2022 ANNUAL REPORT

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Prince
Edward
Island
Lights Program

Submitted by: Productcare

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1. About Product Care Association

Product Care Association of Canada ("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. Product Care manages paint, household hazardous waste, smoke and carbon monoxide alarms and other lamp industry stewardship programs in various provinces in Canada.

Product Care has an approved lamp product stewardship plan with the Prince Edward Island Department of Department of Department of Environment, Energy and Climate Action under the *Materials Recycling Regulations* ("Regulation") of the *Environmental Protection Act*. The PEI Lamp Recycling Program ("Program") began in April 2015 and was renewed for another 5-year period on November 18, 2019.

Product Care's members are the "brand owners" (manufacturers, distributors, first sellers and retailers) obligated by the Regulation. The Program is open to any brand owner to join.

Product Care operates lamp product stewardship programs in three other provinces: British Columbia (BC), Manitoba (MB) and Quebec (the program in Quebec is branded as RecycFluo).

Product Care also operates the Paint Recycling Stewardship Program in Prince Edward Island.

1.1. Report Period

This report covers the reporting period from January 1, 2022, to December 31, 2022.

1.2. Program Summary

The Program offers collection sites, free of charge, throughout the province where consumers and businesses can bring unwanted/burned out lamps. Most collection sites are operated by Island Waste Management Corporation (IWMC) under contract to Product Care. In addition to the IWMC collection sites, a retailer, Home Hardware, in Charlottetown, is also a collection site under the Program. Residents and businesses can return any type of whole lamps to any of the six IWMC collection sites. The Home Hardware store only accepts lamps from the residential sector.

Product Care supplies collection sites with standard recyclable collection boxes and metal drums for collection of broken lamps. A hauler contracted by the Program collects the filled boxes from the collection sites and delivers collection supplies to the collection sites. The full collection containers are shipped to a processor for recycling. Additional elements of the Program managed by Product Care include revenue management, communications, and administration.

The Program is funded by Environmental Handling Fees (EHF) remitted to Product Care, by its' members for each regulated lamp product sold into or in the province (see <u>Appendix 1</u>). There were no changes to the fee rates in 2022.

1.3. Accepted Products

The Program is designed to collect and manage end-of-life intact (whole) lamps. The Program includes the following common categories of lamps, whether they are marketed for residential, industrial, or commercial purposes. This list is subject to change by Product Care.

- Fluorescent Tubes Fluorescent tubes come in different lengths (4 feet, 8 feet, etc.), diameters (T5, T8 and T12) and light output. Most tubes are straight, but some may be curved or shaped.
- Compact Fluorescent Lamps (CFLs) Fluorescent bulbs that are typically similar in size and are intended to replace an incandescent (traditional) light bulb, including pin-type sockets, covered CFLs and various output wattages.
- High Intensity Discharge Lamps (HID), non-mercury and mercury containing lamps Includes mercury vapor, metal halide, high- or low-pressure sodium and UV lamps.
- Incandescent and Halogen lamps Filament lamps of all shapes, sizes, and wattages.
- Light Emitting Diode (LED) lamps Solid-state lamps used for specialty purposes and conventional lighting applications.
- Miniature Bulb Package Miniature bulbs are small or very small bulbs. They can be LED, incandescent, halogen or neon and are typically designed and sold as replacement bulbs.

Lamp products can be sold as replacement lamps or integrated into a product intended to illuminate an area (such as a fixture, a flashlight, etc.). When sold integrated into such a product, the lamp portion of the product must be designed to be able to be removed from that product by the end user to be recycled. Lamps that are sold integrated into products that meet this requirement are included in the Program.

The Program is designed to collect and manage whole lamps and not crushed lamps. A limited amount of incidental breakage of lamps is accepted by the Program, provided the broken lamps are packaged in accordance with the requirements of the Program.

The Program includes lamp products manufactured by existing brand owners as well as orphan products (those that are no longer in production or which the manufacturer is no longer producing) if their function was the same as products accepted in the Program.

1.4. Non-Program Material

Non-program materials are products other than the lamp products listed above. Minimization of non-program material is achieved through a comprehensive program of public education, signage, and collection facility staff training. Non-program material includes, but is not limited to, the following:

- All types of fixtures
- Ballasts
- Any other lighting products (Products containing lights with a primary purpose that is not to illuminate or assist in the illumination of space (e.g., germicidal lamps).
- Lamps integrated into products that are not intended for removal/replacement by end users. Due to technological modifications, this exclusion may be subject to review.

2. Brand Owner Sales Information

Program members reported total sales of 380,253 units of program products in PEI from January 1 to December 31, 2022, as shown below in Table 1.

