

# Understanding Universal Waste

## Boston Green Tourism

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# Agenda

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# Regulations and Recycling



## RCRA

- The Resource Conservation Recovery Act (RCRA) of 1976 regulates the generation, treatment, storage, handling, transportation, and disposal of hazardous waste. Under RCRA, the US Environmental Protection Agency (EPA) clearly states that spent fluorescent and high intensity discharge (HID) lamps are hazardous waste, and it is illegal to dispose of them as a solid waste in the dumpster or compactor. There are fines for improper disposal. Under the US EPA regulations, fines can be up to \$25,000 per occurrence.

## Universal Waste Rule (UWR)

- In 1995 the US EPA adopted a set of regulations called the Universal Waste rule. The UWR significantly reduced the regulatory burden for business that generate these wastes. UW was defined as batteries, mercury thermostats, and pesticides. In 1995 the US EPA added hazardous waste lamps. This designation reduces paperwork and transportation requirements to promote recycling. Universal wastes, including fluorescent lamps and batteries, must either be recycled at a licensed facility or treated at a permitted hazardous waste facility. Solid waste disposal is not a legal option.

# Regulations and Recycling



## Adoption

- Although the law was federally adopted, the rules did not become effective in an individual state until that state adopted the rules. By 2003 all states had adopted UW. States are allowed to add wastes to their UW rules. Many states have added low level mercury lamps, as well as electronics and aerosol cans.

# UW Background

Federal Universal Waste Rule 1995 (40 CFR 273)

Allows Common, Low Hazard Wastes To Be Managed Under Less Stringent Requirements Than Other Hazardous Wastes

Designed To Reduce Hazardous Waste In Municipal Solid Waste Stream

Encourage Recycling

Reduce Regulatory Burden On Businesses Who Generate These Wastes

- Batteries
- Certain Recalled Pesticides
- Mercury Containing Thermostats
- Fluorescent Lamps



# UW Requirements



## Prohibitions

- No Trash Or Landfill
- No Treatment – Activity That Changes Characteristics
  - Lamp Crushing
  - Draining Mercury From Thermostats

## Notification

- Not Required For Small Quantity UW Generator
- No EPA Number Required for Small Quantity UW Generator

