



# NJDEP Universal Waste Generator Requirements

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COMPREHENSIVE COMPLIANCE OVERVIEW – SPECIFICALLY  
FOR SMALL QUANTITY HANDLERS

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DATE: DECEMBER 2, 2025

# Rachel's Bio

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I have been with NJDEP for about 6 years, conducting mandated hazardous waste compliance inspections which include the regulation of used oil, universal, waste, and regulated medical waste.

Received BS in Environmental Biology in 2017. Previous work experience was in a laboratory setting. Born & raised in NJ. Always knew I would be in the environmental field.

# Maria's Bio

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I've been with NJDEP for 27 years since 1998. My specialty has always been in the hazardous waste compliance group. Prior to NJDEP, I worked in private industry. I was on your side of the coin for many years working to maintain compliance with the federal and state regulations.

# Training Objectives

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Understand	NJDEP Universal Waste regulations
Identify	Regulated waste streams
Learn	Proper labeling, storage, and transport
Review	Inspection & recordkeeping requirements
Avoid	Costly violations for non-compliance

# What Is Universal Waste (UW)?

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- Subset of hazardous waste designated by USEPA that can be managed under simplified regulations.
- Allows for alternative management options for these specific hazardous waste streams. Reduces certain regulatory burdens (ex. No manifest required, less stringent transporter requirements).
- Encourages recycling and proper disposal for waste streams that are mismanaged frequently and pose hazards in the municipal solid waste stream.
- When properly managed, presents low risk in the collection, storage, and transportation.

## Why It Matters for Businesses

- Protects employee safety and environment

- Reduces regulatory burden for common wastes

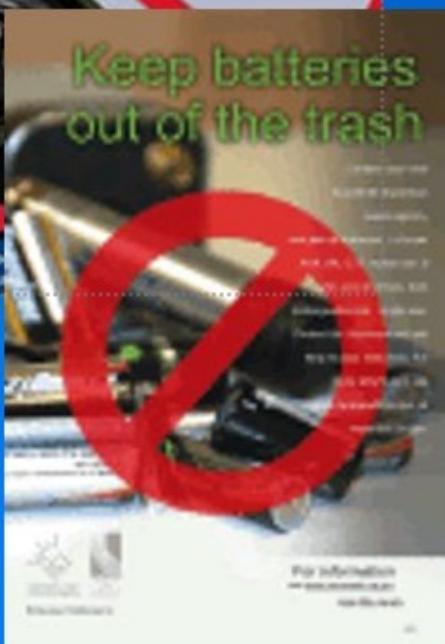
- Prevents violations and fines

- Supports sustainability initiatives

# Regulatory Framework

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- 1994 - U.S. EPA adopted the Universal Waste Rule (40 CFR Part 273)
- 1996 – NJDEP adopted the UWR under the SW Recycling Regulations (NJAC 7:26A-7 et. seq)
- Each state may choose to adopt additional waste streams provided it meets EPA's criteria
- Federally regulated: batteries, lamps, pesticides, mercury-containing equipment
- Additional NJ wastes: consumer electronics and oil-based finishes
- Federally added: Aerosol cans (2020)



Example on how NOT to store  
UW Lamps



# Universal Waste Streams in New Jersey



Batteries



Lamps



Consumer electronics



Pesticides



Oil-based finishes



Mercury-containing equipment



Aerosol cans

# Batteries



Definition: device consisting of one or more electrically connected electrochemical cells that is designed to receive, store and deliver electric energy

Examples – nickel-cadmium, nickel-metal hydride, lithium-ion, lead-acid, mercury, silver-ion, rechargeable alkaline products

Batteries that are not considered hazardous waste and therefore not covered by UWR - alkaline batteries.

# Lamps

Definition: bulb or tube portion of an electric lighting device

Examples – fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, metal halide



# Consumer Electronics

Definition: appliance that includes circuitry

Examples - components & subassemblies of electronic products including computers, printers, copiers, VCRs, & televisions



# Pesticides

Definition: Any substance or mixture of substances labeled, designed or intended for use in preventing, destroying, repelling or mitigating any pest

OR

Any substance or mixture of substances labeled, designed, or intended for use as a defoliant, desiccant, or plant regulator





## Oil-Based Finishes

Definition: Paint or other finish that may exhibit a hazardous waste characteristic or contains a listed hazardous waste. Must be in original packaging.

