

**BC LightRecycle
Collection Site Guidelines:**

**Residential, Institutional,
Commercial and Industrial
Lamps**



Version 2 – April 21, 2013

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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.



Guidelines 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 following guidelines are intended for the collection of **whole lamps** from the residential, institutional, commercial and industrial sectors.

Additional Information

For more information regarding this program or if you have any questions after reading this manual please contact:

Product Care Association
105 West 3rd Avenue
Vancouver, BC V5Y 1E6
604-592-2972 ext. 216 | 1-888-811-6234
Email: pickup@lightrecycle.ca



LightRecycle Program Overview

The LightRecycle Program was developed by Product Care Association in response to the BC Recycling Regulation and was approved by the Ministry of Environment. The program includes a province wide recycling program for all lamp technologies including, but not limited to, fluorescent tubes, CFLs, LEDs, HIDs, halogens and incandescent lights used in residential, institutional, commercial and industrial applications.

There are three types of collection sites included in the program:

1. Collection sites for consumers with up to 16 residential-use whole lamps
2. Collection sites for consumers and large volume generators with whole lamps used in residential, institutional, commercial and industrial applications
3. Collection sites for large volume generators with whole lamps used in institutional, commercial and industrial applications

This guideline manual is designed for collection sites contracted by Product Care to act as either #2 or #3, as described above and not for collection sites only collecting residential-use lamps from consumers.

How the Program Works

Residents and large volume generators from BC will bring their whole lamps to approved collection sites for proper management. Collection sites **CANNOT** charge for the drop off of lamps. 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 also includes direct-service pick-up options for large volume generators with more than a pallet of lamps or drums of crushed lamps. The program is funded by eco-fees charged on the sale of new lighting products.

Safety

Fluorescent light bulbs/tubes and high intensity discharge bulbs (HID), such as high pressure sodium lamps and metal halide lamps, are commonly used in households, businesses and commercial/ industrial applications 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 large volumes of lamps from the institutional, commercial, industrial and/or residential sectors as part of Product Care's BC LightRecycle program. It 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 these guidelines, you have any questions, please contact:

Product Care Association
604-592-2972 ext. 216 | 1-888-811-6234
Email: pickup@lightrecycle.ca



Section 1: Program Products

This program covers all lamp types designed to be removed by the user, which can be categorized as either “bulbs” or fluorescent tubes. Lamps are often referred to as “lights’ of “bulbs” by the public. The program includes the following types of lamps:

Fluorescent Tubes:

- Fluorescent tubes – linear/straight
- Fluorescent tubes – curved/circular

Bulb Types:

- UV and Germicidal lamps
- Compact Fluorescent Lights (CFLs)
- Halogen and Incandescent bulbs
- Light Emitting Diodes (LEDs)
- Ultra High Performance (UHP) lamps
- High Intensity Discharge (HID) lamps

For further details to assist in identifying accepted lamps, including definitions and pictures, please refer to Appendix C.



Accepting Broken Bulbs

Collection sites are expected to receive intact (whole) lamps, but the program will accept small quantities of light bulbs that have been broken accidentally. See picture below of an example of unacceptable drop off.

A customer may bring small amounts of their accidentally broken bulb and the materials they used to clean it up (such as paper towel or cardboard). Ensure it is in a sealed plastic bag or sealed glass container and put it in the lamps collection container provided by the program. The program does **NOT** accept liquid mercury and collection sites must **NOT** accept liquid mercury from customers in any type of container.

Currently, there are businesses that use equipment such as a drum-top crusher or bulb crusher to intentionally crush lamps for consolidation purposes. While the program will pick-up drums of pre-crushed lamps directly from generators, collection sites are **NOT** required and **CANNOT** accept these intentionally pre-crushed lamps as they have other regulatory implications. Any inquires on pre-crushed lamps collection services should be redirected to Product Care.



Unacceptable drop off

******** Do not accept lamps in this condition & have the contractor/customer contact PCA directly to make arrangements for safe containment and recycling *******

Lighting Fixtures

Lighting fixtures, ranging from flashlight to table lamps, wall fixtures and chandeliers, are included in the LightRecycle program but **not all** collection sites collect these products. Only selected collection sites that have signed a contract with Product Care for this purpose should accept lighting fixtures on behalf of the program. Lighting fixtures should **NOT** be placed in the boxes provided for lamps.

These guidelines are designed only for the collection of lamps. A separate set of guidelines has been provided to those collection sites contracted to collect lighting fixtures on behalf of the program.

