

Collection Site Guidelines:

Residential-Use Lamps



Version 2: July 1, 2012

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This guideline is intended to provide practical guidance and best management practices for collection site operators regarding staff handling and storing of program products collected under the Product Care LightRecycle program. This guideline should be used by collection site operators to instruct staff in using required practices of the program.

The practices described in this guideline are not intended to replace any standards, acts or regulations required under Local, Provincial or Federal law; nor is the guideline intended to relieve the collection site operator or staff of requirements under the law.

Product Care accepts no responsibility and assumes no liability resulting from the incorrect use of information contained in this guideline or from the use of this information in any circumstances other than those described.

Program Overview

These Guidelines must be used to instruct workers in the correct handling and storage practices for lamp products collected under the program.

If workers have questions about subjects in these Guidelines, the best way to help them is to explain or show them the correct practice. For instance, you can teach them which lamps are accepted in the program or show them how to correctly prepare a box for shipping.

The Plan

The BC Fluorescent Lamp Stewardship Plan for residential use fluorescent light bulbs has been developed by Product Care to meet to the requirements of the BC Recycling Regulation and was approved by the Ministry of Environment March 1, 2010.

On July 1, 2012 the Light Recycle program will be expanded to include all lamp technologies including fluorescent tubes, CFLs, LED, HID, halogen, incandescent, etc.

How the Program works

BC residents will bring their residential-use lamps to approved collection sites such as yours for proper management. There is no charge for the residents to drop off these products. The collected products from the collection sites will be transported via a Product Care approved transporter to a Product Care approved recycler, for recycling. The program is funded by eco-fees charged on the sale of new lamps (all technologies) and fluorescent tubes.



Safety

Fluorescent and HID lamps are used in households and are considered safe under normal conditions of use. However, these lamps do contain a very small amount of mercury, which is a highly toxic substance.

The risk to health and the environment only occurs if the light bulb is broken so care must be taken in handling the bulbs to ensure they do not break.



Collection Site Guidelines

This guidebook is written for collection sites that are collecting residential-use lamps as part of Product Care's BC Light Recycle collection program and is intended to ensure that the program products are collected and handled in a manner that adequately safeguards the environment and worker health and safety. It provides direction on:

- How to set up a collection site
- Receiving, sorting, packaging and shipping lamps
- Health and safety issues related to lamps management
- Paperwork and record keeping

If, after reading this guidebook, you have any questions, please contact:



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Section 1: Program Products

Accepted Products

This program covers all lamp technologies¹ marketed to residential users that are designed to be removed by the user.

The BC Light Recycle Program has been expanded to include additional lamp types as follows (See Appendix B for full list):



Compact Fluorescent Lights (CFLs)

CFLs are known for their “corkscrew” design, but also come in a wide range of shapes, sizes and styles. They can fit into standard lighting sockets or may have a pin-type end to fit specific fixtures. CFLs may also have a range of light output values.



Fluorescent Tubes

Straight or linear fluorescent tubes come in sizes from one to eight feet (T12, T8, T5). Other fluorescent tubes include U-shaped and circular. Some may come with pin-type sockets or have different diameters and light output.



Incandescent and Halogen Lights

Incandescent and halogen lights are manufactured in a wide range of sizes, light output, and voltage ratings, from 1.5 volts to apx. 300 volts.



Miniature Bulbs

(Packages of two or more LED, halogen and/or incandescent lamps designed and sold as replacement lamps for decorative light strings (e.g. Xmas lights) or hand-held lights (e.g. flashlights).



High Intensity Discharge (HID)

HID lamps come in a variety of shapes and sizes. HID lamp types include High Pressure Sodium, Low Pressure Sodium, Mercury Vapour, Metal Halide, Ultraviolet (UV), Ultra High Performance (UHP) and Germicidal, UHP replacement lamps (projector etc.) and neon replacement lamps



Note: All “lamp technologies” will be placed in the CFL boxes provided by the program. No sorting is required as it will be done at the processing plant. Only fluorescent tubes need to be separated and included in the boxes designed for tubes.

¹ Note: the term “lamps” is used by the manufacturers to describe what consumers call “light bulbs”.

Accepting Broken Bulbs

The program accepts intact (whole) units and does not accept light bulbs that have been crushed on purpose (i.e. by a drum-top crusher, also known as a bulb crusher) but the program will accept light bulbs that have been broken accidentally. A resident may bring their broken bulb and the materials they used to clean it up (such as paper towel or cardboard) in a sealed plastic bag or sealed glass container. If a resident brings in a broken bulb, ensure it is in a sealed plastic bag or sealed glass container and put it in the lamps collection container for the provided by the program.



Non-program Lamps or other products

Full list is in Appendix B

Institutional, Commercial and Industrial Lamps

Collection sites should not accept lamps including CFL's and fluorescent tubes from commercial, industrial or institutional users. Please redirect customers that have exceeded the quantity limits to contact PCA for more information.

Advice for Customers

If a customer brings in a product that cannot be accepted (called non-program) it must be refused and given back to the customer. Direct the customer to the posters and advertising provided by the program to explain the types of products that may be returned. For further information, customers may be also directed to:



- Recycling Council of BC Hotline 1-800-667-4321 or www.rcbc.bc.ca
- Product Care website at www.regeneration.ca
- Email: info@lightrecycle.ca

Abandoned non-program material or accidentally collected non-program material should be managed separate from the program

Lamps Return Limit

The following limits have been set as limits for drop off:

Bulb Limit: 16 at one time.

