

2016

Prince Edward Island

Lamps Recycling Program

Annual Report

Submitted to: **Prince Edward Island Department of Communities, Land and Environment**

Submitted by: **Product Care Association**

Date: **June 29, 2017**

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1.0 About Product Care Association

Product Care Association of Canada (PCA) is a federally incorporated, not-for-profit product stewardship association formed in response to stewardship regulations and is governed by a multi-sector industry board of directors. PCA has managed paint and other household hazardous waste industry stewardship programs since 1994. PCA operates lamp product stewardship programs in three other provinces besides PEI: British Columbia (BC), Manitoba (MB) and Quebec (QC). The BC, MB and PEI programs are branded as LightRecycle while the QC program is branded as RecycFluo.

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

PCA has an approved lamp product stewardship plan with the Prince Edward Island Department of Communities, Land and Environment under the Materials Recycling Regulations (the "Regulation") of the Environmental Protection Act. The PEI Lamp Recycling Program (the "Program") began in April 2015. PCA also operates the Paint Recycling Stewardship Program in Prince Edward Island.

1.1 Report Period

This report covers the Program from January 1, 2016 to December 31, 2016.

1.2 Program Summary

The PEI LightRecycle Program offers collection sites, free of charge, throughout the province where consumers and businesses can bring burned out lamps. Most collection sites are operated by Island Waste Management Corporation (IWMC) under contract to PCA. In addition to the IWMC collection sites, a retailer, Home Hardware, in Charlottetown, is also a collection site under the Program. The BMR Sherwood store in Charlottetown was a collection site until it was closed in mid-year.

Environmental Handling Fees (EHFs) applied to each regulated lamp product that is sold into the province provide funding to manage the Program (See Appendix 1 – PEI's 2016 LightRecycle Environmental Handling Fee Rates). There was no changes to the fee rates in 2016. The Program allows residents and businesses of PEI to return burned out whole lamps to any of the six IWMC collection sites. The retailer collection site accepts only residential lamp products.

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

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 PCA.

- Fluorescent Tubes – Fluorescent tubes come in different lengths (4 feet, 8 feet, etc.), diameters (T5, T8 and T12) and light output. The majority of 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 CLFs and various output wattages
- High Intensity Discharge Lamps (HID), non-mercury and mercury containing lamps – Includes mercury vapour, metal halide, high or low pressure sodium, UV lamps
- Incandescent and Halogen lamps – Filament lamps of all shapes, sizes and wattages
- Light Emitting Diode (LED) lamps – Solid-state lamps used for speciality purposes and conventional lighting applications

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 removed from that product by the end user in order 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 but 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 producers 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.

Non Program Material

Non-program materials are products other than the lamp products listed above. Minimization of non-program material will be achieved through a comprehensive program of public education, signage, collection facility staff training, as well as effective regulatory enforcement against those who abandon products at or near collection facilities. 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. For example, a germicidal lamp)
- 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.

2.0 Brand Owner Sales Information

Program members reported the sale of program products in PEI from January 1 to December 31, 2016, for a total of 628,447 units 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	86,228	84,387	122,423	5,325	312,743	17,341	628,447

Note: Mini bulbs package can be LED, incandescent or halogen.

3.0 Collection

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

3.1 Total Amount of Lamps Collected

Table 2 shows the total number of lamp units by category that were collected and processed by the Program.

Table 2: Total Units of Lamps Collected in 2016

	Fluorescent tubes	Compact Fluorescent Lights (CFL)	LED	HID and Other	Incandescent/ Halogen	Total
Units	49,622	10,345	190	2,468	16,416	79,041

3.2 Collection Sites

As of December 31, 2016, seven collection sites participated in the Program. Six collection sites are operated and managed by IWMC and one collection site is a retail location. See Table 3 for the list of collection sites. Appendix 2 – Product Care Association’s Collection Map contains a provincial map of the collection site locations.