Examples – oil-based paints, lacquers, stains

## Mercury-Containing Equipment

Definition: Product component that uses elemental mercury, sealed in an ampule or other container, as a functional component

Examples – mercury switches, thermometers, thermostats





# Aerosol Cans

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- Definition: non-refillable receptacle containing a gas compressed, liquified or dissolved under pressure, the sole purpose of which is to expel a liquid, paste or powder and fitted with a self-closing release device allowing the contents to be ejected by the gas
- Aerosol cans containing more than 1 inch of hazardous waste – can be managed as UW
- Aerosol cans containing less than 1 inch of hazardous waste – meet the standard for empty containers under 40 CFR 261.7, can be recycled as scrap metal

# UW Handler Categories

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Knowing your facility's handler categories is fundamental to understanding how to stay compliant.

- **Small Quantity Handler (SQH):** accumulates <11,000 lbs. (5,000 kg) of UW on-site at any given time
  - Examples – most small businesses, schools, retail stores, etc.
- **Large Quantity Handler (LQH):** accumulates  $\geq$ 11,000 lbs. (5,000 kg) of UW on-site at any given time
  - Examples – Large manufacturing plants, distribution centers, recycling hubs, etc.

**This presentation is going to focus on the requirements for Small Quantity Handlers of UW.**

## Key Regulatory Differences

Requirement	Small Quantity Handler (SQHUW)	Large Quantity Handler (LQHUW)
EPA ID Number	Not required unless already have one for hazardous waste.	<b>Must obtain</b> an EPA ID Number (via NJDEP) before accumulating $\geq 5,000$ kg.
Notification to NJDEP	Not required for universal waste activity.	<b>Must notify</b> NJDEP/EPA of universal waste management activities.
Accumulation Time Limit	Up to 1 year from the date waste is generated or received.	Same — 1 year maximum accumulation.
Employee Training	Must ensure employees are familiar with proper handling and emergency procedures for UW.	Must provide <b>formal training</b> for employees managing universal waste (documented, covering proper handling & emergency procedures).
Tracking / Recordkeeping	Not required to keep shipment records, though it's recommended.	<b>Required</b> to keep records (logs, bills of lading, manifests, or receipts) of each universal waste shipment <b>for at least 3 years</b> .
Off-Site Shipments	May send UW only to another handler, destination facility, or foreign destination.	Same, but <b>must ensure</b> shipments go only to proper destination facilities and maintain documentation.
Response to Releases / Spills	Must immediately contain releases and determine if cleanup residues are hazardous waste.	Same, but must also document incident response and include in training.
Mixed Wastes (UW + HW)	If UW becomes mixed with hazardous waste → full hazardous waste regulations apply.	Same.

# SQH Requirements

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- Properly label containers of UW
- Inform employees of proper handling and emergency procedures
- Accumulate UW within one year- maintain evidence that UW was accumulated within one year or justification if went over one year
- Ship UW offsite to another UW handler or a destination facility
- Contain/clean up all UW releases/spills. Determine if release/spill is a hazardous waste and manage appropriately.
- Limited processing allowed – removal of mercury ampules from mercury containing devices, de-manufacturing of consumer electronics

# Container Management

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- All UW must be stored in a container that is closed and structurally sound.
  - EXCLUDES batteries and consumer electronics
- All UW can be labeled with the words “Universal Waste” and the type.
  - Please review labeling options.
- Accumulation start date label is not required but is recommended to demonstrate compliance with accumulation time limit (one year)
  - Can also be demonstrated using shipping documents

# Employee Training

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- All employees handling universal waste must be trained on the proper handling and emergency procedures appropriate to the types of universal waste handled at the facility
- Topics: identification, handling, emergency procedures
- Informal training, no documentation needed.
  - Inspectors will determine compliance based on how UW is being stored onsite and/or the level of knowledge that employees understand regarding UW management.
  - It is recommended to document training to easily show compliance during inspection.

# UW Destination Facilities

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- Regulated as either a hazardous waste disposal facility if conducting treatment of UW or a Class D Recycling Center if conducting recycling activities.
- Class D Recycling Center – must obtain approval from NJDEP to conduct recycling activities (processing)
- Recycling activities include:
  - De-manufacturing of UW consumer electronics
  - Crushing UW lamps or consumer electronics
  - Mixing & screening of UW – oil-based paints
  - Recovery of mercury from UW – mercury containing devices

# Transportation & Recordkeeping

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- UW shipped to Class D Recycling Center do **not** have to be transported by NJ licensed HW transporter
- UW shipped to hazardous waste disposal facility **must** be transported by a NJ licensed HW transporter.
- Hazardous waste manifest is NOT required.
- There is no recordkeeping requirement for SQHs of UW, BUT they must be able to demonstrate the length of time that UW has been accumulating onsite during an inspection.
  - Two ways to do this
    - Accumulation start date label on each UW container (most accurate)
    - Maintaining shipping documentation from past shipments

## Alternative Management Practices

### Fluorescent Lamp Crushing

- The intentional breaking of fluorescent and mercury lamps for the purpose of volume reduction. Lamps lose UW status and are managed as fully-regulated hazardous waste.