Service Fees

Under the program, **NO FEES** can be charged to customers dropping off program products. The program is funded by fees applied to the sale of new lighting products in BC. The fee rates vary according to the type or length of the lamp and can be found at www.lightrecycle.ca

Advice for customers

If a customer brings in a product that cannot be accepted by your site, it must be refused and given back to the customer. Direct the customer to the promotional material provided by the program to explain the types of products that may be returned. For further information, customers may be also directed to:



RCBC Hotline: 604-732-9253 | 1-800-667-4321 | www.rcbc.bc.ca

LightRecycle website: www.lightrecycle.ca

Email: info@lightrecycle.ca

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

Section 2: Collection Site Set-Up

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

Receiving Program Products

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

This program is **NOT** a self-drop system; customers must be supervised when returning program products.

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 lamps boxes. Additionally, it should be easy to replace full boxes with empty ones
- Easy for customers to identify as a collection site
- Secure from theft and tampering
- Protected from weather
- On impervious surfaces
- Well-ventilated



Lamps **MUST** be kept dry; the program will not compensate for wet lamps

Storage Location

Once the collection boxes are full, they can be removed from the return collection area to the storage location to stage for shipping. The storage area for collected materials 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 four pallets of boxes, as per the instructions below on how to consolidate boxes onto pallets.
- Protected from the elements, away from drains and on an impervious surface
- Secured during non-operating hours

It is important that the program products are packed properly to:

- Reduce breakage
- Maximize use of storage space
- Simplify handling and prevent injuries as well as exposure to staff and the environment
- Consolidate large volumes on the pallets provided by the program in order to reduce the cost of transportation

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 and Brochures

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 also provide you with brochures which can be given to customers to explain the program.

To reorder promotional material, please fill the online form here:

www.lightrecycle.ca/members/promotional-materials-ordering or call 1-888-811-6234.

Signage will not be provided to collection sites that have informed Product Care that they wish to be an “unadvertised” collection site, unless specifically requested.

Section 3: Handling, Packing & Arranging Transport

3.1 Supplies Provided

Product Care will provide:

- Cardboard “bulb boxes” for all bulbs and shaped tubes (24”x20”x 24”)
- Gaylord boxes for fluorescent tubes 4 feet or less (48”x40”x48”)
- Cardboard boxes for fluorescent tubes over 4 feet and up to 8 feet (96”x10”x10”)
- Pallets
- 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:



604-592-2972 ext. 216 | 1-888-811-6234

Email: pickup@lightrecycle.ca

** You may also order them when you contact us for a pickup **

Alternative Packaging Supplies

Collection sites that currently utilize reusable wooden boxes and other containers provided by Product Care approved service providers for the collection of lamps can continue utilizing these supplies. Other sites that collect very large volumes of lamps under the program may receive these types of supplies in the future. Additional information will be provided at that time.

Alternative supplies may include:

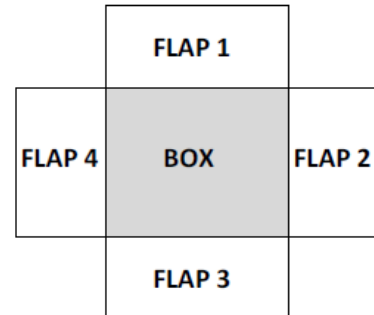
1. Plywood boxes for CFLs, Halogen, Incandescent bulbs, HID and shaped tubes.
2. Plywood boxes for 4 foot fluorescent tubes

See the next page for instructions on how to utilize these boxes.

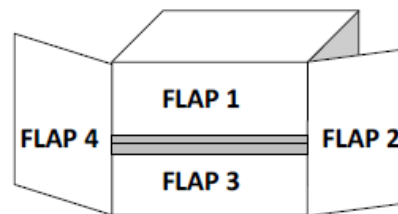
3.2 Assembling Empty Boxes

Collection Box Assembly: Bulb Boxes (24"x20"x24")

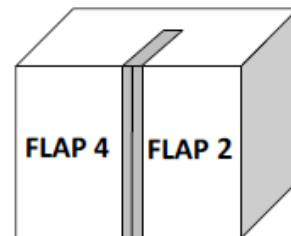
1. Start by unfolding the flattened box into a square shape.
2. Fold Flap 1 and Flap 3 over the box opening till they meet in the middle.



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

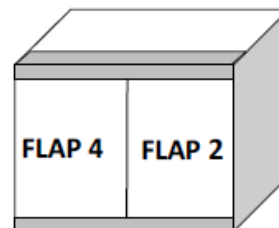


4. Fold Flap 2 and Flap 4 until they meet in the middle.



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.



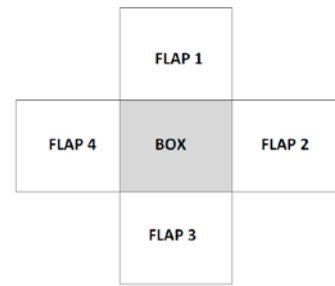
7. Ensure that all open edges of the bottom of the box are securely taped up.
8. Open the plastic liner bag provided inside the box and fold the liner over the top end of the box.