Table 3: 2016 PEI Lamp Collection Sites

Collection Site	Address	City
GreenIsle	8 Superior Crescent	Charlottetown
Brockton	2202 Dock Road Rte # 150	Brockton
New London	10142 Rte #6	New London
Murray River	378 Cape Bear Road Rte #18	Murray River
Dingwells Mills	100 Selkirk Road Rte #309	Dingwells Mills
EPWMF	29786 Rte #2	Wellington Center
Home Hardware	115 St Peters Rd.	Charlottetown
BMR Sherwood (closed mid-year)	423 Mt. Edward Road	Charlottetown

4.0 Processing

4.1 Lamps Processed

All lamps collected through the Program were sent to a processor in Quebec for processing. In 2016, a total of 47 skids of burned out whole lamp products (79 041 lamps) were processed.

During the reporting period, all lamp products collected were processed. The Program's processor is required to conform to the Product Care's Processor Standard. The Processor Standard can be found in Appendix 4.

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 for end-of-life lamp products that no longer work and cannot be reused.

Recycling:

Collected Program Products are broken down into their component parts, under a controlled environment. The resulting glass, ceramic and metal components are recovered as commodities. The metal components (including electronics) are sent to smelters. Up until June 2016, glass and ceramics were sent to a glass recycler to be used for insulation material and sand blasting. In June, due to lack of options for recycled glass on the market, the glass and ceramics were landfilled. The Program continues to work with the recycler to seek new recycling options for glass.

Secure Landfill

During the separation of the components, the mercury and the phosphate powder are collected in drums. The contents of the drums are sent to a waste management company in Quebec for secure landfilling once it has been encapsulated into a concrete-like material. Although the mercury can be removed from the phosphate 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 the recycling option for mercury.

4.3 Design for Environment

The lighting industry is pursuing innovations in product development that strike a balance between sustainability, health & safety and performance. The competition of the lamps market encourages manufacturers to develop products containing less material to help reduce costs, maximize product performance relative to energy consumption, and increase the life span and comfort of use for consumers. All these efforts lead to natural market-driven improvements.

Increased public awareness of the presence of mercury in certain lamp products is driving consumers to encourage manufacturers to reduce the quantity of mercury used in lamp products. As a result, mercury in lamp products has significantly decreased in previous years, as shown in Table 4.

Table 4: Average Content of Mercury in Lamp Products Over Time : 2006, 2010 & 2013

Types	Average mercury content (mg) 2006 ¹	Average mercury content (mg) 2010 ²	Average mercury content (mg) 2013 ²
CFL	3.7 mg	2.3 mg	1.6 mg
Fluorescent tubes	7.6 mg	7.1 mg	5.4 mg
HID	37 mg	43 mg	18 mg

¹ Source : Electro-Federation Canada.

² Source : GE General Electric

5.0 Communications and Education

PCA employed various tactics to educate consumers in accordance with regulatory requirements. The following sections provide details regarding the communication and education program for 2016. PCA connects with consumers through the consumer-facing brand “ReGeneration”.

5.1 Website

PCA operates a website for all of its LightRecycle programs, LightRecycle.ca, through which it engages program end-users through numerous communications platforms. LightRecycle.ca is home to the following bilingual content for the Prince Edward Island LightRecycle program:

- Depot finder (a map displaying locations of the collection sites)
- Depot hours of operations
- Program product list
- Program FAQs, including the safe handling of mercury-containing lamps
- Information for large volume generators of accepted products

An estimated 36,555 unique users utilized Lightrecycle.ca from January 1, 2016 to December 31, 2016. Additionally, LightRecycle.ca is linked from the Island Waste Management Corporation’s website.

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

In 2016, PCA designed and distributed PoS and PoR materials for display by collection sites. The following materials were printed and mailed to collection sites and are available for reorder through our online order form.

- 11”x 17” Posters
- 4”x 3” Outdoor Collection Site signage

5.3 Program Hotline

PCA operated a bilingual “hotline” with a toll-free telephone number 1-888-772-9972 by which consumers were able to obtain information about the Program. In addition, Island Waste Management Corporation (IWMC) also responded to all consumer inquiries regarding the Program through a telephone, email and online service system.

