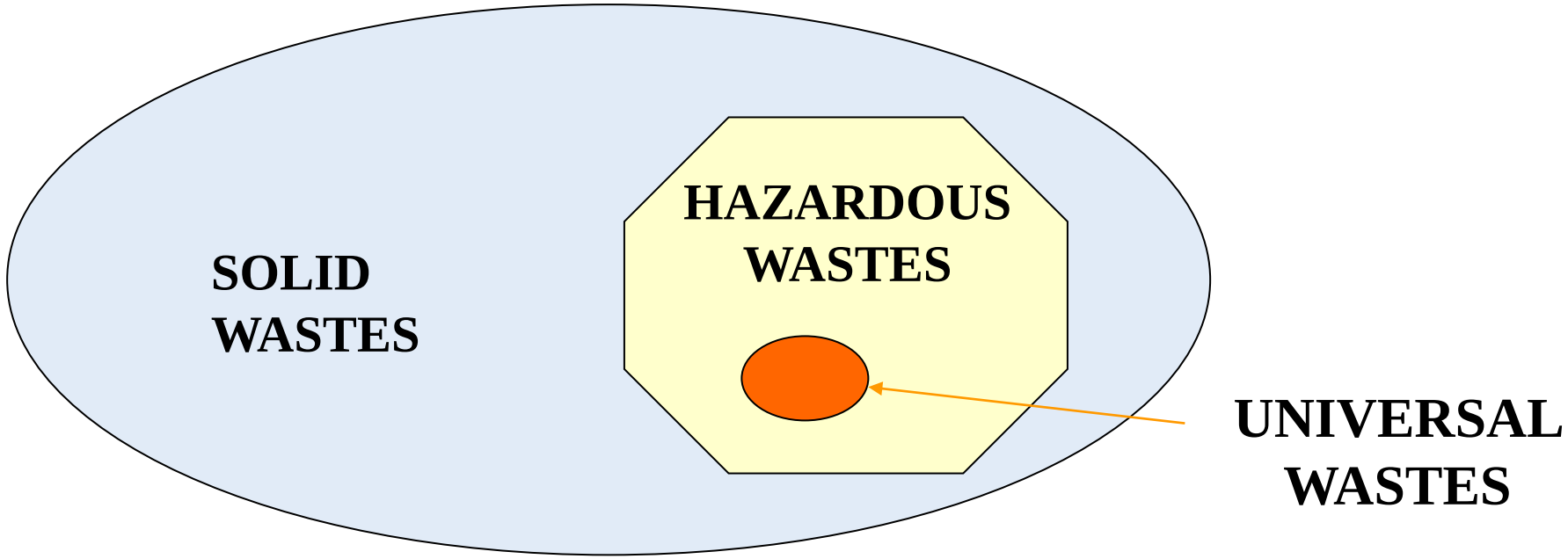
Adding Aerosol Cans to the Universal Waste Regulations

Where does Universal Waste fit?



- Universal waste categories must be hazardous waste before they can be designated as universal wastes
- Waste universally generated in large quantities by various facilities
- They are exempt from full hazardous waste regulations, but must still be managed separately from general trash

What are Universal Waste?

- The federal universal waste regulations are found in Title 40 of the Code of Federal Regulations (CFR) in part 273 and apply to five types of universal waste

- North Carolina adopted the federal regulations for universal waste (15A NCAC 13A .0119)

* Aerosol Cans were considered a Universal Waste in North Carolina on February 7, 2020.

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How do the Universal Waste Rules Simplify Disposal Options?

- No costly analytical testing/reporting required
- Universal wastes do not have to be accumulated in a hazardous waste accumulation area
- Universal waste is not counted toward total monthly hazardous waste generation rate
- May keep universal waste on site for up to one year