### Aerosol Can Puncturing & Draining

- The intentional puncturing and draining of hazardous aerosol cans with >1 in. of hazardous waste. Aerosol cans lose UW status and are managed as scrap metal. Liquid hazardous waste is managed as fully-regulated hazardous waste.



# Fluorescent Lamps- Alternative Management Practice

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- Fluorescent Lamp Crushing Device – Crushed lamps needs to be managed as hazardous waste
- Required to obtain an air permit per N.J.A.C. 7:27-8.2(c)17.
  - Equipment needs a positive ventilation of the process and broken bulb container through a filter and mercury control, such as a carbon bed. The mercury containing carbon, or other absorbent, must then be properly recovered and disposed so the mercury is not emitted to the air.



# Lamp Drum Top Crushing Machines (DTCs)

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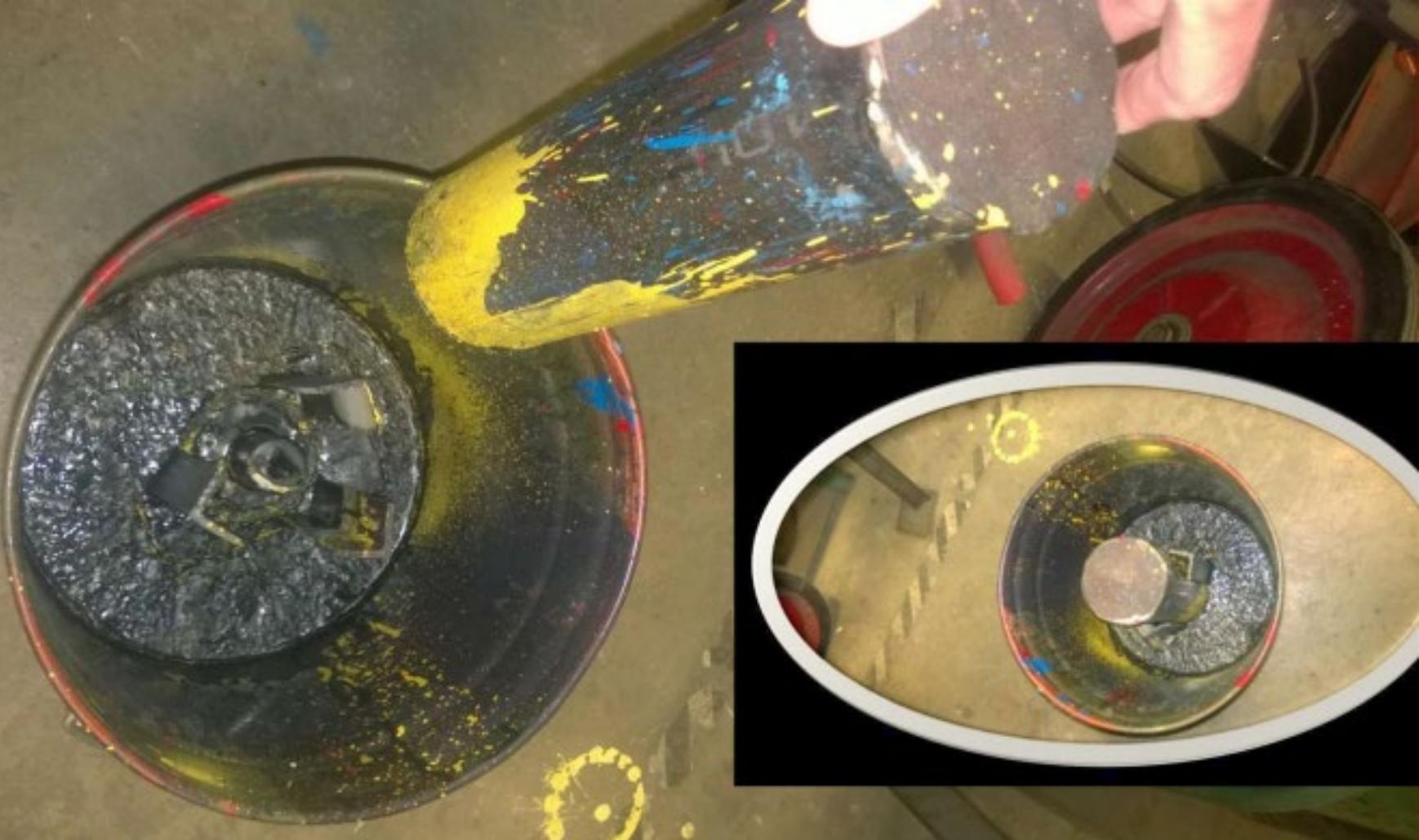
- DTC requirements
  - Segregated Operations
  - Employee training & notification procedures
  - Protective equipment for operators
  - Mercury emission monitoring
  - Operational Log