5.4 Digital Advertising

PCA pursued two Atlantic Canada targeted digital campaigns via YP Group and Multiview, two leaders in the dissemination of search-query informed online advertising. The campaigns included:

- Syndicated Facebook posts, targeted digital display ads (based on relevant search criteria

related to light recycling), and smart digital display advertising (re-serving advertising impressions to a pre-qualified audience based on their browsing behaviour). The Facebook advertising campaign pursued a “gated” strategy, which is to say, content viewable by residents of Prince Edward Island was relevant to that audience specifically, and was not necessarily seen by audiences in other provinces

- Extensive SEM advertising with a specific focus on lighting industry professionals, contractors, relampers, building managers, etc.

5.5 Partnership

PCA has contracted with Island Waste Management Corporation (IWMC) to promote the Program to the public through the following methods:



- A link to Regeneration.ca is available through IWMC’s website
- Distribution of a biannual newsletter to each household in PEI and also available on IWMC website
- Newspaper columns, as applicable
- Promotion through IWMC’s customer service helpline

Appendix 1 – PEI’s 2016 LightRecycle Environmental Handling Fee Rates (no change from 2015).

Accepted Lamp Products	2015 Rates
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

Appendix 2 – Product Care Association’s Collection Map

Below is a snap shot of what the new collection site locator tool available on [LightRecycle.ca](https://www.lightrecycle.ca).


[Consumers](#)
[Large Volume Generators](#)
[About](#)
[Events](#)


COLLECTION SITE LOCATOR

Follow the steps below to find a LightRecycle location near you. Be sure to reference the [accepted products list](#) for your region!

Note: Recycling commercial volumes is only offered in British Columbia, Quebec and PEI.

1 ENTER LOCATION

Prince Edward Island
Charlottetown

2 ENTER VOLUME

☒ Residential
☐ Commercial

For household quantities less than 15 units of light bulbs and 15 units of tubes.

3 ENTER PRODUCT




All products


[Reset](#)
[Search](#)

THERE ARE 1 LOCATION(S) NEAR YOU:
refine distance
0km 50km 100km

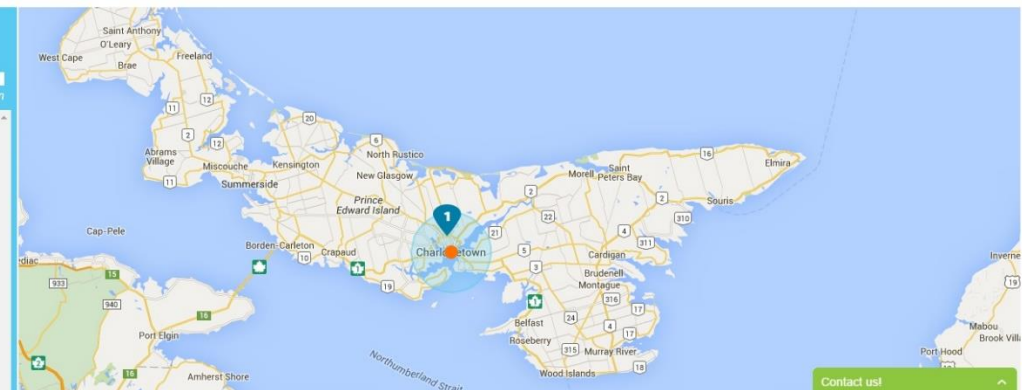
1

Greenslee
8 Superior Crescent
Charlottetown
Mon-Fri 7:00am-5:30pm
Sat 7:00am - 2:00pm
Hours are subject to change



4.26 km [Get Directions](#)



[Contact us!](#)

Appendix 3 – PoS and PoR Materials

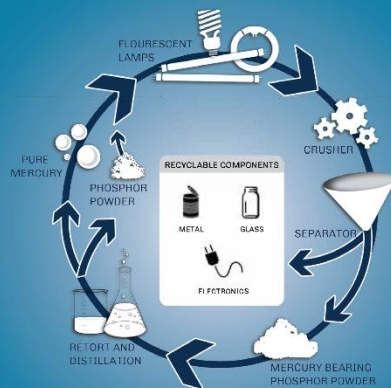
Program Brochure

Program Funding

The LightRecycle program is funded by fees submitted to LightRecycle by its industry members, on the sale of new light bulbs and tubes. The fees are used to cover the program costs, including managing the collection, transportation, and recycling systems for returned products.