Tube Limit 16 at one time



Note: Maximum limit for return at one time is a total of 16 fluorescent tubes and a total of 16 other "bulb" types (i.e. any combination of CFL, incandescent, halogen etc. to a total of 16).

The program has been designed to meet the BC Recycling Regulation which requires the program to be responsible for “fluorescent light bulbs and lamps sold for residential use”. As there may be no visible difference between light bulbs sold for commercial use and those sold for residential use, a limit on the number returned at one time is needed.

If you are asked to take back over this limit, or the customer has large numbers of lamps that would disrupt the collection sites operations or exceed your storage limitation, you should ask them to contact Product Care to assist them with their needs directly or refer them to the RCBC hotline number so they can call to find out about recycling of commercial lights in their area.

After October 1, 2012 the program will include dedicated commercial collection sites, designed to accept commercial volumes of lamps. Customers with more than the return limit should continue to be directed to Product Care or RCBC to ensure commercial volumes are accepted at sites that are designed to handle large volumes.

Service Fees

Under the program, no fees can be charged to customers dropping off the program products. Eco-Fees which are charged at the point of purchase fund this program. The eco-fee rates vary according to the type or length of the lamp and can be found our website www.lightrecycle.ca.

Section 2: Collection Site Set-Up

Collection sites must meet the Collection Site Standard (Appendix A).

Providing personal service for customer drop off is preferred in order to minimize breakage and drop-off of non-program material.

If the collection site is unable to provide personal service, the placing of approved collection containers in staffed areas is required. Unsupervised collection containers located outside staffed areas (e.g. parking lots) is not permitted. The return collection station should be or have:

- Convenient and provide easy access for both customers and employees.
- Well planned and allow for efficient and safe removal of full lamps and fluorescent light tube boxes. Additionally, it should also be easy to replace full boxes with empty ones.
- Easy for customers to identify as a return station.
- Secure from theft and tampering
- Protected from weather
- On impervious surfaces
- Well-ventilated
- Collection containers in staffed areas with some level of supervision

Storage Location

Once the collection boxes are full, they can be removed from the return collection station to the storage location to stage for shipping. The storage area for collected materials and should be:

- Away from high-traffic areas
- Inaccessible to the public (i.e. staff only)
- Monitored and safely maintained
- Able to provide adequate room to support at least 2 boxes for bulbs(14" x 14" x 14"), 2 boxes for 4-foot fluorescent light tubes (8" x 8" x 48")and 1 box for 8-foot fluorescent light tubes (8" x 8" x 96")
- Protected from the elements, away from drains and on an impervious surface
- Clean, dry, and free of debris
- Secured during non-operating hours

The storage location must also be equipped with a Clean Up/Spill Kit (provided by Product Care).

Security

When the site is closed, access by people or animals must be prevented to make sure that stored lamps are protected from improper handling, theft, or damage. Make sure that all materials are secured inside your facility and protected from weather at all times.

Public Access

The collection sites must be open for the public to return lamps during regular business hours. If customers abandon products on property while the collection site is closed, take them inside and place them in the appropriate containers if they are program material.

If they are non-program material, they should be disposed according to the recommendations of your local municipality's waste management division. They should not be knowingly placed into the collection containers provided by the program

Signage

In order to inform and make the consumers or customers aware that your site is a collection site for the program, Product Care will be supplying you with signage. The signage will inform them of the following:

- Your location is a collection site under the program
- Materials that are/are not acceptable (i.e. the list of acceptable materials)

Product Care will provide posters/signage and updated counter-cards for all sites. Some sites may require a sturdy sign for their facility.

If you would like further promotional materials, please fill in the form here: <http://www.lightrecycle.ca/member-and-seller-support-centre/member-resources/order-promotional-materials/?region=BC>.

Section 3: Handling, Packing & Arranging Transport

Supplies

Product Care will provide:

- Pre-labelled boxes for all bulbs and shaped tubes
- Pre-labelled boxes for fluorescent tubes (4 feet or less)
- Pre-labelled boxes for florescent tubes (over 4 feet and up to 8 feet)
- Packing tape
- Lamp Spill Kit
- Promotional items (signage, brochures, etc.)



Note: Boxes will require assembly prior to use.



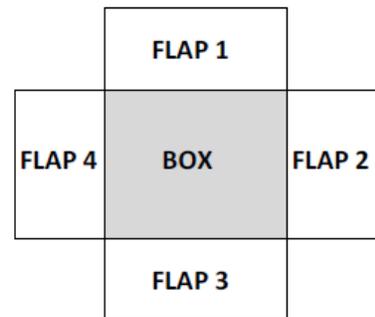
If you need more of any of these items, please contact Product Care at 1-888-772-9772 ext. 216 or order them when you contact us for a pickup



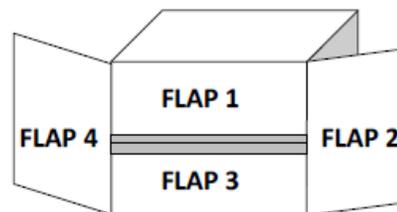
Packaging

Collection Box Assemble: Bulbs

1. Start by unfolding the flattened box into a square shape.

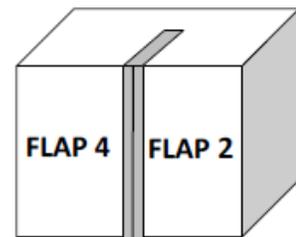


2. Fold Flap 1 and Flap 3 over the box opening until they meet in the middle.



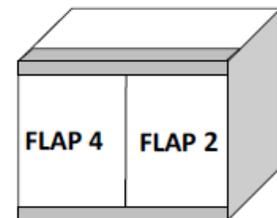
3. Affix two (2) strips of packing tape down the middle of the flaps.

