
Υ	Y		Strathclair Landfill (RM)	Strathclair
Υ	Y		Stuartburn RM (Vita Transfer Station)	Vita
	Υ	Υ	Swan River Waste Disposal Ground	Swan Valley
				West
	Y	Y	Teulon Waste Disposal Site	Teulon
	Y	Υ	Thompson Waste Disposal Grounds	Thompson
Y	Y		Traverse Bay WDG	Traverse Bay
	Y	Υ	Tri-Com Recycling Inc. (The Pas & Area	The Pas
			Recycling Centre)	
	Y	Υ	Village of Dunnottar	St Andrews
Y	Y		Westlake-Gladstone	Gladstone
	Y	Υ	Whitemouth-Reynolds Waste	Whitemouth
			Management Facility	
	Y	Υ	Winfield Road Transfer Station	Stonewall
	Y	Υ	Winkler Public Works Yard (City Of)	Winkler
Y			MidCanada Environmental Services -	Grande Pointe
			Bennet Road	
	Υ	Υ	MWM Environmental	Morden
Υ	Υ		Bristal Hauling Transfer Station	Niverville
			Mother Earth Recycling	Winnipeg
Y	Y		Ashern Home Hardware	Ashern
Y	Y		Boissevain Boundary Co-op Ltd	Boissevain
Y	Y		Brandon Home Hardware Building Centre	Brandon
Y	Y		Carman Homestead Co-op	Carman
Y			Cloverdale Paint Winnipeg	Winnipeg
Y			Countryside Home Building Center	Fisher Branch
Y	Υ		Dauphin Home Hardware	Dauphin



Paint	Lights	Full- service	Collection Sites	City
			Ecofitt Corporation	Winnipeg
Y			EG Penner Building Centre	Steinbach
Y	Υ		Elm Creek Co-op Ltd	Elm Creek
Y	Υ		Heritage Co-op Home Centre	Minnedosa
Y			Janzen's Paint and Decorating Ltd - Brandon	Brandon
Y			Janzen's Paint and Decorating Ltd - Steinbach	Steinbach
Y			Janzen's Paint and Decorating Ltd - Winkler	Winkler
	Υ		London Drugs #66 (Winnipeg)	Winnipeg
Y	Υ		Lowe's #3285 South Winnipeg	Winnipeg
Y	Υ		Lowes Winnipeg East #3718	Winnipeg
Y	Υ		Minnedosa Home Hardware	Minnedosa
Υ	Y		Molgat Shopping Centre	Laurier
Υ	Y		Morris Home Hardware	Morris
Y	Y		Neepawa-Gladstone Co-op	Neepawa
	Y		Pine Falls Home Hardware	Pine Falls
	Y		Princess Auto - Portage Ave	Winnipeg
Υ	Υ		Rivers Home Hardware	Rivers
	Y		Robinson Lighting	Winnipeg
Y	Υ		RONA Building Centre - Gimli #620	Gimli
	Y		RONA Building Centre - Portage #1375	Portage la Prairie
Y	Y		RONA Revy Home & Garden - Kenaston #64870	Winnipeg
Y	Y		RONA Revy Home & Garden - Sargent #64890	Winnipeg
Y	Y		RONA Revy Home & Garden - Winkler #64670	Winkler
Y			Rossburn Home Hardware	Rossburn
	Y		Selkirk Home Hardware Building Centre	Selkirk
Υ			Snow Lake Home Building Centre	Snow Lake
Υ			Souris Home Hardware	Souris



Paint	Lights	Full- service	Collection Sites	City
Υ	Y		St. Laurent Home Hardware Building	St. Laurent
			Centre	
Υ	Υ		Ste Anne Builders Supply	Ste. Anne
Υ	Υ		Sun Valley Co-op Ltd.	Altona
	Υ		Super-lite Lighting Ltd.	Winnipeg
	Υ		Total Lighting Sales	Winnipeg
Υ	Υ		Tru Hardware (Ace) (Store # 70013)	The Pas
Υ			Windsor Plywood Century St, Winnipeg	Winnipeg
Υ			Windsor Plywood North	Winnipeg
Y			Winnipegosis Hardware	Winnipegosis
Y			WM Dyck and Sons (1993)	Niverville