The Life Cycle of a Residential-Use Light Bulb



Benefits of Recycling Lights

While that one burnt out bulb may seem trivial at first, know that when you recycle it, you contribute to a growing movement that is making a significant positive impact on our environment. When in doubt about whether to recycle your lights or not, just remember: every bulb diverted from the landfill counts! In the case of CFLs and fluorescent tubes, recycling keeps mercury out of our natural environment, while all bulbs contain valuable materials such as glass and metal that can be repurposed as new products.

About LightRecycle

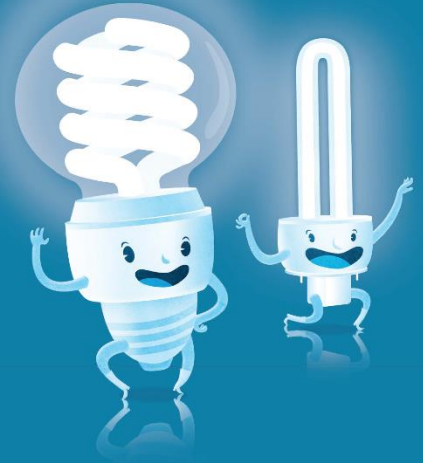
LightRecycle™ is a family of recycling programs that are operated by ReGeneration (née Product Care Association), a non-profit industry association, specializing in product stewardship on behalf of the manufacturers, distributors and retailers of products that are regulated under provincial Extended Producer Responsibility (EPR) regulations.

In essence, we are a passionate group of environmentally-minded solutions providers who want to help good people, like you, change the world for the better. We do that by making sure that your spent or unwanted lights end up in the recycling stream and not in the trash.



LightRecycle operates in British Columbia, Manitoba, Ontario, Québec (as RecycFluo) and Prince Edward Island.

www.lightrecycle.ca | 1-888-280-8111



PEI's Recycling Program for Lights

RESIDENTIAL • COMMERCIAL • INDUSTRIAL • INSTITUTIONAL

www.lightrecycle.ca
1-888-280-8111

LightRecycle Collection Site Poster

A vertical poster with a blue background. At the top, the LightRecycle logo is displayed. Below it, three cartoon lightbulbs with faces and arms are shown: a large fluorescent bulb on the left, a compact fluorescent bulb in the middle, and a U-shaped fluorescent bulb on the right. A dark blue rectangular box at the bottom contains white text and icons. The text reads: "Recycling lights has never been easier... and it's free!", "We accept CFLs, Fluorescents, LEDs, HIDs, and Incandescents, and Halogens.", and "Visit us online at www.LightRecycle.ca for a complete list of accepted products or to find a collection site near you!". Below the text are icons for a CFL, a fluorescent tube, a halogen bulb, and two incandescent bulbs. The LightRecycle logo and website information are at the very bottom.

 **LightRecycle**
PEI's Recycling Program for Lights
RESIDENTIAL · COMMERCIAL · INDUSTRIAL · INSTITUTIONAL

Recycling lights has never been easier... and it's free!

We accept CFLs, Fluorescents, LEDs, HIDs, and Incandescents, and Halogens.