Table 1: Total Units Sold by Category

	Fluorescent tubes	Compact Fluorescent Lights (CFL)	LED	HID and Other	Incandescent/ Halogen	Mini bulbs package	Total
Units	42,126	11,834	213,601	1,693	80,296	30,703	380,253

3. Collection

The following section provides the total amount of lamps collected in PEI, as well as the location of collection sites.

3.1. Total Amount of Lamps Collected

Table 2 shows the total number of lamp units by category collected by the Program in 2022.

Table 2: Total Units of Lamps Collected in 2022

	Fluorescent tubes	Compact Fluorescent Lights (CFL)	LED	HID and Other	Incandescent/ Halogen	Mini bulbs package	Total
Units	56,778	18,012	4,879	6,519	28,750	2,149	117,087

3.2. Collection Sites

As of December 31, 2022, seven collection sites participated in the Program: six collection sites operated and managed by IWMC and one retail location. Table 3 lists all collection sites. <u>Appendix 2</u> illustrates the Program's recycling location finder. - https://www.productcare.org/recycling-locator/

Table 3: 2022 PEI Lamp Collection Sites

Collection Sites	Address	City	
GreenIsle	8 Superior Crescent	Charlottetown	
Brockton	2202 Dock Road Route # 150	Brockton	
New London	10142 Route #6	New London	
Murray River	378 Cape Bear Road Route #18	Murray River	

Collection Sites	Address	City	
Dingwells Mills	100 Selkirk Road Route #309	Dingwells Mills	
EPWMF	29786 Route #2	Wellington Center	
Home Hardware	115 St Peters Rd.	Charlottetown	

4. Processing

4.1. Lamps Processed

All lamps collected through the Program were sent to Quebec for processing. In 2022, a total of 117,087 whole lamps were recycled. The Program's processor is required to conform to Product Care's Processor Standards.

4.2. Disposal Method Descriptions

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

Reuse

The Program is designed to manage end-of-life lamp products that no longer work and cannot be reused. Consequently, no lamps collected through the Program were reused.

Recycling

Collected Program Products were broken down into their component parts in a controlled environment. The resulting glass, ceramic and metal components were recovered as commodities. The metal components were sent to smelters. Glass and ceramics were sent to a glass recycler to be used for sand blasting.

Secure Landfill

During the separation of the components, the mercury and the phosphor powder were collected in drums. The contents of the drums are sent to a waste management company in Quebec where they are encapsulated into a concrete-like material and securely landfilled. Although the mercury can be removed from the phosphor powder by retort, the market for recycled mercury has been greatly reduced in the last few years due to regulatory restrictions. These restrictions include a US ban on mercury exports, which has limited the availability of recycling options for mercury.

4.3. Environmental Sustainability

Lighting product producers are making significant efforts to reduce the environmental impact of their products through innovative product design and technology. By implementing measures to improve product impact reduction, reusability, and recyclability, they are creating more sustainable products. New design and technology solutions have addressed environmental concerns by reducing material use, increasing lamp life, increasing energy

efficiency, and reducing waste. With the increasing awareness of the impact of products on the environment, lighting manufacturers are actively taking steps towards creating more sustainable products.

The primary focus of the lighting industry in recent years has been the development and adoption of energy-efficient and long-lasting LED lamp technology. The longer lifespan of LED lights has led to a decline in sales for other traditional lighting technologies, such as halogen, incandescent, fluorescent, and HID lights. 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 two years. Furthermore, it is anticipated that fluorescent tubes will follow CFLs and likely be eliminated from the market in the next five to ten years. 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. As a result of LEDs containing no mercury and having an even longer life, there is a drive to further integrate LEDs into fixtures.

The lighting industry is adopting the "lighting as a service" business model, which offers a more sustainable approach to the use of lighting and fixtures. This model provides consumers with assistance in design, installation, operation, and maintenance, while the responsibility of the lighting system's durability, reuse, and recycling at the end of its life remains with the service provider. This strategy applies circular economy principles, promoting a more sustainable and environmentally friendly approach.

Lighting product producers are reducing packaging waste by using less packaging material. Companies are using innovative design and technology to create products that require minimal packaging. This approach is reducing the amount of waste that ends up in landfills and reduces the resources needed to produce packaging. Additionally, companies are increasingly using sustainable materials in their products, such as recycled plastics or bamboo, to reduce their environmental impact further.

Lighting product producers are also focusing on increasing reusability of their products. By creating products that can be used multiple times or for different purposes, manufacturers are reducing the need for consumers to purchase new products, resulting in a reduced environmental impact. Additionally, companies are designing products that are easier to disassemble, making them more repairable and recyclable.

In summary, the lighting industry is undergoing a transformation towards more sustainable practices by embracing energy-efficient LED technology, phasing out traditional lighting technologies, adopting the lighting as a service business model, and focusing on product impact reduction, reusability, and recyclability. These efforts are not only promoting a more sustainable future but are also driving innovation in the industry.