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

Collection Box Assembly: 8ft Tube boxes (96"x10"x10")

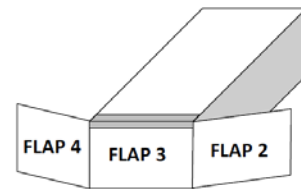
1. Start by unfolding the flattened box into a rectangular shape.

Note: All four flaps are full flaps.



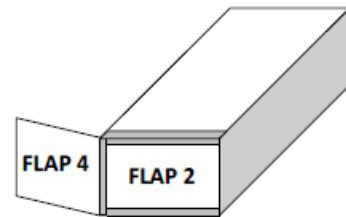
2. Fold Flap 1 and Flap 3 over the box opening.

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



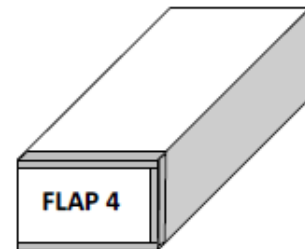
4. Fold Flap 2 over.

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.

Gaylord Collection Box Assembly: 4ft Tube Boxes (48"x40"x48")

1. Start by unfolding the flattened Gaylord box into a rectangular shape.
2. Fold two of the bottom flaps over the box opening until they meet in the middle.
3. Fold the other two flaps until they meet in the middle.
4. Affix a minimum of two (2) strips of packing tape down the middle of the flaps.
5. Once the bottom of the box is sealed it can be centred on the pallet (48x40) provided by PCA and ensure it does not sit outside the pallet, as it may create loading problems if shifts in transportation.
6. Open the plastic liner (provided) and place it inside the box so the edges overlap the box walls with enough overlap to be later taped together in the middle.
7. Take one of six insert boxes that will be placed inside the lined Gaylord.
8. Like the large box, fold two of the bottom flaps of the insert box over the box opening until they meet in the middle.
9. Fold the other two flaps until they meet in the middle.
10. Affix two (2) strips of packing tape down the middle of the flaps.
11. Repeat steps 7-9 with the five other insert boxes and place the completed inserts into the lined Gaylord box.
12. Assemble the lid by affixing two (2) strips of packing tape along each of the four (4) corners and fit over the open end of the Gaylord box.



Upon completion of steps 1-12, the Gaylord box is ready for use.

3.3 Handling and Sorting Lamps into Boxes

Lamps should be taken from the customer and placed in the collection containers (boxes) provided. Collection site staff must sort received lamps into the collection boxes provided in the following manner (4 categories):

- **All regular sized bulbs** (CFL's, incandescent, halogen, LED, UHP.) and tubes with unusual shapes (U shape, curved, circular shape etc.) can be mixed in the "bulb boxes" (24"x20"x24"). Refer to Appendix C for pictures of these bulb types to assist with identification.
- **HID bulbs** should be separated from all other bulb types and placed separately in their own "bulb box" (24"x20"x24"). These bulbs can be much bigger and heavier than a regular sized bulb. Refer to Appendix C for pictures of these bulb types to assist with identification. Staff should clearly mark these boxes on the outside as "HID" using a dark pen or a marker to ensure they are counted separately from the other bulb boxes on the Bill of Lading.
- **4 foot fluorescent tubes** and shorter straight fluorescent tubes should be placed in the Gaylord boxes (48"x40"x48") or wooden boxes provided.
- **8 foot fluorescent tubes** (and those under 8 feet but longer than 4 feet) should be placed in the 8ft cardboard boxes (96"x10"x10") provided. If you receive 8 foot tubes in an original box that is in good shape (not broken or with holes) you can ship that box instead of repackaging the tubes into Product Care provided boxes.

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



The following methods will ensure safe handling of all lamp types 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 on pallets so they don't tip over easily.
- 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 3 high because the lamps on the bottom could be crushed by the weight of the pile.
- The lamps should be handled by their bases, not the glass portion and should be set down gently in the boxes or collection containers.
- Lamps should be carefully placed into boxes and not dropped or thrown in to prevent breakage.
- Lamps should be placed inside the plastic liners provided for each box type. When the boxes are full the liners ends should be tied or taped together to create a seal with all lamps inside the liner.
- Ensure boxes are filled to capacity (to prevent breakage during transport and to qualify for payment) but do not overfill boxes
- Seal boxes with packing tape in preparation for ship-out. Ensure all seams are taped. Refer to the Taping Method instructions below.
- Any lamp that is broken must be cleaned up immediately using the spill procedure under the Clean-up Procedures.
- ALL Boxes should be packed in such away as to avoid the movement (and possible breakage) of bulbs during transport.



NOTE: Large HID bulbs are to be separated from other bulb types and placed in their own boxes. HID boxes must be clearly marked as HID boxes on the outside. See above for more detail and Appendix C for pictures to distinguish these bulb types.