4. Fold Flap 2 and Flap 4 until they meet in the middle.



5. Affix two (2) strips of packing tape down the middle of the flaps. Make sure that the strips of tape reach down the side of the box at least six (6) inches (15 cm).

6. Affix two (2) strips of packing tape along each side of the box where the flaps were closed.



7. Ensure that all open edges of the bottom of the box are securely taped up

8. Open the plastic liner bag provided inside the box and fold the liner over the top end of the box

Upon completion of steps 1-8, the box is now ready for use.

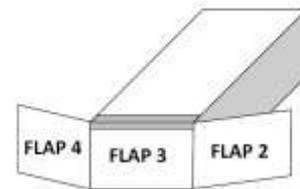
Collection Box Assemble: 4ft and 8ft Tube boxes

1. Start by unfolding the flattened box into a rectangular shape.



Note: All four flaps are full flaps.

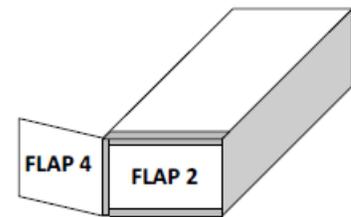
2. Fold Flap 1 and Flap 3 over the box opening.



3. Affix two (2) strips of packing tape along the edge of the box where the flap is closed.

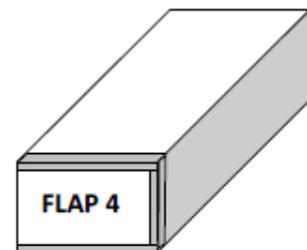
4. Fold Flap 2 over.

5. Affix two (2) strips of packing tape along each of three (3) edges of the box where the flap was closed.



6. Fold Flap 4 over.

7. Affix two (2) strips of packing tape along each of the three (3) edges of the box where the flap was closed.



8. Make sure all the open edges of the bottom of the box are securely taped up.
9. Open the plastic liner bag provided inside the box and fold the liner over the top end of the box.

Upon completion of steps 1-9, the box is now ready for use.

Handling

If the lamps are dropped off at a customer service station or front counter, the items should be taken from the customer and placed in the collection containers provided.

If the material is not physically received by a staff person, the customer will place the lamps in the collection bin. All bulbs (CFL's, incandescent, LED, HID etc.) should go in the smaller boxes for bulbs while tubes should be placed in the boxes for the appropriate length (Those 4 feet or under should go in the 4ft boxes and longer tubes should go in the 8 foot boxes). Tubes of unusual shapes should also go in the bulb boxes.



The following methods will ensure safe handling of the lamps and minimization of risk:

- The containers and packages must remain structurally sound and lack evidence of leakage, spillage or damage.
- Containers should be set up to be stable (i.e. they don't tip over easily)
- The lamps should be handled by their bases, not the glass portion
- All lamps should be set down gently
- Boxes should not be left on counters or places that they could easily be knocked over or down.
- Any lamp that is broken must be cleaned up immediately using the spill procedure under the Clean Up Procedures.
- Lamps are to be stored in Product Care supplied containers only.
- Lamps should be stored and handled in a way that prevents breakage.
- Do not over fill the lamps collection containers as they will be difficult and dangerous to close during shipping preparations.

- Do not force fluorescent tubes in the collection container. If a tube does not slide into place within the container, the container is full.
- Keep the bulbs and shaped tubes separate from the linear tubes.
- Do not tape bulbs or tubes together or use rubber bands
- Do not leave the lamps in a position or in an area where they can be easily broken
- Do not stack material on top of the collection containers



Note: No fees can be charged to customers that drop off the program products.

Compare the item with the list of accepted program products, if the item is not listed, it is not a program product and is not acceptable (see Appendix B for the full list).

If your facility provides collection services for other products (non-program) other than program products and you charge a fee for that service, you may continue to charge the fees for collection of the other products but not the program products. The non-program products must go into a separate system than the program light bulbs (i.e. not be placed in Product Care containers, and must be stored, tracked and transported separately.)

Accepting Broken Bulbs

The program does not accept lamps that have been crushed on purpose (i.e. by a drum-top crusher, also known as a bulb crusher) at collection sites, but will accept lamps that have been broken accidentally. For customers that have intentionally crushed lamps in drums from bulb crushers, please refer them to Product Care for further direction.



The Health Canada website (and others) provides information on what a resident should do in case of a broken light bulb.

A resident may bring their broken lamp and the materials they used to clean it up (such as paper towel or cardboard) in a sealed plastic bag. If a resident brings in a broken lamp, ensure it is in a sealed plastic bag and put it in the program container that it fits in (usually the “bulb” box). Do not open this container to avoid unnecessary risk.

Please let the residents know that the safe procedure for cleaning up a broken light is on Health Canada’s website (www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cfl-afc-eng.php) and on the Product Care website and give them a brochure with the website address.

Preparing for Shipment

Correctly filling boxes protects against shifting and breakage during transport. The lamps should be stored and packaged in a way that avoids breakage:

- Containers should be stored in such a way that they won't easily tip over or get damaged
- Do not stack boxes of lamps more than 2 high because the lamps on the bottom could be crushed by the weight of the pile.