5. Communication and Public Education

In 2022, in partnership with IWMC, the Program implemented several different methods to raise consumer awareness of the Program. The following section provides details regarding communication and public education activities in 2022.

5.1. Website

The Product Care website includes the following content about the Program:

- "Find a Recycling Location" tool (a searchable map displaying collection sites and drop-off events See Appendix 2
- Collection site hours of operations
- Accepted and not accepted products
- Consumer videos showing the product management approach for lights
- Program member support section with news and updates
- Other information (e.g., a description of the Program, annual reports)

An estimated 477,479 users accessed ProductCare.org during the 2022 calendar year. The Prince Edward Island section (including sub-sections for accepted products and fee information) received 835 total page views. In addition, there were a total of 1,815 page views to the "Find a Recycling Location" tool from consumers in Prince Edward Island.

5.2. Program Hotline

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

5.3. Partnerships

Product Care continued to contract with IWMC to promote the Program in the province throughout the year by implementing the following tactics:

- **1. Waste Watch News:** Newsletters were distributed to Island residences (including seasonal dwellings and apartment units) in June and December through Canada Post. These newsletters were available in English and French and contained a summarized sorting guide, including information on lighting products and recycling. A total of 72,000 newsletters were distributed each time.
- 2. Interactive Sorting Guide: The IWMC website provided a webpage with information on specific products, including steps for sorting recyclables into the correct stream and an interactive sorting guide. The page also included a direct link to the Program's website for a complete list of accepted and excluded products. Hard copies of the sorting guide were made available in English, French, Mandarin, and Arabic. They also produced this guide in poster size for display at businesses, community organizations and multi-family dwellings. The sorting guide was also made available to new residents and promoted through social media channels in various languages.

- **3. Business Customers:** Business Guides helped the industry, commercial and institutional sectors manage waste. IWMC included Sorting Guides when distributing the Business Participant Guide. Sorting information for the business sector was also available on IWMC's website.
- **4. Customer Service Inquiries:** IWMC's Customer Service Centre operated a toll-free line where consumers could call in to request more information regarding the disposal of various recyclables, including lights. IWMC receives an average of 50,000 calls every year and answers queries through e-mail and IWMC's Facebook page.
- **5**. **Corporate Annual Report:** Information on lamps recycling was highlighted in IWMC's Annual Report. The latest version of the annual report tabled in the Legislature is made available on the IWMC website.
- **6. Sorting Game:** A bilingual sorting game included a light bulb icon on its Special Disposal panel (see <u>Appendix</u> <u>5</u>) and was widely used by audiences of every age (day care, schools, community college, English as a Second Language sessions, and community groups).
- **7. Presentations & Tours:** IWMC made presentations about the program to over 450 residents in 2022, including daycare centres, senior homes and schools.
- **8. Website:** A link to productcare.org was available through IWMC's website. The website, having been updated in 2020, has seen many upgrades in the past two years including an in-depth done bi-monthly to ensure all information is correct.

5.4. Digital Advertising

All digital campaigns reached the entire province.

- **1. Google Search Advertising Campaign**: A search advertising campaign served lights ads to provincial residents based on an extensive list of keyword searches relevant to the Program. These ads work according to user's queries on the Google Search engine and during 2022 they received 69 impressions and 21 clicks.
- **2. Facebook and Instagram Content Strategy**: Content on Facebook and Instagram focused on light recycling, special waste, and the recycling community in general.

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

In 2022, Product Care distributed both PoS and PoR materials as requested by retailers and collection sites. General program awareness posters were made available for reorder through the online order form. See Appendix 4

6. Financial Information

The following is a summary of the Program's finances for the 2022 reporting year.

2022 Revenue and Expenses	(\$'000s)
Total Revenue	68
Total Operating Expenses	82
Program Operation	71
Program Administration	4
Education, Public Awareness	2
Regulatory	5
Surplus/Deficit from Operations ¹	(15)
Cumulative Surplus (Reserve)	83

¹ Note: Surplus/Deficit from Operations does not total due to rounding.

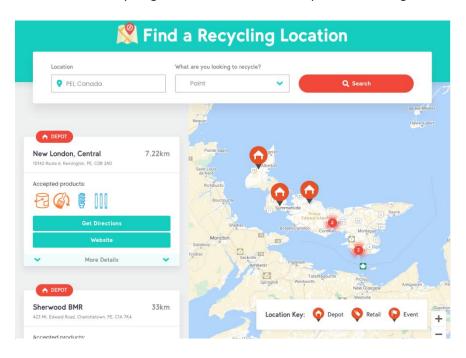
Appendix 1: PEI Lamps Environmental Handling Fee Rates

Accepted Lamp Products	Rates ²
Fluorescent Tubes measuring ≤ 2 feet	\$0.30
Fluorescent Tubes measuring > 2 feet and ≤ 4 feet	\$0.50
Fluorescent Tubes measuring > 4 feet	\$1.00
Compact Fluorescent Lights (CFL)/Screw-in induction lamps	\$0.20
Light Emitting Diodes (LED)	\$0.15
High Intensity Discharge (HID), Special purpose and Other	\$1.10
Incandescent / Halogen	\$0.05
Miniature Bulb Package	\$0.10

² The Program has not had a change rate since 2015.