Appendix D: Audited Financial Statements

PRODUCT CARE ASSOCIATION OF CANADA MANITOBA HOUSEHOLD HAZARDOUS WASTE PROGRAM

STATEMENT OF REVENUES AND EXPENSES

31 DECEMBER 2021

PRODUCT CARE ASSOCIATION OF CANADA MANITOBA HOUSEHOLD HAZARDOUS WASTE PROGRAM Statement of Revenues and Expenses

For the year ended 31 December 2021

Contents

Independent Auditors' Report	
Statement of Revenues and Expenses	6
Notes to the Statement of Revenues and Expenses	7 - 9



INDEPENDENT AUDITORS' REPORT

To: Minister of Conservation and Water Stewardship

Report on the Audit of the Statement of Revenues and Expenses

Opinion

As required by the Manitoba Waste Reduction and Prevention Act (C.C.S.M.c W40 (16(1))) we have audited the Statement of Revenues and Expenses of the Manitoba Household Hazardous Waste Program (the "Statement") as reported by Product Care Association of Canada (the "Association") for the year ended 31 December 2021 and a summary of significant accounting policies and other explanatory information.

In our opinion, the Statement presents fairly, in all material respects, the revenue and expenses of the Manitoba Household Hazardous Waste Program for the year ended 31 December 2021 in accordance with Canadian accounting standards for not-for-profit organizations.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditors' Responsibilities section of our report. We are independent of the Association in accordance with the ethical requirements that are relevant to our audit of the Statement in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Matter - Restriction on Distribution and Use

This report is prepared on the direction of Product Care Association of Canada's management and the Minister of Conservation and Water Stewardship. As a result, the report may not be suitable for another purpose. Our report is intended solely for Product Care Association of Canada's management and the Minister of Conservation and Water Stewardship, and should not be distributed to other parties.

Responsibilities of Management and Those Charged with Governance for the Statement

Management is responsible for the preparation and fair presentation of the Statement in accordance with Canadian accounting standards for not-for-profit organizations and for such internal control as management determines is necessary to enable the preparation of the Statement that is free from material misstatement, whether due to fraud or error.





INDEPENDENT AUDITORS' REPORT - Continued

In preparing the Statement, management is responsible for assessing the Association's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Association or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Association's financial reporting process.

Auditors' Responsibilities

Our objectives are to obtain reasonable assurance about whether the Statement as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this Statement.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Statement, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Association's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Association's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the Statement or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Association to cease to continue as a going concern.



INDEPENDENT AUDITORS' REPORT - Continued

• Evaluate the overall presentation, structure and content of the Statement, including the disclosures, and whether the Statement represents the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Rolfe, Benson LLP

CHARTERED PROFESSIONAL ACCOUNTANTS

Vancouver, Canada 25 March 2022

PRODUCT CARE ASSOCIATION OF CANADA MANITOBA HOUSEHOLD HAZARDOUS WASTE PROGRAM

Statement of Revenues and Expenses

For the year ended 31 December 2021

	2021	2020
Revenues	\$ 1,890,539	\$ 1,827,079
Program expenses		
Processing	850,770	948,926
Collection	466,978	475,393
Transportation	393,018	389,188
Administration (Note 2(b) & (d))	229,471	301,661
Communications	99,137	89,909
	 2,039,374	2,205,077
Deficiency of revenues over expenses for the year	\$ (148,835)	\$ (377,998)

Commitments (Note 3 & Note 5)

Fund transfer - allocation of interim program costs (Note 4)

The accompanying notes are an integral part of this statement of revenues and expenses.

PRODUCT CARE ASSOCIATION OF CANADA MANITOBA HOUSEHOLD HAZARDOUS WASTE PROGRAM Notes to the Statement of Revenues and Expenses

For the year ended 31 December 2021

1. Basis of Presentation

The Statement of Revenues and Expenses (the "Statement") only includes the revenues and expenses related to the Manitoba Household Hazardous Waste Program (the "Program"), a segment of the operations of Product Care Association of Canada (the "Association").

2. Summary of Significant Accounting Policies

The Statement is prepared in accordance with Canadian accounting standards for not-for-profit organizations. The significant policies are detailed as follows:

(a) Revenue Recognition

Environmental Handling Fees are received from members of the Association making sales of designated program materials within the province of Manitoba. The Association recognizes these fees as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured. Environmental Handling Fees revenues are recognized as individual members report and remit them as required by the Association's membership agreement which is at the end of the month following the reporting period that the designated program materials were sold by the member.