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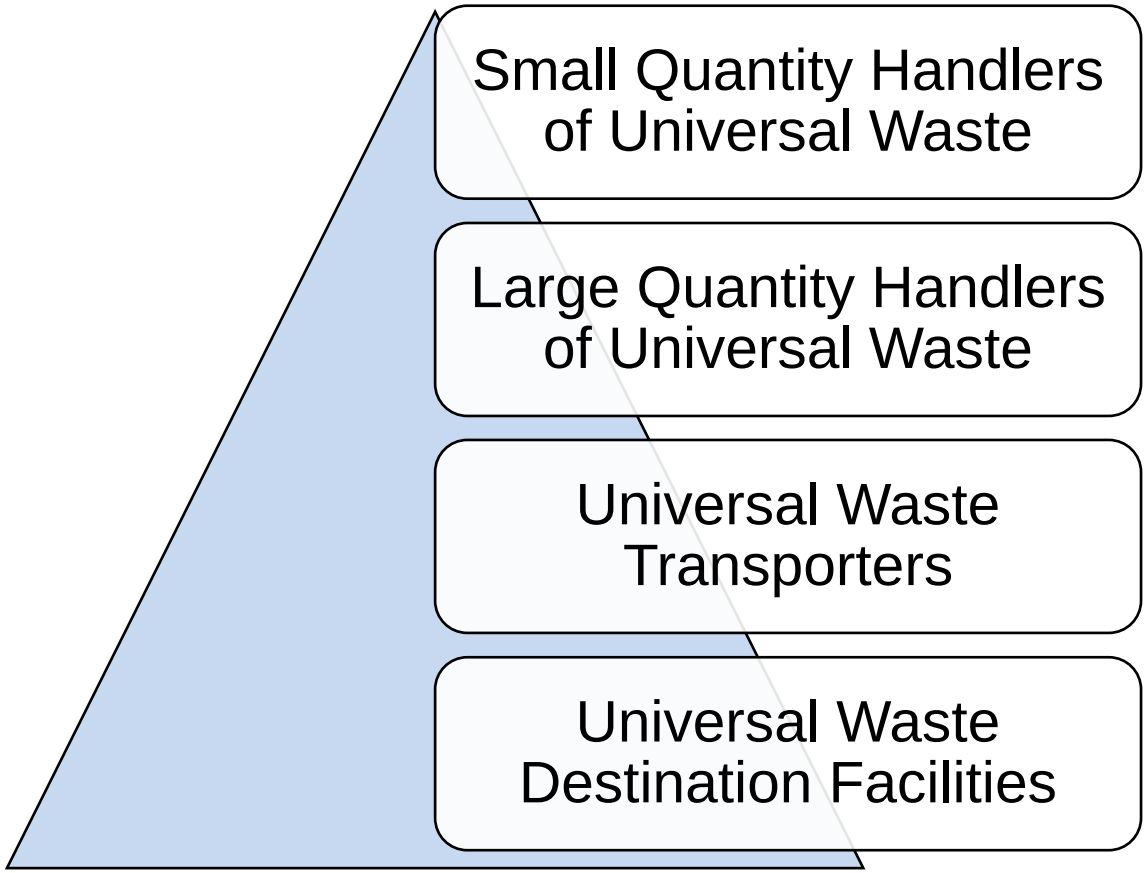
Regulated Participants in the Universal Waste System



Two Types of Universal Waste Handlers

Small Quantity Handlers of Universal Waste (SQHUW)

- Generates
- Collects
- **Accumulates < 5,000 Kg***
- May NOT treat/dispose

Large Quantity Handlers of Universal Waste (LQHUW)

- Generates
- Collects
- **Accumulates ≥5,000 Kg***
- May NOT treat/dispose

* Must include weight of all universal waste at site at any one time.

Comparison of Universal Waste Handlers

SQHUWs	LQHUWs
No EPA ID	EPA ID
Universal Waste Label	Universal Waste Label
Proper Training to Inform	Proper Training to Make Thoroughly Familiar
No Shipping Records Required	Shipping Records for Three Years
1-Year Accumulation	1-Year Accumulation

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Training for Universal Waste Handlers

Small Quantity Handlers of Universal Waste (SQHUW)

- Handler of universal waste must inform all employees who handle or have the responsibility for managing universal waste.
- The information must describe proper handling and emergency procedures appropriate to the type of universal waste.

Large Quantity Handlers of Universal Waste (LQHUW)

- Must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

Prohibitions for Handlers

Disposal - handlers are prohibited disposing of universal waste

- Except for a provision allowing farmers to dispose of waste pesticides for their own use on their own farms

Treatment – handlers are prohibited from diluting or treating universal waste

- Except by responding to releases (273.17) or managing specific wastes (273.13)
  - Removing electrolytes from batteries
  - Puncturing aerosol cans

Shipments for Handlers

- Handlers must send universal waste only to:
  - Other universal waste handlers (40 CFR 273 Subpart B or C),
  - Destination facilities (40 CFR 273 Subpart E), or
  - Foreign destination (40 CFR 273.18 or 273.38)

- Handlers that self-transport their own universal waste off-site becomes a universal waste transporter and must comply with the universal waste transporter requirements (40 CFR 273 Subpart D)

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Universal Waste Transporters

40 CFR 273 subpart D

- Must meet applicable DOT requirements (49 CFR part 171 through 180)
- Universal waste transporter that stores universal waste for more than 10 days, becomes a universal waste handler and must comply with universal waste handler requirements (40 CFR 273 subparts B and C)
- Must transport to a universal waste handler, a destination facility or a foreign destination
- Must immediately contain all releases or universal wastes & other residues from universal waste
- Prohibited from treating, diluting and disposing of universal waste

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A Note About Transportation

If universal waste is shipped out of North Carolina, to a state (or through one), that has not yet adopted the regulations, the universal waste can still be managed as a universal waste on-site in North Carolina, but would need to be transported as a hazardous waste (or by any other state requirements) until the receiving state (or any states the waste travels through) adopts the regulation.

