

Mercury-containing Light Recycling Program

Collection Site Guideline

October 2016



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Program Overview

Thank you for becoming a Collection Partner in the Washington State Recycling Program, **LightRecycle Washington**. These guidelines are provided to help ensure safe management and transportation of mercury-containing lights that are dropped off at your Collection Site.

Our Collection Partners enhance their communities and our State by helping reduce the number of mercury-containing lights that enter our landfills. Retail Collection Partners also benefit from increased customer traffic and from letting their community know that they care about the environment.

This document is intended to provide practical guidance to collectors in the LightRecycle Washington program and should be used to train personnel in the handling and management of Program materials. In addition, all collectors must comply with the requirements of the Mercury-Containing Lights Law (RCW 70.275) (the "Law") and rule WAC 173-910-520. For more information, visit: <u>www.ecy.wa.gov/programs/swfa/mercurylights</u>

How the Program Works

Washington State residents bring unwanted mercury-containing fluorescent tubes/bulbs and High Intensity Discharge (HID) lights to authorized Collection Sites during business hours. As stated in the Law, collections sites can accept **up to 10 lights on any given day** from any individual, business or organization in Washington State. **There is no charge to drop the lights off**. Collection sites safely store the lights using containers and supplies provided by the program. The Program picks up full collection containers and provides replacement empty containers. . See Section 3 below for information on how to arrange the pick up of full containers and the re-supply of empty containers.

Safety

Fluorescent tubes, bulbs and HID lights accepted by the Program contain a small amount of mercury, which can pose a risk to human health and the environment if the light is broken. Take care when handling lights to prevent breakage. If a light is broken, open a window or door, leave the immediate area where the breakage occurred and consult the broken light handling procedure in Section 4 of this manual. Clean-up information is also available at the Washington State Department of Ecology Website:



www.ecy.wa.gov/mercury/mercury_bulb_cleanup.html.



LightRecycle Washington LightRecycleWA.org info@LightRecycleWA.org Phone: (877) 592-2972 x 354 Fax: (206) 343-7445



Section 1: Approved Materials for Collection

Washington State residents, businesses and other organizations can drop-off up to 10 mercury-containing lights per day at any authorized Collection Site.

Collection Partners accept the lights for recycling, store them in provided containers, and call for pick-up when containers are full. The LightRecycle Washington program provides all containers, supplies, transportation and recycling services.

ACCEPTED LIGHTS:

Accepted Lights: LightRecycle Washington will accept lights that contain mercury and provide functional illumination in homes, businesses, and outdoor stationary fixtures. The most common categories of these lights are described below.



ALL SHAPES AND SIZES OF THESE LIGHTS ARE ACCEPTED

Compact Fluorescent Lights (CFL's)

CFLs are known for their "corkscrew" design, but also come in a wide range of shapes, sizes and styles.



Fluorescent Tubes

Straight (or linear) fluorescent tubes come in sizes from one to eight feet. Other fluorescent tubes include Ushaped, circular and other curved shapes.



High Intensity Discharge (HID)

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

For further assistance in identifying accepted lights, including definitions and pictures, please refer to Appendix C.



NO CHARGE DROP-OFF

Under this program, <u>no fees</u> can be charged to customers dropping off accepted lights for recycling.

ACCEPTING BROKEN LIGHTS



Fluorescent tubes and bulbs that have been broken accidentally can be accepted at your collection site. Residents may bring their broken bulb and the materials used to clean it up (such as paper towel or cardboard) in a sealed plastic bag or other air-tight container. If a resident brings in a broken light, ensure it is in a sealed container and add it to the other materials that are being collected for recycling.

The program does not accept lights that have been intentionally crushed in quantities, either manually or mechanically (i.e. by a drum-top crusher, also known as a bulb crusher).

NON-PROGRAM LIGHTS AND PRODUCTS

LightRecycle Washington only accepts mercury-containing lights (lamps, bulbs and tubes) that contain mercury and provide functional illumination in homes, businesses, and outdoor stationary fixtures.

The Program does not accept incandescent, halogen, LED, or other lights that do not fit the above description. Collection sites can use LightRecycle Washington promotional literature to help explain this limitation to consumers. LightRecycle Washington provides this literature to Collection Sites at no charge.