## Accumulation Time Limits

- One Year
- Extension For Special Circumstances

## Document Accumulation Start Date

- Label Universal Waste
- Label Containers Of Universal Wastes

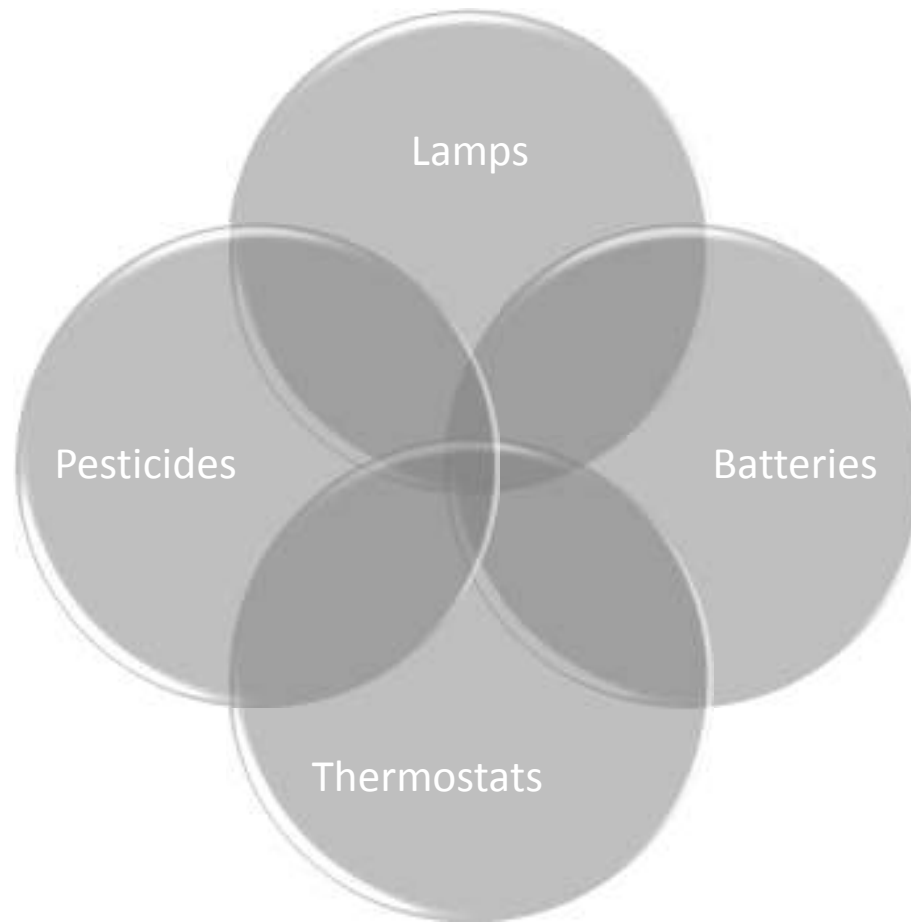
# UW Requirements



## Waste Management

- Properly Contain Wastes
  - Proper Packaging: Closed, Structurally Sound, Compatible, Prevent Leakage or Breakage
- Clean Up Releases
  - Broken Lamps, Broken CRT Glass
  - Repackage And Manage As Universal Waste
- Train Employees
  - Handling
  - Packaging, Labeling
  - Storage
  - Releases

# Universal Waste





# What About Crushed Lamps?

## • EPA

- The US EPA rules state that crushing of lamps is considered treatment. Treatment is defined as any process that changes the characteristics of the hazardous waste.

## • States

- In most states generators are prohibited from treating hazardous waste without a permit. Oftentimes the permit requires medical monitoring of the operator to check mercury levels. Crushed lamps must be shipped as hazardous waste on a hazardous waste manifest, not as universal waste on a bill of lading. The generator becomes subject to stringent state and federal regulations.

- **It is important to note that the mercury filter, when full, must be disposed of as hazardous waste as well.**



# Establish a Process for Managing Lamps



Designate an area within your facility to store lamps. Bigger facilities may need more than one location for easier access.

Make sure employees know whom to call if they see that a lamp is burned out.

Consider re-lamping areas in bulk. Rather than replacing individual lamps when they fail, re-lamp entire rooms or floors at the same time. This will permit easier collection and shipping of lamps to a recycling facility. But make sure you're getting the maximum amount of life from the lamps in the area before you re-lamp.

# Safely Handle and Store Spent Lamps



Prevent exposure, save money disposing of higher-cost broken lamps and prevent breakage by storing and packing lamps safely.



Storage Option 1: Put used lamps in original boxes, with no packing material. Make sure you completely seal the box to prevent leaks from bulb breakage. If you are combining used lamps with new ones, mark the used with a piece of tape or a permanent marker (be sure tape or marker is located next to receptacle).

Storage Option 2: You can also purchase specially made lamp containers for used lamp storage. These containers are often reusable, very durable and won't tip over easily. Your lamp recycler may have a container that they like to use to make shipping or pick-up easier.

# What We Do



Veolia recycles mercury containing lamps and other hazardous lamps such as high pressure sodium. Veolia also recycles the glass and metal from non hazardous lamps such as incandescent and halogen.

Veolia recycles PCB and Non PCB lamp ballasts.

Veolia also recycles household, commercial, and industrial batteries, computers and electronics, mercury devices such as thermometers and thermostats, and power distribution equipment such as transformers.



# Service Types

## Large Quantity or “Bulk” Recycling

- Recycling for large “Bulk” quantities (greater than a pallet of lamps) is done with Veolia owned trucks or approved third-party transporters. We schedule pickups as needed or scheduled “milk runs” in some Providence’s upon request of the customer. The bulk pick up program is good for re-lamp and retrofit projects and also for large facilities and consolidators of waste.