Adding Aerosol Cans to the Universal Waste Regulations

- Final Federal Rule published in the Federal Register December 9, 2019

  Link to Federal Register: https://www.govinfo.gov/content/pkg/FR-2019-12-09/pdf/2019-25674.pdf

- **Effective** on federal level and in North Carolina on February 7, 2020

- Adds aerosol cans to 40 CFR 273 Universal Waste Regulations

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Adding Aerosol Cans to the Universal Waste Regulations

Definition of **Aerosol Can**:

"Aerosol can means a non-refillable receptacle containing a gas compressed, liquefied 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."

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Applicability for Aerosol Cans Added to the Universal Waste Regulations

Aerosol Cans not covered by rule are ones that:

- Are not yet a solid waste under 40 CFR 261
  - If it can be used for its intended purpose, it is not yet a solid waste
- Are not hazardous waste
  - An aerosol can is not a hazardous waste if it does not exhibit one or more hazardous waste characteristic identified in 40 CFR 261 subpart C and/or is not listed in 40 CFR 261 subpart D

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Applicability for Aerosol Cans Added to the Universal Waste Regulations

Aerosol Cans not covered by rule are ones that:

- Meet the standard for empty containers under 40 CFR 261.7 (basic overview below)
  - If aerosol can held an acute hazardous waste, the container must be triple rinsed to be considered empty.

  Otherwise,
  - All wastes have been removed that can be removed using common practices to remove materials, (e.g., pouring, pumping, and aspirating) and
  - No more than 2.5 cm (1 inch) of residue remains on the bottom of the container or inner liner
  - For a compressed gas: When the pressure in the container approaches atmospheric

DO NOT *throw aerosol cans in the trash unless you are* ***CERTAIN*** *they are empty!!*

Inspectors will check your trash cans.

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Side Note About Empty Aerosol Cans

- In order to recycle the can as a scrap metal (40 CFR 261.6(a)(3)(ii)) it must not contain a "significant" amount of liquid

- Aerosol cans that have been punctured and drained so that most of any remaining liquid remaining in the can may flow from the can and drain (e.g., with punctured end down) would not contain "significant" liquids

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Applicability for Aerosol Cans as Universal Waste

Question: Do I have to puncture and drain aerosol cans to manage them as universal waste?

No, universal waste aerosol cans may be:

- Managed intact (Slide 19-22) or
- Punctured and drained (Slides 20-33)

just make sure you following the associated requirements for each activity

Question: Does the aerosol can have to be empty to manage it as a universal waste?

No, the aerosol can does not have to be empty in order to manage it as a universal waste. It must be empty (with no significant liquids) once it is punctured/drained and managed as scrap metal.

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Applicability for Aerosol Cans Added to the Universal Waste Regulations

Generation of Waste Aerosol Cans

- A used aerosol can becomes a waste on the date it is discarded
- An unused aerosol can becomes a waste on the date the handler decides to discard it

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Allowed Activities Involving Universal Waste Aerosol Cans

As long as each individual aerosol can is ***not breached and remains intact***, the following is allowed:

- May be sorted into type
- May be mixed in one container
- May remove actuators to reduce risk of accidental release

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Adding Aerosol Cans to the Universal Waste Regulations

Universal Waste Aerosol Cans must be:

- Managed in a way that prevents releases of the universal waste or any universal waste component to the environment.
- Accumulated in a container that is:
  - Structurally sound,
  - Compatible with the contents and
  - Lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and
  - Protected from sources of heat.