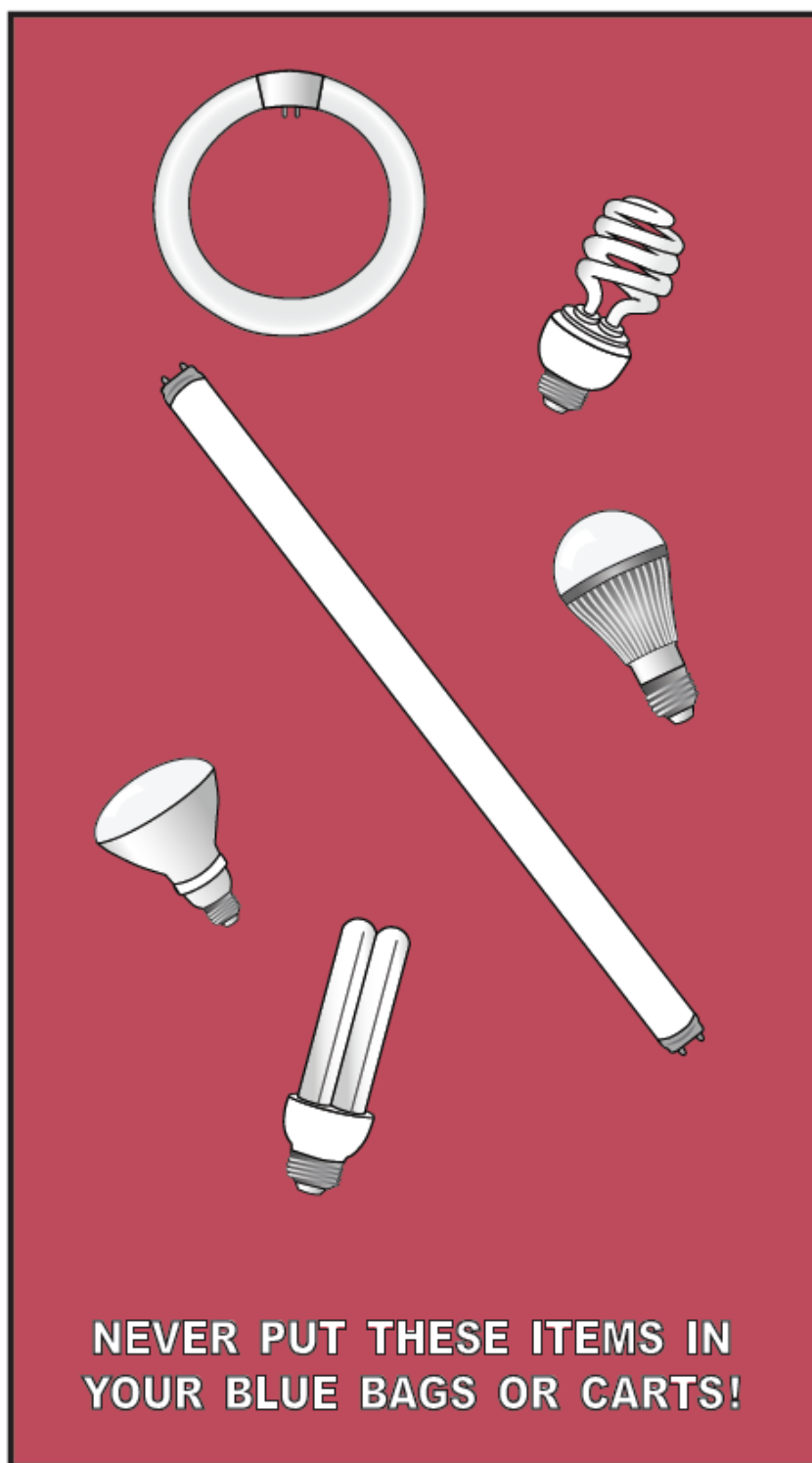
Visit us online at www.LightRecycle.ca for a complete list of accepted products or to find a collection site near you!