- Do **NOT** tape bulbs or tubes together or use rubber bands.
- Do **NOT** over fill the lamps collection containers as they will be difficult to close during shipping preparations.
- Do **NOT** stack material on top of the collection containers.
- Do **NOT** throw in ballasts, light strings, batteries, phones, glass jars, ceramic dishes, aerosol cans, and other non-compliant materials. The recyclers do not have the capacity to handle these materials. They will be returned to you at your cost.

Gaylord Box Instructions

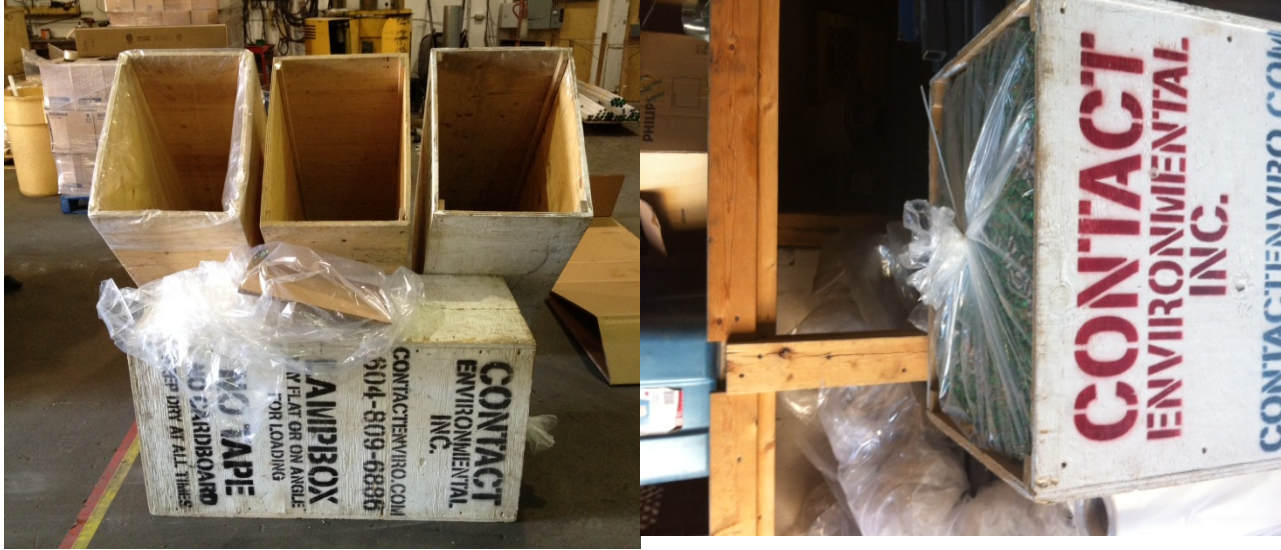
Gaylord boxes should be placed on pallets prior to being filled as they will be shipped on a pallet.

1. Gaylord boxes should be centred in the middle of the pallet.
3. Make sure that the box is placed securely on the pallet (should not extend or fall beyond the edges of the pallet).
4. Begin filling Gaylord boxes from the middle of the box going outward to prevent tubes from tipping over.
5. When the Gaylord box is full, pull the plastic liner over the top and tie or tape it shut to prevent the items from falling out of the box or to contain any breakage.
6. Ensure the box is completely full, as to minimize the amount of movement within the box during transport, to minimize the amount of breakage.
7. Do **NOT** overfill the Gaylord boxes.
8. Place the lid on top of the box opening and shrink wrap it to prevent it from shifting during transportation.
9. Write the name of your company on the shrink wrap.

Plywood Box Instructions

The following procedures should be used to handle straight fluorescent tubes up to 4 feet in length in the wooden boxes if they are received/used by a collection site.

- Plywood boxes should be placed on their side (as pictured below) or at an angle to be filled.
- Plastic liners provided should be placed inside the boxes prior to placing lamps inside, as well as any cardboard pad provided.
- Tubes should be placed inside the boxes carefully and not thrown or dropped in to prevent breakage.
- Tubes should not protrude past the top of the box
- When the plywood box is full, pull the plastic liner over the top and tie ,tape or zap strap it shut to prevent the items from falling out of the box or to contain any breakage.
- Do NOT overfill the plywood boxes.
- Once the boxes are filled they should be placed horizontally (tubes pointing sideways) for shipment. Horizontal boxes stacked 2 high (4 per pallet) are stable and may be stacked one pallet on top of another for storage.. Plywood boxes stacked 3 high (6 per pallet) MUST be shrink wrapped/banded/secured in some manner for safe transport. Unsafe loads can be refused at driver's discretion.
- Test the pallet's stability by pushing on the stack. A properly stacked and shrink-wrapped pallet is difficult to move side to side.
- If the pallet is unstable, restack or wrap with additional shrink wrap.
- Write the name of your company on the top of the liner



Images of Plywood Boxes with liners

Drop-Off Limits

The program will also be providing direct pick-up services to large volume generators that have, at a minimum, a pallet's worth of whole lamps for recycling. This service will be advertised to all large volume generators, and will be available to those that have enough lamps to qualify for the service.