LightRecycle Washington is not responsible for non-program materials accepted at Collection Sites.

Section 2: Collection Site Set-Up

LightRecycle Washington will provide each Collection Site with supplies and marketing materials needed to collect materials safely and effectively.

SUPPLIES

Collection Sites will be provided with:

- Boxes for all bulbs and u-shaped and curved tubes
- Boxes or fiber drums for fluorescent tubes (4 feet or less)
- Boxes or fiber drums for florescent tubes (over 4 feet and up to 8 feet)
- Broken Light Clean-up Kit





NOTE: Boxes will ship flat with a plastic liner and re-closable zip tie and require minimal assembly prior to use.

SIGNAGE AND MARKETING MATERIALS

Signage and promotional materials are intended to raise awareness about recycling lights. Examples of promotional pieces may include:

- Window Sign
- Brochure and/or rack card, detailing the recycling program
- Promotional Magnets
- Shelf Talkers
- Door Stickers
- Counter Stands (for 8.5" x 11" flyer)

These materials are provided at no charge to Collection Partners and can be re-ordered by:

- Telephone:
- Order online at www.LightRecycleWA.org.

Please display signage and promotional pieces prominently. Contact us with questions, feedback, or to request additional materials.

CHOOSING A STORAGE LOCATION

You will need a storage location for collected lights and program supplies. Recommendations for the storage location include:

- Select a storage location that can easily be accessed by personnel who are carrying lights that have been dropped off, but is away from high-traffic areas.
- Storage area should be inaccessible to the public (i.e. authorized personnel only) except in settings designed for supervised self-service.
- It should be easy to move full containers of lights from the storage area to transport vehicle.
- The floor surface should be impervious, and the area should be dry, protected from the weather and free of debris and away from drains. Wet lights cannot be transported for recycling.
- The space used for collection containers must hold a minimum of:
 - two boxes for bulbs (approx. 14" x 10" x 24"),
 - two boxes for 4-foot fluorescent light tubes (8" x 8" x 48") and
 - one box for 8-foot fluorescent light tubes (8" x 8" x 96").
- Secure the area during non-operating hours.



• The storage location must be equipped with a Broken Light Clean-up Kit provided by the Program.



The Collection Site is only required to accept lights during regular business hours. However, if lights accepted by the Program are abandoned at the Site when closed, please add them to your collected materials for recycling.

Section 3: Collecting and Storing Lights

LIGHTS SHOULD BE HANDLED, STORED AND TRANSPORTED CAREFULLY TO AVOID BREAKAGE. LIGHTS COLLECTED THROUGH THIS PROGRAM WILL BE MANAGED AS UNIVERSAL WASTE.

FOR MORE INFORMATION, REVIEW THE WASHINGTON STATE UNIVERSAL WASTE RULE FOR LAMPS, WAC 173-303-573(5).

At retail store collection locations and some municipal facilities, lights will be received by site personnel and placed in containers at the designated storage area. Customers and visitors

should not have access to the collection containers. Some municipal facilities may allow individuals to place the lights into the containers themselves during operating hours, as long as site personnel is available to answer questions regarding acceptable materials and quantities.

CFLs, HIDs and u-shaped or circular tubes go in the smaller boxes. Linear tubes are placed in boxes for the



appropriate length (tubes that are 4 feet or under should go in the 4-foot boxes. Tubes longer than 4 feet go in the 8-foot boxes). All containers will come with a plastic liner and re-closable zip tie.

The following methods will ensure safe light handling and risk minimization:

- Handle collected lights gently to prevent breakage. The lights should be handled by their bases, not the glass portion.
- Set lamps into the containers carefully. Do not drop, throw or toss lights.
- All containers will include a plastic liner which must be in place before the container is used to hold lights.



- Store the lights in a secure area where they will not be run into or toppled.
- Keep CFL, HID and shaped tubes separate from linear tubes.
- Do not tape or use rubber bands to hold bubs or tubes together. Tape must be removed before the lights are placed in the storage containers.
- Use provided containers to collect lights. The containers must remain structurally sound and lack evidence of leakage, spillage or damage.
- Broken lamps must be cleaned up immediately.
- Do not over-fill collection containers as they will be difficult and dangerous to close and may be rejected for shipping.
- Do not force fluorescent tubes in the collection container. If a tube does not slide into place within the container, the container is full.
- Do not stack material on top of collection containers.