## Small Quantity Recycling

- Recycling for small quantities, less than a pallet of lamps (25 cases) is best accomplished with the RecyclePak® program. The RecyclePak® program includes prepaid return shipping for boxes and pails for universal waste. There is a wide selection of packaging supplies. RecyclePak® allows for quick turnaround, and on time waste pickup at the customers convenience. The RecyclePak® program is great for ongoing facility maintenance.

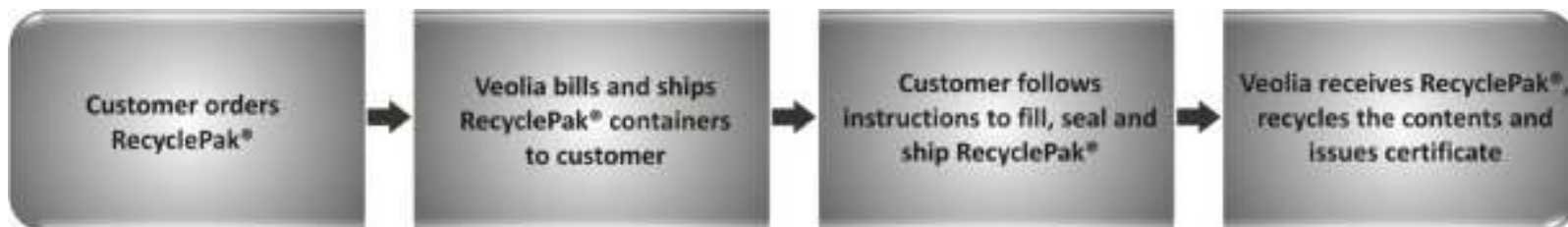


# Service Types



## How Small Quantity or “RecyclePak” Works

- Customer orders online, emails or faxes Veolia customer service representatives a complete Order Form.
- Order is received and entered into our computer system.
- Order is billed on a per container basis upfront.
- RecyclePak® containers are shipped from Greenville, WI. Please allow 3-6 days for delivery of RecyclePak® containers.
- Customer receives RecyclePak® containers and follows the instructions to properly assemble, fill, seal and ship the container.
- When the RecyclePak® container is sealed and ready for shipping, customers contact Purolator Courier toll-free at 1-888-669-9725 to request a pickup.
- RecyclePak® containers are delivered to the Veolia Ottawa facility, where they are stored till full truck loads are accumulated and then shipped to our Stoughton, MA facility where they are recycled.
- A Certificate of Recycling is issued to the customer.



# Available Containers

- A wide variety of packaging and sizes designed to fit your needs.
  - Straight Fluorescent lamps
  - U-tubes and HIDs
  - CFLs
  - Ballast
  - Batteries
  - Mercury Devices
  - Computer Electronics
  - Dental Waste



# Service Types



## How Large Quantity or “Bulk” Recycling Works

- Customer emails or faxes Veolia customer service representatives a complete Bulk Service Request Form
  - This form includes the generator address and contact information, material type, and quantity.
  - Veolia enters this information into our computer system.
- Veolia schedules the pickup directly with the generator within 7-10 working days.
- The waste is transported to the nearest Veolia facility, where it is received, recorded, and recycled.
- Our driver arrives with pre-printed waste labels and shipping documents (either hazardous waste manifest or bill of lading).
- Customer receives the invoice from Veolia Environmental Services accounting department in Port Washington, Wisconsin, along with a copy of the Certificate of Recycling for billing purposes.
- Waste is billed on a unit basis with transportation and/or packaging charges.





## Going Green, Sustainability, and Social Responsibility



These are not just buzz words, it's now the way of life.

- Being green and environmentally responsible makes sound business sense.
- Studies have shown that consumers today and those of tomorrow will be more conscious of the practices of manufacturers and businesses and will take allegiance with those demonstrating a strong commitment to the environment.
- Consumers are more savvy than they have ever been and have access to information resources that simply did not exist 20 years ago, that's why it's critical to not only appear green but to actually do something with substance that has a measurable and positive effect.
- That is where Veolia steps in. We help you turn your waste into a resource!