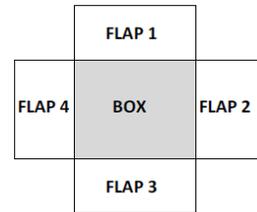
To pack the boxes:

- Check that the box is structurally sound and has no evidence of damage
- Check that the container is not overfilled.
- Seal boxes with packing tape in preparation for ship-out. Please see the following Taping Method for both types of boxes.

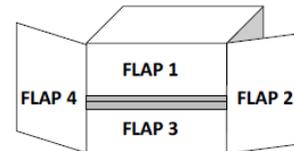


Taping Method for Full Bulb Boxes

1. Once the box is full, open the flaps as shown (top view).

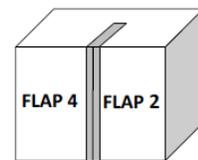


2. Fold Flap 1 and Flap 3 over the box opening until they meet in the middle.



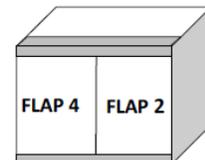
3. Affix two (2) strips of packing tape down the middle of the flaps.

4. Fold Flap 2 and Flap 4 until they meet in the middle.



5. Affix two (2) strips of packing tape down the middle of the flaps. Make sure that the strips of tape reach down the side of the box at least six (6) inches (15 cm).

6. Affix two (2) strips of packing tape along each of the box where the flaps were closed.

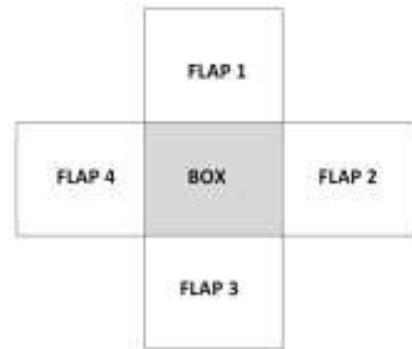


Taping Method for Full Fluorescent Tube Boxes

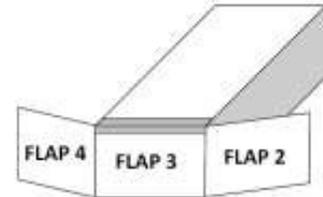
1. Once the box is full, open the flaps as shown (top view).



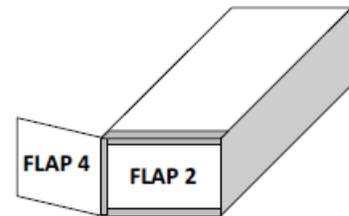
Note: All flaps are full flaps.



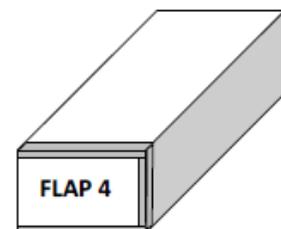
2. Fold Flap 1 and Flap 3 over the box opening.
3. Affix two (2) strips of packing tape along the edge of the box where the flap is closed.



4. Fold Flap 2 (full flap) over.
5. Affix two (2) strips of packing tape along each of the three (3) edges of the box where the flap was closed.



6. Fold Flap 4 (full flap) over.
7. Affix two (2) strips of packing tape along each of the three (3) edges of the box where the flap was closed.



Arranging Transport

You should order a pickup once half of any of your box types have been filled. Do not wait until you are down to your last box.

When you have full boxes and would like them picked up you can either call or fax your information to us.

BY PHONE:

Please call Product Care at 1-888-772-9772 x 216 to place your order (toll-free). You can also request any supplies needed at this time.

OR

BY FAX:

1. Please complete the 'Container Request Form' as shown on the next page. The form is also found in Appendix C: Forms. Please keep this form blank and photocopy as needed. Please request any supplies needed at this time using this form.
2. Please fax the completed form to Product Care at 1-604-592-2982.
3. When Product Care has processed your request, the form will be returned to you with the AUTHORIZATION number completed in the upper right hand corner.

Whether you choose to phone or fax in your order, we will send the carrier to pick up the full boxes and deliver empty replacement ones to you.

For the FULL boxes:

- a. The carrier will arrive at your location within 5 days of your request. They will have the bill of lading with them. It will already be completed with the number of pieces they are picking up.
NOTE: You cannot ship more than the number of pieces recorded on their bill of lading. If you have more boxes ready to ship you will need to send in contact us.

- b. Review the shipping labels that the driver has brought. Confirm that your address (as the shipper) is correct as is the number of pieces. It is your responsibility to make sure that the shipping information including the quantity and contents are correct.

Within a few days you should receive your EMPTY boxes. If they are not received within 5 business days please call 604-592-2972 ext. 216.



Note: the pickup of full boxes and the drop off of new empty boxes is not done at the same time. Supplies may also be delivered at a separate time.

For Supplies:

Make sure to order any supplies that you need and at the time you place your order for pickup. These supplies will be delivered to you separately from the replacement boxes. Ensure that you place an order for supplies before you run out as it could take several days from the time you place an order to when you receive your order.