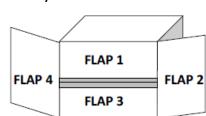
PACKAGING

Cardboard boxes used to collect, store and ship CFL and HID lights are assembled and sealed like other boxes, with one important exception: **All open flaps must be sealed closed with packing tape.** This requirement, the plastic liner and re-closable zip tie, minimize leakage, even if the lights shift or break during transport.

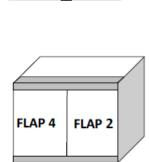
Collection Box Assembly: Bulbs

- 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.
- 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.
- 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: 4 foot and 8 foot Tube boxes

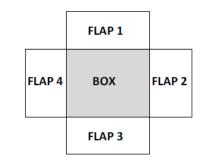


FLAP 4



FLAP 2







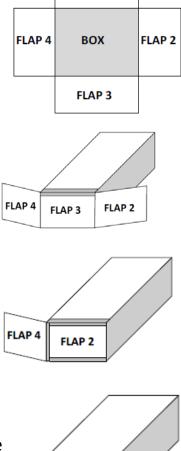
Cardboard boxes used to collect, store and ship linear fluorescent lights are assembled and sealed like other boxes, with one important exception: **All open flaps must be sealed closed with packing tape.** This requirement, the plastic liner and re-closable zip tie, minimize leakage, even if the lights shift or break during transport.

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.
- 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.
- 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.



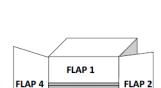
FLAP 4

FLAP 1

Taping Method for Full Bulb Boxes

Cardboard boxes used to collect, store and ship CFL and HID lights are assembled and sealed like other boxes, with one important exception: **All open flaps must be sealed closed with packing tape.** This requirement, the plastic liner, and re-closable zip tie, minimize leakage, even if the lights shift or break during transport.

- 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.



FLAP 3

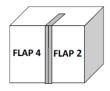
FLAP 1

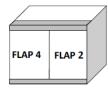
BOX

FLAP 3

FLAP 2

FLAP 4









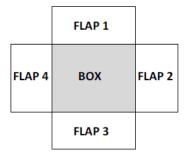
Taping Method for Full Fluorescent Tube Boxes

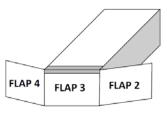
Cardboard boxes used to collect, store, and ship linear fluorescent lights are assembled and sealed like other boxes, with one important exception: **All open flaps must be sealed closed with packing tape.** This requirement, the plastic liner, and re-closable zip tie minimize leakage, even if the lights shift or break during transport.

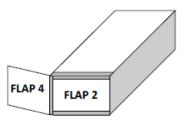
1. Once the box is full, open the flaps as shown (top view).

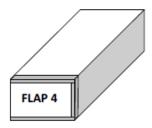
Note: All flaps are full flaps.

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











PREPARING COLLECTED MATERIALS FOR TRANSPORT

The collected lights should be stored and packaged in a way that avoids breakage.

- Do not tape bulbs or tubes together or use rubber bands.
- Do not overfill containers.
- Close the liner bag securely with the re-closable zip tie and seal containers so that they will not leak, even if the contents shift or break during transport.
- Check that the box is structurally sound and has no evidence of damage.
- Seal boxes with packing tape in preparation for ship-out. Please see the Taping Methods above for both types of boxes.

PREPARING AND ARRANGING FOR TRANSPORT

Timing: You should order a pick-up at least two weeks before all of your containers are full. <u>Do</u> not wait until you are down to your last empty box.

Before scheduling a pick-up, make sure that containers being shipped are sealed securely for transport. Transport vehicles that have been scheduled may not wait once they have arrived on site.

- a. The carrier will arrive at your location with a Bill of Lading (BOL) to document the pick-up. It will already be completed with the number of pieces they are picking up.
- b. Review the BOL for the pick-up. Confirm that it is complete and make any changes that are necessary. Double check these items to be sure they are correct:
 - i. The number of boxes and category of materials they contain (i.e. fluorescent lights, CFLs or HIDs)
 - ii. The Collection Site address



It is your responsibility to make sure that shipping information is correct.