## Aerosol Cans – Alternative Management Practice

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Puncturing & Draining – recycle empty cans as scrap metal and manage drained residuals as hazardous waste

- A device must be used that is specifically designed to safely puncture cans and effectively contain the residual contents and any emissions.
- A written procedure must be established: Including proper assembly, operation and maintenance of puncturing unit; Segregation of incompatible wastes, Proper waste management practices to prevent fires or releases.
- Maintain, on-site, a copy of the manufacturer's specifications and instruction for puncturing unit
- Ensure employees operating the device are trained in the proper procedure.



Home-Made Can Puncture Station

**NOT ALLOWED!!**

# Aerosol Cans Puncturing & Draining

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Key points for safe puncturing



- Device is securely mounted and grounded to prevent static discharge
- Aerosol can is placed into puncturing chamber, and a lever mechanism is activated to safely puncture the can
- Residual contents are drained into the drum and vapors are filtered (often via an activated carbon filter) before release
- Operator uses safety gear and the setup is in a well-ventilated area

# Class D Recycling Centers in NJ

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- Recycle UW consumer electronics and other UW.
- Northern Region
  - Electronic Recycler Int. Inc.
  - Back Thru The Future
  - NewTech Recycling Inc.
- Central Region
  - EACR Inc.
  - Monmouth Wire
  - Fortune Metal
- Southern Region
  - Thanks for Being Green, LLC

# Class D Recycling Centers -Solar Panel Waste

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- RD&D Permit, Certificate of Authority to Operate a Research, Development & Demonstration Project – Solar Panels
  - Class D facilities can obtain an approval through a RD&D Permit allowing them to accept non-hazardous, end-of-life (EOL) solar panels.
  - Must manage solar panels according to approval.
- Class D facilities with a RD&D Permit
  - Electronic Recycler Int. Inc.
  - EACR Inc.
  - Monmouth Wire

# Lithium Battery Waste

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Lithium-ion battery modules and cells lie scattered after they caught fire at a universal waste battery handler in late 2021.

- USEPA is working on a proposal for UW standards specially tailored for lithium batteries, separate from the existing general battery UW category.
- This change was initiated by these batteries causing fires when improperly discarded or otherwise mismanaged at the end of their lives. Establishing a category for UW lithium batteries will improve safety standards, while continuing to promote battery recycling.

# Thoughts?



# Thoughts?



# UNIVERSAL WASTE

CONTENTS

CRT - WASTE  
(Monitor)

ACCUMULATION START DATE

10/18/04

SHIPPER

B46 - B4

ADDRESS

CITY, STATE, ZIP

HUAF PICK-UP DATE: 10/18/04



Thoughts?

Thoughts?



# Key Takeaways

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- UW are still hazardous waste, subject to reduced management requirements.
- UW in NJ – batteries, lamps, consumer electronics, pesticides, oil-based finishes, mercury-containing equipment, and aerosol cans.
- There are alternative management options for lamps and aerosol cans
- Large Quantity Handlers (>11,000 lbs.) have more regulatory requirements than Small Quantity Handlers.
- Recyclers of UW are regulated as Class D Recycling Centers

# Resources

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- [Universal Waste | US EPA](#)
- [Improving Recycling and Management of Renewable Energy Wastes: Universal Waste Regulations for Solar Panels and Lithium Batteries | US EPA](#)
- [NJDEP | Division of Sustainable Waste Management | Class D Recycling Facilities](#)
- [Microsoft PowerPoint - RD&D permit, Certificate of Authority Solar Panels - Read-Only](#)
- [COMPLIANCE ASSISTANCE](#)