Collection sites may therefore set a limit on the number of lamps customers can drop off at one time based on space availability, provided this limit is greater than the number of lamps from any one source than could reasonably be consolidated onto a single pallet (in accordance with the instructions on handling and consolidation provided in these guidelines). Ultimately, it is at the discretion of each individual collection site whether to accept very large volumes of lamps (i.e. more than a pallet's worth of lamps from one user) if space is available or whether to direct them to the program for direct pick-up service options.

If you are unable or unwilling to accept a customer's large volume of lamps, please explain to them that you do not have the space available and that they can qualify for a direct-service by the program. Please gather all possible information from the customer including their name and contact information and pass this information on to Product care. Please also pass on the following contact information to them so they can arrange to have their lamps picked up.

Please direct these customers to:



Product Care Association
1-888-811-6234
Email: pickup@lightrecycle.ca
www.lightrecycle.ca

Service Fees



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 C).

If your facility provides collection services for other products (non-program) 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 and explain to the customer that it is being accepted outside of the program. The non-program products must go into a separate system than the program lamps (i.e. not be placed in Product Care containers, and must be stored, tracked and transported separately.) If fees are being charged to customers to drop off non-program products, ensure the customer understands the fee is not being charged under the LightRecycle program.

3.4 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. The program **does not** accept liquid mercury and collection sites should NOT accept liquid mercury from customers in any type of container.

Currently, there are businesses that use equipment such as a drum-top crusher or bulb crusher to intentionally crush lamps for consolidation purposes. While the program will pick-up drums of pre-crushed lamps directly from generators, collection sites are **NOT** required and **CANNOT** accept these intentionally pre-crushed lamps as they have other regulatory implications. Any inquiries on pre-crushed lamps collection services should be redirected to Product Care.



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 can be found on Health Canada’s website (<http://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.

3.5 Preparing Boxes for Shipment

Once boxes have been completely filled and the box liners have been tied or taped shut they must be prepared for shipment.

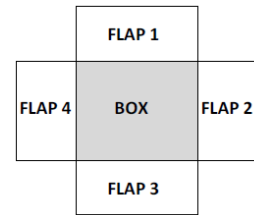
Mark/label each box with your company name. If the box is a bulb box containing Large HID bulbs that have been separated from the other bulb types in accordance with the instructions above, ensure you have marked/labelled the box with “HID” on the outside.

Follow the instructions above for how to prepare Gaylord boxes and wooden boxes for shipment.

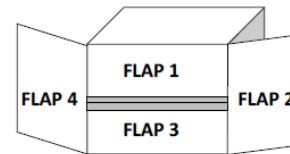
Instructions on how to tape and consolidate bulb boxes and 8 foot tube boxes on pallets are included below.

Taping Method for Full Bulb Boxes (24"x20"x24")

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

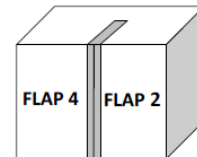


2. Fold Flap 1 and Flap 3 over the box opening until they meet in the middle.



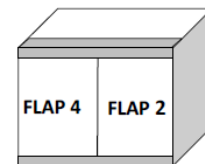
3. Affix two (2) strips of packing tape down the middle of the flaps.

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.



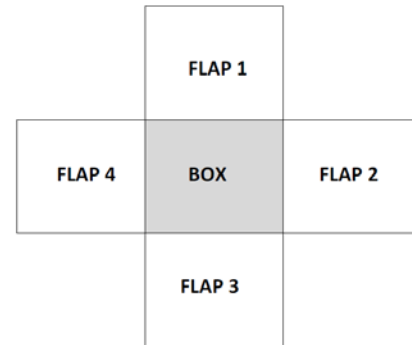
7. Ensure all seams are taped.

8. Mark/label the outside of the box with your company's name.

Taping Method for Full Fluorescent 8ft Tube Boxes (96"x10"x10")

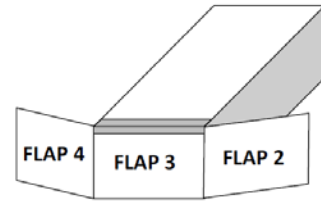
1. Once the box is full, open the flaps as shown (top view).

Note: All flaps are full flaps.



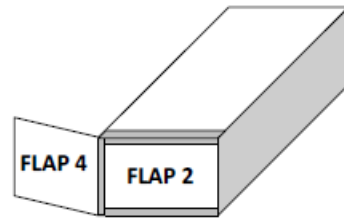
2. Fold Flap 1 and Flap 3 over the box opening.