HOW TO ORDER A PICK UP

Large Collection Sites	Small Collection Sites		
Shipping <u>fiber drums, pallet boxes</u> or <u>at least</u> <u>five boxes</u> at a time.	Shipping less than five boxes at a time, using recycling kits that ship via FedEx.		
To schedule a Pick-up use one of these two methods:	Single boxes can be placed with other boxes that are being picked up by FedEx.		
 Log in at LightRecycleWA.org and complete the Schedule a Pick-up/Supply Order form. 	If no regular FedEx pick-up schedule is in place, schedule a pick-up through FedEx online at www.fedex.com or by calling (800)		
 Call EcoLights at (888) 214-2327 to arrange transportation or order supplies 	<u>GO-FEDEX</u> .		

Section 4: Broken Lights at Your Collection Site

RISKS

Mercury containing lights contain a small amount of mercury, which is toxic and can pose a threat to human health and the environment if the light is broken. A careful and prompt cleanup of broken lights will minimize exposure to staff, customers and the environment.

Clean-up Procedure Web Pages:

WA Department of Ecology Fluorescent Light Clean Up:

www.ecy.wa.gov/mercury/mercury_bulb_cleanup.html

BROKEN LIGHT CLEAN-UP KIT

The program will supply each collection site with a kit for cleaning up broken fluorescent or HID lamps. If you need replacement items, please complete the Schedule a Pick-up/Supply Order form at LightRecycleWA.org or call EcoLights at (877) 214-2327.



CLEAN-UP PROCEDURE

Be careful not to break fluorescent bulbs. However, if a bulb breaks, do not panic; just follow these simple instructions:

Avoid breathing vapors or touching broken materials. Do not vacuum or sweep.



- 1. Open windows to vent vapors for at least 15 minutes. Leave the area during this time.
- 2. Use stiff paper or cardboard to pick up large pieces.
- 3. Use duct tape to pick up small pieces and powder.
- 4. Wipe the area clean with a damp paper towel or wet wipe.
- 5. Place all materials in an air-tight container, such as a plastic bag that is completely sealed with tape. Be sure to include the broken light and any items that were used to clean it up.
- 6. Place the sealed bag in a light collection box. It will be processed for recycling.
- 7. Wash your hands.



Section 5: Record Keeping and Reporting

RECORD KEEPING

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

REPORTING INCIDENTS OR FINES

Injuries to collection site staff are extremely rare. However, should they occur, the collection site will provide notice of the following to the program:

- Incidents of these types must be reported to LightRecycle Washington within 24-hours of the occurrence:
 - o Injuries requiring the assistance from a Doctor or first responders
 - Incidents that are reported to OSHA (Occupational Safety and Health Administration)
- Any regulatory orders or fines within 48 hours of receiving such orders or fines



LightRecycle Washington LightRecycleWA.org info@LightRecycleWA.org Phone: (877) 592-2972 x 354 Fax: (206) 343-7445



Section 6: Training

Collection Sites are responsible for training employees in safe and effective program procedures. The program is designed to be self-directed, using this manual as a guideline.

This guideline is intended to provide practical guidance and best management practices for the handling and storing of products collected under the Washington Mercury-Containing Lights Product Stewardship Program. This guideline should be used by Collection Site managers to instruct staff in required program practices.

The practices described in this guideline are not intended to replace or relieve the site operator or staff of any standards, acts or regulations required under local, state or federal law.

PCA Product Stewardship, Inc. 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.

All collection site workers must understand these Guidelines and have a clear understanding of:

- The handling and management of lights including but not limited to:
 - Potential hazards and risks associated with handling lights
 - o Proper and safe handling and packaging of lights
 - o Ways to reduce risk
 - Safety and emergency procedures
- Broken light clean-up procedures
- The operations training program and policies/procedures set by the program
- The identification of program and non-program products
- The completion of proper shipping documentation and record keeping

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

Collection Site Operators should schedule regular training sessions with staff members who have emergency response responsibilities. This will help keep staff informed and up to date on Program procedures.