 **LightRecycle** www.lightrecycle.ca | 1-888-280-8111

Appendix 4 – IWMC

<div> SPECIAL DISPOSAL </div>		
<div> DO NOT PLACE </div> <div> IN CARTS, BLUE BAGS OR IN DUMPSTERS: </div>		
ITEM	DESCRIPTION	DISPOSAL
Batteries	Rechargeable and non-rechargeable batteries (i.e. AAA, AA, C, D, button type, lithium, etc.) and items such as disposable flashlights where the battery cannot be removed.	Place in battery recycling containers found at most grocery stores or Waste Watch Drop-Off Center
Cell Phones	Any type	Visit www.recyclenycell.ca for drop-off locations or take to a Waste Watch Drop-Off Center
Household Hazardous Waste (HHW)	<ul style="list-style-type: none"> fuel (gasoline, kerosene, etc.) silicone, caulking, adhesives pesticides, herbicides, insecticides items with mercury aerosol cans (with contents) cosmetics & personal care products pet medications 	Waste Watch Drop-Off Center - Must be in sealed original container. Jerry cans (or other containers) used for transporting must be left behind with contents
Ink Cartridges	Laser or ink jet	Accepted at most electronic retailers or Waste Watch Drop-Off Center
Large Bulky Furniture	Material larger than 4 ft. or heavier than 50 lb. such as sofas, tables, china cabinets, mattresses, patio furniture, etc.	Waste Watch Drop-Off Center
Propane Tanks	30 lb. or less Over 30 lb.	Propane dealer OR Waste Watch Drop-Off Center Propane dealer
Tires	Must be removed from rims	Waste Watch Drop-Off Center
White Goods	Appliances (stoves, washers, dishwashers, hot water heating tanks, etc.)	Waste Watch Drop-Off Center
STEWARDSHIP PROGRAMS	Electronics	Televisions, computers, audio equipment, cameras, etc.
	Automotive Lead Acid Batteries	Any size
	Light Bulbs	All lights that can be removed from fixture, i.e. Fluorescent (CFLs, linear, u-tubes, etc.), high intensity bulbs, LEDs, halogens, incandescents
	Medications	Prescriptions, over-the-counter drugs (pain & cold medications, etc.), natural health products (vitamins & mineral supplements, etc.)
	Motor Oil / Automotive Antifreeze	Oil fluids, containers, & oil filters; automotive antifreeze fluids and containers, aerosol containers for propelled lubricant and brake cleaner
	Needles / Syringes	Needles, syringes, needle tips, lancets, insulin pens, and other sharps
	Paint Products	Paints, stains, etc. AND empty paint containers
ADDITIONAL SORTING INFORMATION: www.iwmc.pe.ca or 1-888-280-8111		

SPECIAL DISPOSAL



WASTE WATCH UPDATE

... brought
to you by
The Journal
Pioneer

RECYCLING OUR LIGHTS



Last year more than 6.7 million lights were collected by LightRecycle™ programs in Canada. That's 6.7 million items containing recoverable materials such as glass, metal, or phosphor powder that were kept out of landfills and waterways and remanufactured into other uses.

One burnt out bulb may seem trivial at first, but remember ... when you recycle it, you are making a positive impact on our environment. *Every bulb counts!*

Any type of light bulb that can be easily removed from the fixture or product (i.e. flashlight) is recyclable and must be taken to a Waste Watch Drop-Off Center for recycling.

DO NOT PUT LIGHT BULBS IN WASTE!

Accepted Lights from Homes & Businesses (at no charge)



**Compact
Fluorescents (CFLs)**



**Fluorescent
Tubes**



**Incandescents
& Halogens**



LEDs



**High-Intensity
Discharge Bulbs**

How Are Lights Recycled?

Lights are sorted by type, then staged for processing. They are then crushed and separated into various components. Crushed glass finds new life in such applications as insulation or sandblasting material. Metal ends/ components from bulbs are remanufactured into metal products.

Mercury-bearing phosphor powder is distilled from fluorescents and other bulbs containing these elements in order to separate the mercury. The mercury is then safely contained and is directed back into the market for use in the lighting, medical and other purposes.

For additional information: Visit our Website at www.iwmc.pe.ca
Phone Customer Service Centre (Toll Free) 1-888-280-8111
or Email our Info Line at info@iwmc.pe.ca

ISLAND WASTE MANAGEMENT CORPORATION