Members are obligated to remit Environmental Handling Fees for all products sold from the earlier of the Program's start date or the date when the member started selling obligated products. If, for any reason, a member omits reporting and remitting Environmental Handling Fees associated with sold program products, the Association will recognize those Environmental Handling Fees as revenue when the amounts are determinable by the Association.

(b) Tangible Capital Assets

Tangible capital assets are recorded at cost. The Association provides for amortization using the straight-line method at rates designed to amortize the cost of the tangible capital assets over their estimated useful lives. The annual amortization rate is as follows:

Depot equipment 3 years

Included in administration expense is \$20,414 (2020 - \$19,532) of amortization expense related to tangible capital assets.

PRODUCT CARE ASSOCIATION OF CANADA MANITOBA HOUSEHOLD HAZARDOUS WASTE PROGRAM Notes to the Statement of Revenues and Expenses

For the year ended 31 December 2021

2. Summary of Significant Accounting Policies - continued

(c) Use of Estimates

The preparation of financial statements in accordance with Canadian accounting standards for notfor-profit organizations requires management to make estimates and assumptions that affect the reported amounts of revenues and expenses and disclosure of contingencies included in the Statement. Accounts subject to estimates include revenue accruals, expense accruals, amortization, overhead allocation and processing commitments. Actual results could differ from those estimates.

(d) General and Administrative Expenses - Overhead Allocation

A portion of the total general and administrative expenses of the Association, net of expense recoveries, has been allocated to the Program. The allocation of general and administrative expenses to the Program is determined using the percentage of program specific operating expenses as compared to total operating expenses for all the Association's programs. Included in administration expense is \$122,344 (2020 - \$124,071) of overhead expense which has been allocated to the Program.

3. Commitments

During the 2021 fiscal year, the Association committed \$Nil additional funds above the \$1,335,000 committed in previous years to be used for the development of collection facilities for the Manitoba Household Hazardous Waste Program. These funds are to be disbursed at the discretion of the Association based on an application process from qualifying organizations. The funds have been disbursed in the form of loans which may be forgiven providing certain performance conditions are met by the borrower.

Balance of funds disbursed as of 31 December 2020	\$335,885
New disbursements to qualified organizations during the year	89,910
Loans forgiven during the year	(54,901)
Balance of funds disbursed as of 31 December 2021	\$370,894

PRODUCT CARE ASSOCIATION OF CANADA MANITOBA HOUSEHOLD HAZARDOUS WASTE PROGRAM Notes to the Statement of Revenues and Expenses For the year ended 31 December 2021

4. Fund Transfer - Allocation of Interim Program Costs

During the 2015 and 2016 fiscal years at the request of the Ontario Ministry of Environment, expenses were incurred to operate an interim Light Recycling Program for a 12 month period in the Province of Ontario on behalf of the industry. These expenses were recorded as general and administrative expenses of the Association pending the expected regulation of lighting products in Ontario. During the 2018 fiscal year, the Association's Board of Directors passed a resolution where these expenses would be allocated amongst the other Light Recycle Programs of the Association as the expected regulation to designate lighting products in Ontario had not occurred.

At that time it was determined that these costs were to be allocated over a five year period to each of the Association's Light Recycling Programs proportionally based on the 2017 operating expenses of these Programs. The total amount allocated to the Manitoba Household Hazardous Waste Program for the 5 year period was determined as \$27,385. This was to be allocated as a fund transfer decreasing the accumulated surplus (deficit) of the Program in each of the 2018 to 2022 fiscal years in equal amounts. During the 2018 fiscal year, \$5,477 was recorded as a fund transfer with \$21,908 remaining to be transferred in future years.

On May 9, 2019, the Ontario Ministry of Environment issued draft extended producer responsibility regulations for electrical and electronic products including lighting products. The regulation for electrical and electronic equipment (EEE) was finalized in September 2020, with lighting products designated for 1 January 2023. On this basis, the Association's Board of Directors determined that the prior year fund transfer to the Manitoba Household Hazardous Waste Program of \$5,447 should be reversed in the 2020 fiscal year and that the \$27,385 of costs which were previously intended to be allocated to the Manitoba Household Hazardous Waste Program will be allocated to the Ontario Light Recycling Program upon its commencement.

5. Processing Commitment

At year end, the Association had unprocessed program materials on hand related to the Program with an estimated cost to process, transport and recycle of \$39,725 (2020 - \$8,853) which will be incurred in 2022.