Appendix A – Collector Requirements

All authorized, LightRecycle Washington Collection Sites agree follow these Collector Requirements:

(1) Mercury-containing lights must be collected free of charge. Collection Sites cannot charge for lights that are dropped off and recycled through the LightRecycle Washington program.

(2) Collectors may not intentionally crush or process collected lights. All collected lights must be sent to the LightRecycle Washington authorized processor for recycling.

(3) Collectors must comply with the standards for collection small quantities of universal waste (WAC 173-303-573), as well as all other applicable laws, rules, and local ordinances. Collection Site guidelines provided by the Program will outline these responsibilities.

(4) As an approved collection site, you must:

(a) Staff the site during operating hours;

(b) Notify LightRecycle Washington of changes in hours and days of operation;

(c) Handle collected lights in a way that prevents releases of mercury to the environment;

(d) Have a mercury release response plan that describes the materials, equipment, and procedures to clean up broken lights. (LightRecycle Washington will provide you with one if you do not have one of your own.)

(e) Have a worker safety plan (provided by LightRecycle Washington) that describes safe handling procedures to protect worker health and safety;

(f) Package and ship collected lights using supplies provided by LightRecycle Washington. These supplies are designed to minimize the release of mercury into the environment by volatilization (or any other means) and reduce breakage.

(5) A collector must allow the Washington State Department of Ecology or LightRecycle Washington access for inspections to determine compliance with the Collection Site requirements.

(6) No entity may claim to be collecting mercury-containing lights for LightRecycle Washington unless the entity is registered with LightRecycle Washington as a collector and submits all collected mercury-containing lights to transporters and processors authorized by LightRecycle Washington.

(7) All Collection Site locations must maintain general liability insurance of at least \$1,000,000 per occurrence. If requested by the Washington State Department of Ecology or LightRecycle Washington, the Collection Site must provide documentation indicating that the liability policy is in place with contact information for the insurance carrier or agent.

(8) Any collector found to be out of compliance with the collector requirements will have its participation in the program cancelled.



Appendix B – Forms

- PICK-UP REQUEST
- CONTAINER REQUEST



Please keep these forms blank and photocopy as needed.

LightRecycle Washington
Pick-up Request



Please fax this form to: (206) 343-7445

	TODAY'S DATE:
COLLECTION SITE NAME:	
ADDRESS:	
PHONE:	FAX:
SHIPPING HOURS:	
CONTACT PERSON:	
TO BE PICKED UP:	Quantity
BULB BOXES (CFLs and HIDs)	
4' FLUORESCENT TUBE BOXES (8" x 8" x 48")	
8' FLUORESCENT TUBE BOXES (8" x 8" x 96")	
Fiber Drum (length:)

SPECIAL SHIPPING INSTRUCTIONS:

LightRecycle Washington Container Request



Please fax this form to: (206) 343-7445

	TODAY'S DATE:		
COLLECTION SITE NAME: ADDRESS:			
PHONE:		FAX:	
SHIPPING HOURS:			
CONTACT PERSON:			
CONTAINERS REQUESTED:		Quantity	
BULB BOXES (CFLs and HIDs)			
4' FLUORESCENT TUBE BOXES (8"	′ x 8″ x 48″)		
8' FLUORESCENT TUBE BOXES (8"	′ x 8″ x 96″)		
4' Fiber Drum			
SPECIAL SHIPPING INSTRUCTIONS	5:		



Appendix C – Accepted and Not-Accepted Products List

The program includes all lamp mercury-containing lights including:

Accepted Products							
Fluorescent Tubes - Straight/Linear							
Includes all diameters and light output	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.						
6	= =		1 =		*		
Fluorescent Tubes - Curved/Circula	r						
Includes all diameters and light outputs in a curved/circular configuration (curved, square, U, etc.).							
	QD		\square	ant .	Ø		
UV and Germicidal Lamps							
UV or germicidal lamps of all shapes and sizes. All base types including pin-type, screw-in, etc.							
		and the second sec					





Pictures are shown as illustrative examples only and should not be considered an endorsement of any brand or supplier



NOT Accepted • Non-Program Products

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.