BOL#:	OFFICE USE ONLY
CARRIER:	
DATE EXP:	

LightRecycle Residential Lamps Container Request Form

Please fax this form to 1-604-592-2982 or email to pickup@lightrecycle.ca

DATE: _____

CONTACT NAME: _____

DEPOT NAME / NUMBER: _____

ADDRESS: _____

PHONE: _____ **FAX:** _____

SHIPPING HOURS: _____

TO BE PICKED UP:

BULB BOXES (14" x 14" x 14")		8' TUBE BOXES (96" x 8" x 8")	
4' TUBE BOXES (48" x 8" x 8")			
OTHER (GIVE DETAILS)			

SUPPLIES NEEDED:

4' TUBE BOXES (48" x 8" x 8")		SPILL KIT	
8ft BOXES (96" x 8" x 8")		PACKING TAPE	
BULB BOXES (14" x 14" x 14")		SHIPPING PALLETS	
OTHER (GIVE DETAILS)			

SPECIAL SHIPPING INSTRUCTIONS and NOTES:

Section 4: Clean Up Procedure for a Broken Fluorescent Light

Risks

Intact (unbroken) fluorescent lights, HIDs and tubes pose no health risk. Mercury in fluorescent lights is in vapour form and also with the phosphor powder which coats the inside of the light bulb. Broken lamps release the mercury, which can enter the body by absorption through the skin or by inhalation of the vapour. A careful and prompt cleanup of the spill by the designated worker will minimize exposure to the staff, customers and to the environment.

A mercury spill must be treated as a serious safety concern. Staff should be trained in the management of broken lamps and the use of a spill kit.

Procedure

If you break a lamp or fluorescent tube, follow these directions for clean-up:

Leave the room

- Leave the room and keep people out from the room during the clean-up process.
- Avoid stepping on broken glass

Ventilation

Ventilate the room for at least 15 minutes prior to starting clean-up by opening windows and doors to the outdoors. This will ensure that the mercury vapour levels are reduced before you start cleaning.

Clean-up Directions for Hard and Carpeted Surfaces



- Do **not** use a vacuum or broom to clean up the initial breakage, as it will spread the mercury vapour and dust throughout the area. Additionally, contamination may occur within the vacuum and/or on the broom.
- Wear disposable gloves to avoid direct contact with mercury and to reduce the risk of cuts.
- Wear disposable mask.
- Scoop or sweep up the broken pieces and debris with the two pieces of cardboard provided in the clean up kit and place into the sealable plastic bag.
- Use packing tape to pick up any remaining fine glass or powder. **Prepare several strips of tape ahead of time** in order to avoid contaminating the roll and to make the clean-up effort easier and more efficient. Take a strip of packing tape, rolled with the sticky side out. Gently pat the contaminated area, rolling the tape to use a fresh surface each time. Phosphor powder, mercury and glass will adhere to the tape. Repeat this step as often as necessary to cover the affected area thoroughly. Place all contaminated tape into the same sealable plastic bag.
- Wipe the area with a damp paper towel, cloth or disposable wet wipe to remove any residual particles.
- Place the broken glass and clean-up materials in the plastic bag and seal it to further minimize the release of mercury vapour.

Placing the debris in the sealable plastic bag

Place all of the debris and contaminated clean-up materials into the sealable plastic bag safe storage and later disposal. Once the clean-up effort is completed, place the sealed bag into the bulb box.

Washing

Wash your hands after storing and disposing of waste.

RESOURCES:

US EPA:

www.epa.gov/mercury/spills/index.htm#fluorescent

www.ec.gc.ca/MERCURY/DA/ONBMP/EN/appC.cfm#more

Health Canada:

<http://hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cfl-afc-eng.php>

Spill Kit

The program will supply you a spill kit containing the following:

- Sealable Plastic Bags
- Packing tape
- Cardboard
- Disposable gloves
- Disposable mask

Incident Reporting

To report an incident involving 5 or more broken lamps, please use the form found on the next page and forward to Product Care, as per the instructions on the form. Please keep this form blank and photocopy as needed. It can also be found in Appendix C: Forms.



LightRecycle INCIDENT REPORT

Only fill out this incident report if five (5) or more lamps were broken at one time.

Depot Name _____

Depot Address _____

Telephone Number _____

Date of Incident _____ Time of Incident _____

of Lamps Broken Five (5) Six (6) to nine (9) 10+ Box dropped

If the box dropped and resulted in broken glass, please answer the following questions:

Did any broken glass spill onto the floor? Yes No

Did the box drop during: Packing In-store movement Shipping

Please describe the incident (use additional paper if needed):

Was staff wearing protective gear to clean up? Yes No

Was anyone injured? Yes No

If yes, please attach a copy of the WCB Form and Record to this report.

What are your suggestions to help prevent this type of incident from happening in the future?

Please complete the information and fax or mail (and other forms if applicable) to Product Care.

The mailing address, email, fax and telephone number are:

105 West 3rd Ave, Vancouver BC, V5Y 1E6
pickup@lightrecycle.ca

FAX: 604-592-2982
PHONE: 1-888-811-6234

Employee Name _____ Signature _____

Manager Name _____ Signature _____

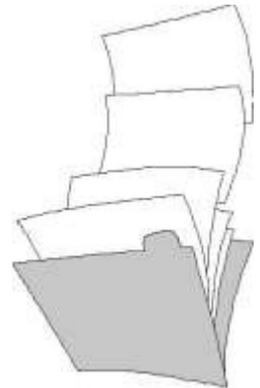
Section 5: Record Keeping and Reporting

Training

Collection sites are responsible for training their employees so they can safely and effectively perform the responsibilities outlined in this manual. The program is designed to be self-directed study, using this manual as a guideline. If you require additional information after reading this manual or need clarification please contact PCA at 604-592-2972.