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



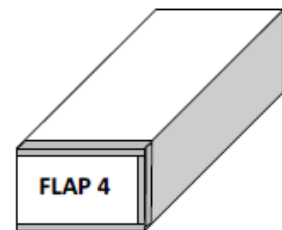
4. Fold Flap 2 (full flap) over.

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.



8. Ensure all seams are taped.

9. Mark/label the outside of the box with your company's name

Consolidating Full Boxes on Pallets

Bulb Boxes:

Bulb boxes (24"x20"x24") must be stacked on pallets for transport and shrink wrapped. Bulb boxes should be stacked 4 boxes to a level, 2 levels high (8 boxes total per pallet). Test the pallet's stability by pushing on the stack. A properly stacked and shrink-wrapped pallet is difficult to move side to side. If the pallet is unstable, restack or wrap with additional shrink wrap.



8ft Tube Boxes:

The 8ft tube boxes (96"x10"x10"), once full, can be stacked on 2 pallets to reduce the space required to store the full boxes. These boxes can be stacked 4 boxes to a level, 3 levels high (12 boxes total per pallet). 8 ft tube boxes should not initially be shrink-wrapped together as the transporter will likely require each box to be loaded into the truck individually, given their size. However, if the transporter is able to load these boxes by 8 foot pallet, ensure the entire pallet is shrink wrapped and test the pallet's stability by pushing on the stack. A properly stacked and shrink-wrapped pallet is difficult to move side to side. If the pallet is unstable, restack or wrap with additional shrink wrap.

3.6 Arranging Transport of Full Boxes and New Supplies

Full containers are to be picked up by approved PCA transporters. The full containers will be picked up from the collection site and empty collection containers and pallets dropped off. Requested depot supplies may also be dropped off at this time or they may be shipped separately at a later date.

Shipment of Full Boxes

To qualify for a pick-up of full boxes, a collection site must have consolidated a **MINIMUM** of 2 pallets of full boxes, packaged and consolidated in accordance with the instructions above. This could consist:

- 2 gaylords, or;
- 2 pallets of stacked bulb boxes, or;
- 1 gaylord and 1 pallet of stacked bulb boxes.

Collection sites are encouraged to consolidate more than two pallets of full boxes prior to arranging a pick-up of full boxes if they have the storage space available.

Before advising how many full collection containers you have available for pickup:

- Check the collection containers to ensure they are packed correctly.
- Pallets:
 - Stable
 - Shrink-wrapped correctly
 - Stacked bulb boxes are 8 to a pallet
 - Each box is labelled with your company name
 - Boxes that contain large HID bulbs separated from the other bulb types, in accordance with the instructions above, are clearly marked/labeled as “HID”
- Gaylords
 - Square on the pallet
 - Lamps are tightly placed inside
 - The plastic liner is sealed and the top is secured in place
 - No items are protruding from the top
 - Each box is labelled with your company name
- Plywood Boxes
 - Square on the pallet, facing sideways, 2 boxes wide and 2 boxes high; if stacking 3 high, the boxes must be properly secured
 - Lamps are tightly placed inside
 - The plastic liner is sealed
 - No items are protruding from the top
 - Boxes are shrink-wrapped together correctly
 - Each box is labelled with your company name on the top of the liner



When you have consolidated at least two pallets of lamps and would like them picked up you can call, email or fax your information to Product Care directly (see below for instructions).



NOTE: All collection sites contracted by Product Care, including those that may have been collecting lamps prior to the program and were serviced by a transporter/recycler prior to October 1, 2012, must contact Product Care directly to have their boxes picked up. Transportation/recycling providers should NOT be contacted directly as may have occurred prior to the program.

Requesting New Supplies

Do NOT wait until you are down to your last box to request additional boxes or supplies.

Empty boxes should be ordered in advance to ensure you have all of the boxes required. As a general rule of thumb, you should order additional boxes once half of any of your boxes have been filled. Additional supplies can be ordered by following the instructions below.

Arranging Shipment

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

BY PHONE:

Please call Product Care at 1-888-811-6234 to place your order (toll-free) OR

BY EMAIL:

Please complete the 'Container Request Form' as shown in Appendix B, scan the form and then email the completed form to pickup@lightrecycle.ca OR

BY FAX:

Please complete the 'Container Request Form' as shown in Appendix B then fax the completed form to Product Care at 1-604-592-2982 or email to pickup@lightrecycle.ca



NOTE: Before the truck arrives, make sure the loading area is clear and that all collection containers are easily accessible.

Bill of Lading (shipping document) – Full Boxes

The transporter dispatched by the program, will arrive at your location within 5 days of your request in most locations in BC.

The transporter will supply the bill of lading, but you must complete it.