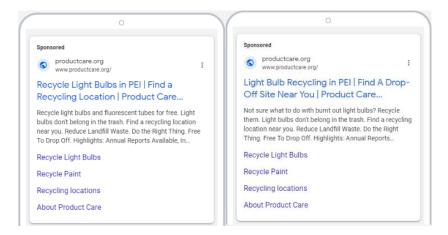
Appendix 2: Recycling Locator Tools

Below is a snapshot of the "Find a Recycling Location" tool located at productcare.org.

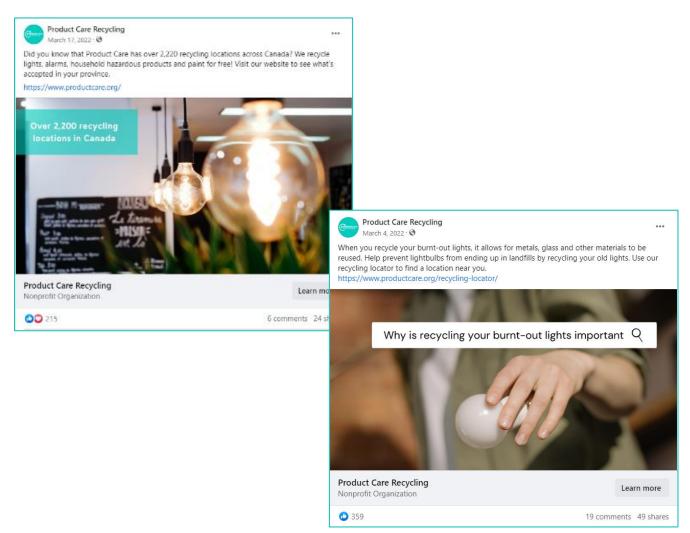


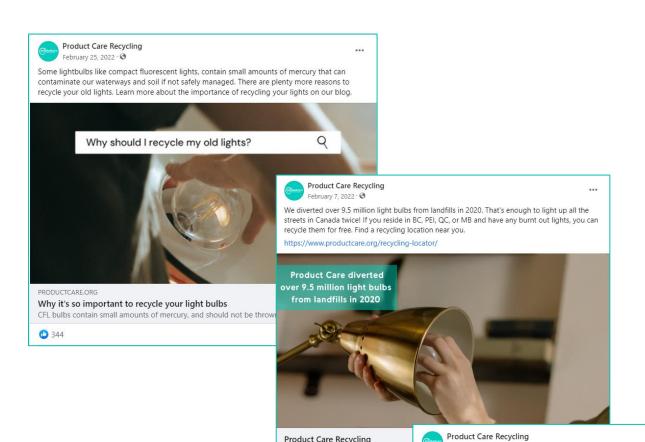
Appendix 3: Digital Advertising Activities

Google Search Ads



Social media posts

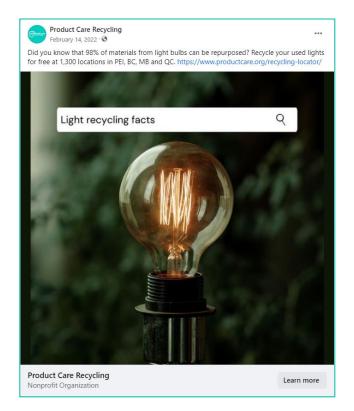


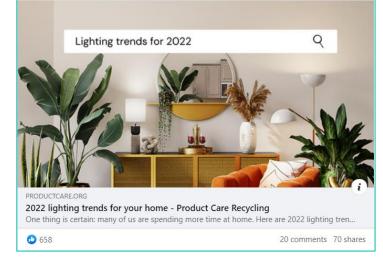


Product Care Recycling

Nonprofit Organization

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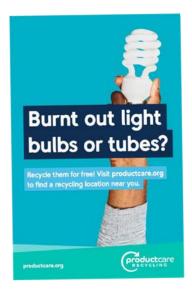
Looking to brighten up your home with new lighting? We compiled a list of 5 cool lighting trends

February 18, 2022 · 😚

to inspire you!

Appendix 4: PoS and PoR Materials

General program awareness posters



Lights rack card



IMMC Sorting Guide



IWMC Recycle Coach App