Training Records

Ensure that documentation is kept showing that staff had been trained on the information contained in these Guidelines.



Reporting Incidents or Fines

The collection site will provide notice of the following to the program:

- Any incidents that required the assistance of first responders within 24 hours of the occurrence
- Any regulatory orders or fines within 48 hours of receiving such orders or fines.



- Wayne Chisholm
- Service and Logistics Supervisor
- **Product Care Association**
- **Telephone:** 604-592-2972 ext. 216
- **Fax:** 604-592-2982
- **Email:** wayne@productcare.org

Section 6: Health & Safety

IMPORTANT: The Health and Safety section of these Guidelines is a supplement to your facility's existing Occupational Health and Safety Manual and is not intended to replace any standards, acts or regulations required under Provincial or Federal legislation nor are these Guidelines intended to relieve the depot operator or workers of any obligations under this or other legislation.

The section only includes health and safety issues as they pertain to the BC Light-Recycle Program and NOT the other services offered or activities conducted at your facility.



For further information on general health and safety issues, including accident prevention and procedures, please consult the Occupational Health and Safety manual at your facility or WorkSafe BC.

Lifting Hazard

Moving boxes of lamps requires bending and lifting which can cause injury if done incorrectly. Simple precautions should be used as a means of prevention.



- When lifting, bring objects near to the body; do not try to lift at arm's length.
- Bend your knees and keep the back straight.
- Only lift what you can manage safely; ask for assistance if it is needed.

Ensure that boxes are not overfilled to avoid unsafe lifting.

Mercury Hazards

While mercury is a highly toxic substance, only a very small amount is used in a CFL or HID lamp, about the amount to cover the tip of a ballpoint pen. There is no risk to your health when the light bulbs are unbroken but care needs to be taken if the lamps are broken. The best defense is to handle the lamps with care to avoid breakage. Should a lamp get broken, follow the Clean up procedure found in Section 4.

Broken Glass Hazard

The main risk with handling lamps is of getting cut with broken glass. As with the mercury hazard, preventing breakage is the most important way to avoid this. Should a lamp get broken, follow the Clean up procedure found in Section 4.

Safety Equipment

No safety equipment is required for the regular handling of intact light bulbs. The personal protective equipment (PPE) required to handle broken lamps is noted in Section 4 Clean Up Procedure.

Section 7: Training

All collection site workers must understand the information provided in these Guidelines and provide a clear understanding of:

- the handling and management of lamps including but not limited to:
 - Potential hazards and risks associated with handling of lamps
 - Proper and safe handling of lamps
 - Ways to reduce risk
 - Safety and emergency procedures
- spill/breakage clean up procedures and management
- the operations training program and policies/procedures set by the program
- the identification of which products are accepted and not accepted by the program
- the completion of proper shipping documentation and record keeping

Newly hired employees must also be instructed on the information in these Guidelines before they are permitted to handle lamps.

Collection Site Operators should schedule regular training sessions with staff members who have emergency response responsibilities. This will help staff to regularly practice the correct response actions and be informed up to date on recommended response measures.



Appendix A - Residential-Use Lamps **Collection Standard**

The Residential-Use Lamps Collection Standard defines the minimum requirements for business and organizations to become approved and operate as a collection site under Product Care's BC LightRecycle Program. This standard intends to ensure that lamps are collected and handled in a manner that will adequately safeguard the environment and worker health and safety. It will also ensure that data is collected in order to track the materials. Product Care reserves the right to review and revise these standards on an on-going basis.

Background

Fluorescent lamps (tubes, CFL, HID) are commonly used in households and are considered safe under normal conditions of use. However, fluorescent lamps do contain a very small amount of mercury, which is a highly toxic substance. The risk to health and the environment only occurs if the lamp is broken. For this reason lamps should be handled with care and precautions taken to avoid breakage.²

Disclaimer

The Fluorescent Lamp Collection Standard is not intended to reduce or absolve collection sites from the responsibility of compliance with any federal, provincial and/or municipal legislation and regulations applicable to the management of fluorescent lamps, or the business operation of the collection site. Nor is it intended to constitute or to provide legal advice. It is the responsibility of the collection site to be aware of and abide by all such legislation and regulations.

General Requirements

All collection sites shall:

1. Possess a valid business license and/or is an incorporated and/or an otherwise validly existing business or municipality under the laws of British Columbia in good standing and qualified to carry on business in British Columbia
2. Comply with all applicable federal, provincial and/or municipal legislation and regulations including but not limited to:
 - Environmental Management Act
 - Hazardous Waste Regulation

² Health Canada 2009. The Safety of Compact Fluorescent Lamps. <http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cfl-afc-eng.php>

- BC Recycling Regulation
 - Municipal zoning by-laws
 - British Columbia Fire Code Regulation
 - Transportation of Dangerous Goods Act & Regulations
3. Possess Comprehensive or Commercial General Liability Insurance including coverage for bodily injury, property damage, complete operations and contractual liability with combined single limits of not less than \$2 million per occurrence, \$2 million general liability.
 4. Possess and maintain in good standing workers compensation coverage from WorkSafe BC as required under the *Workers Compensation Act* of British Columbia and its Regulations
 5. Ensure that procedures comply with the Program Training Manual and that staff follow these procedures. The program will provide the Manual.