The number of full boxes being picked up must be recorded on the bill of lading. The number of **EACH TYPE** of full boxes being picked up must be recorded separately. The number of bulb boxes (24"x20"x24") containing HID bulbs must be recorded separately from the bulb boxes containing all other types of bulbs. The HID boxes must be clearly marked with HID on the outside, as described above.

It is the collection site's responsibility to list the quantity of each specific type of box being picked up, unless this is provided by the transporter. The bill of lading should include the following information:

Type of Full Box	Number of Full Boxes for Transport
Gaylord boxes (48" x 40" x 48")	
8 foot tube boxes (96" x10" x10")	
Bulb Boxes – HID (24" x 20" x 24")	
Bulb Boxes – Other Bulbs (24" x 20" x 24")	
Plywood boxes	
Other (give details)	
Other (give details)	

If the transporter has provided a bill of lading, it is the collection sites responsibility to ensure that the information on the bill of lading is correct.

The driver may have the shipping document/Bill of Lading (BOL) with them and already it may already be completed with the number of pieces they are picking up based on your request.



NOTE: If you have more than the number of boxes recorded on their bill of lading or if the total is correct but the types of boxes have changed you will need to ensure the bill of lading is changed appropriately and reflects your actual piece counts and type of boxes. It is your responsibility to make sure that the shipping information including the quantity and contents are correct.

Bill of Lading – New Supplies

The number of empty boxes and pallets delivered must also be checked and recorded on a bill of lading. The transporter dropping of these materials will generally have a copy of this bill of lading listing the supplies the collection site is receiving. It is the collection site's responsibility

to confirm that the information listed on the bill of lading is correct before signing off on it.



NOTE: Even if the transporter completes the paperwork, you are still responsible for making sure it is completed correctly before you sign.

Truck Loading

When the truck arrives at your site, it is the depot's responsibility to assist the carrier in unloading and re-loading of the boxes. Forklift loading/unloading only if the driver agrees. In some case you will need to help load the 8ft tubes manually.

Forklift loading approval is dependent on many factors including, but not limited to:

- Stability of collection containers
- The driver's routing (they may have other deliveries to make)
- The type of trailer he/she is using (some floors may not support the weight of a forklift)
- Weather conditions
- Loading conditions
- Other site factors

It is the depot's responsibility to:

- Make sure loading area is clear
- Collection containers are easily accessible
- Verify all paperwork has been completed (quantity of pieces, types of containers, pick up date, etc.)
- Verify all full containers are properly labelled or mark with your company name
- Verify any boxes that contain large HID bulbs separated from the other bulb types, in accordance with the instructions above, are clearly marked/labeled as "HID"
- Verify quantity of empty and full containers that are being delivered and/or picked up
- Sign all shipment paperwork once details have been confirmed
- Ensure the driver has given you a copy of the shipment paperwork

It is the truck driver's responsibility to:

- Dictate how the empty collection containers are to be unloaded
- Dictate how the full collection containers are to be loaded and/or stacked
- Secure load to prevent movement during transport using straps, load bars or some other type of bracing
- Verify completed paperwork & leave the depot with one copy of the bill of lading (shipment paperwork)



NOTE: Drivers will **NOT** accept loose lamps, improperly packaged boxes or boxes that are not consolidated on pallets as described above.

Section 4: Clean-Up Procedure for a Broken Lamps

Risks

Intact (unbroken) fluorescent lamps (CFLs and fluorescent tubes) and HID lamps pose no health risk. Mercury in fluorescent lamps 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.

HID lamps contain more mercury than fluorescent lamps (30 mg on average). The mercury is sealed in a sealed glass or quartz capsule (referred to as an “ampoule” or “arc tube”) within the lamp. If the capsule remains intact the mercury is contained. However if the ampoule is broken mercury will be released to the ground.



In both cases 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.



NOTE: no health risks are posed from broken incandescent, halogen or LED lamps other than risk of cutting by broken glass.

Clean-up Directions for Hard Surfaces

If you break a fluorescent lamp (CFL or fluorescent tubes) or HID lamp, 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.

If you break a fluorescent lamp or the ampule contained within an HID lamp is visibly broken follow these directions for clean-up:

- 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.
- 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. Make sure to work from the outside of the spill to the centre. Use the cardboard to gather the beads of mercury. Tip- a flashlight held at a low angle in a darkened room can be used to find beads of mercury which can travel quite far on a hardened surface.
- Use eyedropper to collect mercury and then squeeze carefully into a damp paper towel. Repeat this step as often as necessary to cover the affected area thoroughly. Place the paper towel into the same sealable plastic bag (note this is only required for HID lamps with a visibly broken ampoule).
- Use packing tape to pick up smaller beads and place in plastic bag (note this is only required for HID lamps with a visibly broken ampoule).
- Residual mercury can be removed by wiping with vinegar followed by peroxide (note this is only required for HID lamps with a visibly broken ampoule).
- Keep the area well ventilated for 24 hours.
- Place the broken glass and all clean-up materials in the plastic bag and seal it to further minimize the release of mercury vapour.
- All contaminated items and mercury should be double or triple bagged.
- Once the clean-up effort is completed, place the sealed bags in a sturdy container (plastic container, glass jar etc.) and then place the container in a bulb box.