Facility Requirements

The collection site shall:

1. Provide reasonable hours of operation for the collection of fluorescent lamps
2. Provide personal service for customer drop off. Drop-off in supervised areas with mechanisms or systems in place to minimize breakage and drop-off of non-program material may be possible if the collection site assumes responsibility and liability for onsite activities. Unsupervised, self service drop off is not permitted
3. Ensure the storage area has sufficient space for safe storage, is protected from weather, and the floor is constructed of impervious material such as concrete
4. Ensure that unauthorized access to the premises and storage area is prohibited or restricted through security measures
5. Ensure the storage area is not near sensitive areas such as drains
6. Have appropriate signage to inform consumers that it is a collection site and have program information available for the customer
7. Only accept program products as defined in the Program Plan
8. Only accept lamps for the Program from residential customers and not from institutional, commercial and industry users
9. Not use onsite size reduction or processing equipment for lamps
10. Provide notice of any incidents that required the assistance of first responders within 24 hours of the occurrence. Provide notice of any regulatory orders or fines within 48 hours of receiving such orders or fines.
11. Not charge the residential users for the program service
12. Keep program materials segregated from any industrial, commercial or institutional lamps that may be returned to the collection site as part of a separate service the site may offer. If the site chooses to offer a service for non-program lamps, the site assumes all liability associated with those materials.

Occupational Health and Safety

All collection sites shall:

1. Comply with all applicable health and safety regulations including but not limited to Workers Compensation Act of British Columbia
2. Possess written procedures to systematically manage environmental, health and safety matters such as but not limited to accidents, fires and spills
3. Implement and maintain proper lamp handling and safe housekeeping procedures to ensure minimal risk of breakage
4. Provide adequate training for all employees to ensure safe and proper handling of lamps
5. Document health and safety training
6. Provide and enforce correct use of required personal protection equipment
7. Implement spill/breakage cleanup procedure when needed and maintain equipment/supplies according to depot manual
8. Implement and maintain an emergency response plan

Training

All collection sites shall ensure that all staff are trained in:

1. The handling and management of lamps including but not limited to:
2. Potential hazards and risks associated with handling of lamps
 - Proper and safe handling of lamps
 - Ways to reduce risk
 - Safety and emergency procedures
 - Emergency response plan
3. spill/breakage cleanup procedures and management
4. the operations training program and policies/procedures set by the program
5. the identification of which products are accepted and not accepted by the program
6. the completion of proper shipping documentation and record keeping
7. and that all such training is documented.

Record Keeping

Maintain all records and documentation including applicable manifest, bill of lading, waste records, training records, and other data as required for a minimum of 2 years

Definitions

Fluorescent lamps - are a low-pressure mercury electric-discharge source in which a phosphor powder transforms ultraviolet energy generated by the mercury discharge into visible light. The term “lamps” is used by the manufacturers to describe what consumers call “light bulbs”.

Residential users –individuals who return lamps they have used in their residences to the program

Program Products – This program covers fluorescent lamps marketed to residential users that are designed to be removed by the user.

There are two categories of fluorescent lamps generally used for residential lighting:

1. Compact fluorescent lights (CFLs), which fit into standard lighting sockets. CFLs are manufactured in a number of different shapes and a range of light output values.
2. Fluorescent tubes, (such as T12 Fluorescent Lamps, T8s, T5s, shaped or curved tubes) which require dedicated pin-type sockets. Fluorescent tubes come in different lengths, diameters, and light output. Most are straight but some are curved or shaped.-
3. All lamp technologies including LED, HID, halogen, incandescent, etc.(see Appendix B for more info).
- 4.

Last updated, July 1, 2012

Appendix B – Accepted / Not Accepted Products

✓ Accepted products

Lamp Category	Typical Size
1. Fluorescent Tubes measuring \leq 2 feet - Includes all diameters, light outputs and shapes (curved etc.)	2 feet
2. Fluorescent Tubes measuring $>$ 2 feet and \leq 4 feet - Includes all diameters, light outputs and shapes (curved etc.)	4 feet
3. Fluorescent Tubes measuring $>$ 4 feet - Includes all diameters, light outputs and shapes (curved etc.)	8 feet
4. Compact Fluorescent Lights (CFL) - Fluorescent bulbs that are typically similar in size and intended to replace an incandescent (traditional) light bulb, including pin-type sockets, covered CFLs and various output wattages	CFL
5. Light Emitting Diodes (LED) - Solid-state lamps used for specialty purposes and conventional lighting applications	LED
6. High Intensity Discharge (HID) and Other: High Pressure Sodium, Low Pressure Sodium, Mercury Vapour and Metal Halide, UV, Germicidal and UHP replacement lamps	HID
7. Incandescent and Halogen - Filament lamps of all shapes, sizes and wattages (unless captured under category 8)	Inc.
8. Miniature Bulbs - LED, halogen and/or incandescent lamps designed and sold as replacement lamps for decorative light strings (e.g. xmas lights) or hand-held lights (e.g. flashlights).	Miniature

ACCEPTED LIGHTS – Residential Lights

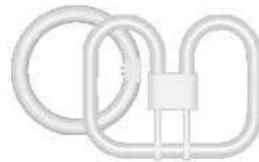
Fluorescent Tubes - Straight/Linear

Includes all diameters and light outputs in a straight/linear configuration. Can range in size from under 2 feet in length to 8 feet in length.



Fluorescent Tubes - Curved/Circular

Includes all diameters and light outputs in a curved/circular configuration (curved, square, U, etc.).



UV and Germicidal Lamps

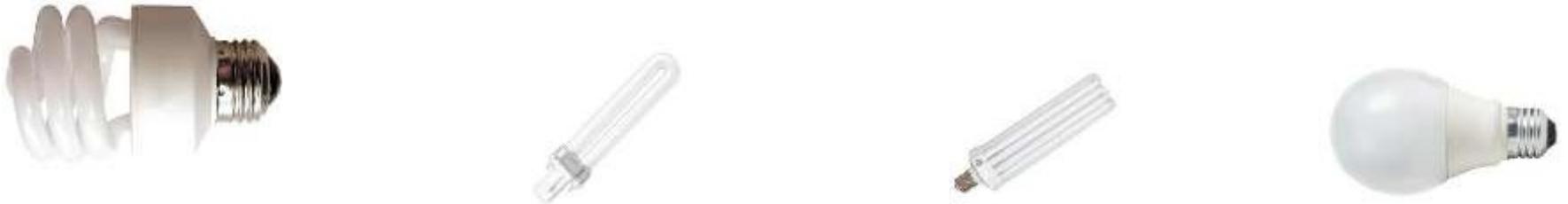
UV or germicidal lamps of all shapes and sizes. All base types including pin-type, screw-in, etc.



ACCEPTED LIGHTS – Residential Lights

Compact Fluorescent Lamps (CFLs)

Fluorescent bulbs that are typically similar in size and intended to replace an incandescent (traditional) light bulb.



Halogen and Incandescent- Bulbs

Filament lamps of all shapes, sizes and wattages. All base types including pin-type, screw-in, etc.



Light Emitting Diodes (LED)

Solid-state lamps used for specialty purposes and conventional lighting applications. All base types including pin-type, screw-in, etc.



ACCEPTED LIGHTS – Residential Lights

Ultra High Performance (UHP) / Mercury Arc Lamps

Replacement lamps designed for commercial projection systems, home theatre projectors, MD-PTVs and video walls. Often housed within a metal casing.



High Intensity Discharge (HID) and Other

Includes all HID technologies, such as high pressure sodium, low pressure sodium, mercury vapour and metal halide. These lamps vary in size but are much larger than a typical bulb. In some cases, they can be as big, or bigger, than a football.



Light Emitting Diodes (LED)

Solid-state lamps used for specialty purposes and conventional lighting applications. All base types including pin-type, screw-in, etc.



X Not accepted Items

Lighting Fixtures:

The BC LightRecycle includes dedicated collection sites for the collection of residential-use lighting fixtures, ranging from flashlights to table lamps and chandeliers. These products should NOT be placed in the boxes designed for lamps (bulbs and tubes). Unless a collection site has also signed a contract to collect lighting fixtures for the LightRecycle program, in large “mega-bags” designed for this purpose, lighting fixtures should NOT be accepted from the public.

Examples of lighting fixtures include:

- Bike Lights
- Ceiling Fixtures
- Chandeliers
- Flashlights
- Floor lamps
- Light Strings (e.g. xmas lights)
- Outdoor fixtures
- Recessed/pot lights

For a complete list of fixture products please visit www.lightrecycle.ca/expansion.



Appendix C - Forms

Container Request Form

Incident Report

Please keep these forms blank and photocopy as needed.



BOL#: _____ OFFICE USE ONLY
CARRIER: _____
DATE EXP: _____

LightRecycle Residential Lamps Container Request Form

Please fax this form to 1-604-592-2982 or email to pickup@lightrecycle.ca

DATE: _____

CONTACT NAME: _____

DEPOT NAME / NUMBER: _____

ADDRESS: _____

PHONE: _____ **FAX:** _____

SHIPPING HOURS: _____

TO BE PICKED UP:

BULB BOXES (14" x 14" x 14")		8' TUBE BOXES (96" x 8" x 8")	
4' TUBE BOXES (48" x 8" x 8")			
OTHER (GIVE DETAILS)			

SUPPLIES NEEDED:

4' TUBE BOXES (48" x 8" x 8")		SPILL KIT	
8ft BOXES (96" x 8" x 8")		PACKING TAPE	
BULB BOXES (14" x 14" x 14")		SHIPPING PALLETS	
OTHER (GIVE DETAILS)			

SPECIAL SHIPPING INSTRUCTIONS and NOTES:



LightRecycle INCIDENT REPORT

Only fill out this incident report if five (5) or more lamps were broken at one time.

Depot Name _____

Depot Address _____

Telephone Number _____

Date of Incident _____ Time of Incident _____

of Lamps Broken Five (5) Six (6) to nine (9) 10+ Box dropped

If the box dropped and resulted in broken glass, please answer the following questions:

Did any broken glass spill onto the floor? Yes No

Did the box drop during: Packing In-store movement Shipping

Please describe the incident (use additional paper if needed):

Was staff wearing protective gear to clean up? Yes No

Was anyone injured? Yes No

If yes, please attach a copy of the WCB Form and Record to this report.

What are your suggestions to help prevent this type of incident from happening in the future?

Please complete the information and fax or mail (and other forms if applicable) to Product Care.

The mailing address, email, fax and telephone number are:

105 West 3rd Ave, Vancouver BC, V5Y 1E6
pickup@lightrecycle.ca

FAX: 604-592-2982
PHONE: 1-888-811-6234

Employee Name _____ Signature _____

Manager Name _____ Signature _____