Washing:

Wash your hands after storing and disposing of waste.

Resources

US EPA:

- <http://www.epa.gov/mercury/spills/index.htm>

Environment Canada:

- <http://www.ec.gc.ca/mercure-mercury/default.asp?lang=En&n=D2B2AD47-1>

Spill Kit

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

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

Incident Reporting

To report an incident involving 5 or more broken fluorescent lamps (CFLs and fluorescent tubes) or HID lamps, please use the form provided in Appendix B and forward to Product Care, as per the instructions on the form. Please keep this form blank and photocopy as needed.

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 ext. 216

Training Records

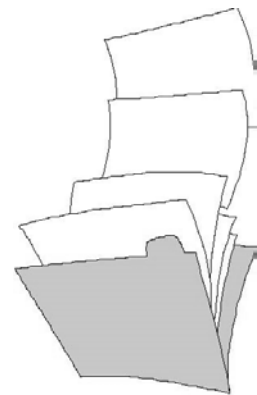
Ensure that documentation is kept showing that staff had been trained on the information contained in these Guidelines.

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.

Product Care Association
604-592-2972 ext. 216 | 1-888-811-6234
pickup@lightrecycle.ca



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 LightRecycle 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 fluorescent lamps and HID lamps. There is no risk to your health when the lamps 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 cleanup 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 - Lamps Collection Standard

The Light Recycle 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 (CFLs and fluorescent tubes) and HID lamps are commonly used in households and businesses and are considered safe under normal conditions of use. However, fluorescent lamps and HID 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.¹

Disclaimer

The Lamps 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
 - 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

¹ Health Canada 2009. The Safety of Compact Fluorescent Lamps.<http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cfl-afc-eng.php>

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 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 that loading equipment is available for loading and unloading (at minimum pallet jack).
6. Ensure the storage area is not near sensitive areas such as drains
7. Have appropriate signage to inform consumers that it is a collection site and have program information available for the customer
8. Only accept program products as defined in the Guidelines
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 customers for the program service
12. Keep program materials segregated from any non-program products 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 products, 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
6. 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

Appendix B - Forms

The Container Request Form and the Incident Report Form are listed on the following pages.

Please keep these forms blank and photocopy as need.

BOL#:	OFFICE USE ONLY
CARRIER:	
DATE EXP:	

LightRecycle 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:

# OF BULB BOXES (24" x 20" x 24")		# OF 8' TUBE BOXES (96" x 10" x 10")	
# OF Gaylord BOXES (48" x 40" x 48")		# OF PLYWOOD BOXES	
# OTHER (GIVE DETAILS)			

SUPPLIES NEEDED:

GAYLORD BOX (48" x 40" x 48")		SPILL KIT	
8ft BOXES (96" x 10" x 10")		PACKING TAPE	
BULB BOXES (24" x 20" x 24")		SHIPPING PALLETS	
PLYWOOD BOXES			
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

FAX: 604-592-2982

pickup@lightrecycle.ca

PHONE: 1-888-811-6234

Employee Name _____ Signature _____

Manager Name _____ Signature _____

Appendix C - Accepted and Not-Accepted Products

Accepted Products

The program includes all lamp technologies including:

LAMPS

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.



LAMPS

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)

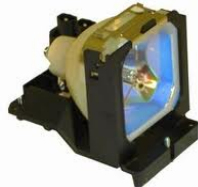
Solid-state lamps used for specialty purposes and conventional lighting applications. All base types including pin-type, screw-in, etc.



LAMPS

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.



Not Accepted Products

Lighting Fixtures:

Lighting fixtures, ranging from flashlight to table lamps, wall fixtures and chandeliers, are included in the LightRecycle program but not all collection sites collect these products. Only selected collection sites that have signed a contract with Product Care for this purpose should accept lighting fixtures on behalf of the program. Lighting fixtures should NOT be placed in the boxes provided for lamps.

Examples of lighting fixtures include:

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

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

Appendix D-Product Container Photos

To assist your staff with proper placement of lamps into the correct containers –should be 4 types of collection

48"x40"x48" Gaylord Container for 4 foot Lamps



24"x20"x24" Bulb Box for CFL, Halogen, LED & Incandescent Lamps



24"x20"x24" Bulb Box for HID Lamps



96"x10"x10" Lamp Box for 8 foot Lamps