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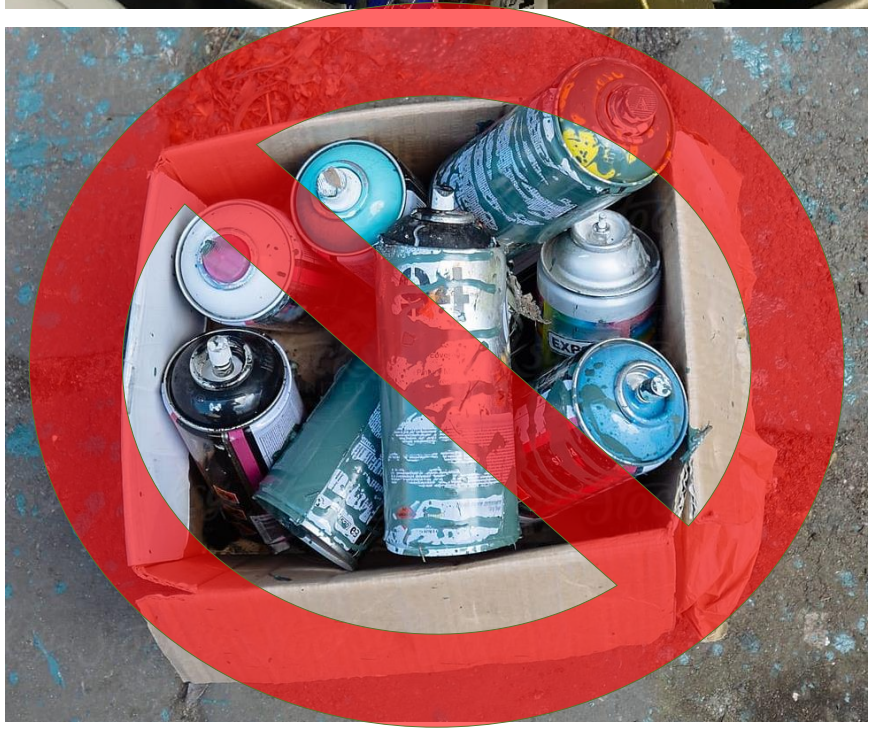

This cardboard box is not structurally sound.

Adding Aerosol Cans to the Universal Waste Regulations

- If the aerosol can shows evidence of leakage, spillage or damage, must be:
  - Packaged in a separate closed container or
  - Overpacked with absorbents or
  - Immediately punctured and drained.

- Labeled (each aerosol can or container in which the cans are contained) with one of the following phrases:
  - "Universal Waste – Aerosol Can(s)"
  - "Waste Aerosol Can(s)"
  - "Used Aerosol Can(s)"

Puncturing and Draining Aerosol Cans

Aerosol Cans may still be managed as a universal waste prior to puncturing and draining provided specific conditions are met (see next slides).

Puncturing and Draining Aerosol Cans

If universal waste aerosol cans are *<u>punctured and drained</u>*:

- The empty can must be recycled
- A device must be used that is specifically designed to safely puncture cans & effectively contain the residual contents and any emissions

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Aerosol Puncturing Device

Alternative Puncturing Devices

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Aerosol Can Puncturing Devices

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Puncturing and Draining Aerosol Cans

If universal waste aerosol cans are *<u>punctured and drained</u>*:

- The empty can must be recycled
- A device must be used that is specifically designed to safely puncture cans & effectively contain the residual contents and any emissions

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Home Made Can Puncture Station

Puncturing and Draining Universal Waste Aerosol Cans

If universal waste aerosol cans are *punctured and drained*:

- A written procedure must be established detailing how to safely puncture & drain cans:
  - 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

Puncturing and Draining Universal Waste Aerosol Cans

If universal waste aerosol cans are *punctured and drained*:

- Ensure puncturing of cans is done in a manner designed to prevent fires and releases of any component to the environment
  - This includes, but is not limited to, locating the equipment on a solid, flat surface in a well-ventilated area
- Immediately transfer contents from the waste aerosol can, or puncturing device, if applicable, to a container or tank that meets the applicable requirements (for VSQG, SQG, LQG or satellite accumulation)

Puncturing and Draining Universal Waste Aerosol Cans

If universal waste aerosol cans are *punctured and drained*:

- Conduct a HW determination on the emptied aerosol can and its contents per 40 CFR 262.11
- Any hazardous waste generated as a result of puncturing/draining is subject to all applicable hazardous waste rules and must be managed accordingly
- A written procedure must be in place in the event of a spill or release and a spill clean-up kit must be provided
- A spill or releases of the contents must be cleaned up promptly

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Basic Overview of the Typical Universal Waste (UW) Aerosol Can Management Flow

Aerosol can that can no longer be used for intended purpose

Accumulated prior to puncturing and draining

Basic Requirements
- Container must be structurally sound,
- Compatible with contents,
- Lacks evidence of leakage, spillage, or damage
- Protected from heat sources
- Labeled "Used Aerosol Can(s)," "Waste Aerosol Can(s)," "Universal Waste - Aerosol Can(s)"
- Must not remain on site for more than one year

Puncturing Device (must meet requirements described in UW rules)

Punctured aerosol can requires a waste determination. If empty, must be recycled as scrap metal.

Material drained from aerosol can requires a waste determination. Typically the container under puncturing unit (capturing drained material) is managed as a hazardous waste container.

Accumulated intact (not punctured)
As long as individual aerosol can is not breached & remains intact, the following activities are allowed: the actuator may be removed (to reduce risk of accidental release), aerosol cans may be sorted by type, or aerosol cans may be mixed in one container.

Basic Requirements
- Container must be structurally sound,
- Compatible with contents,
- Lacks evidence of leakage, spillage, or damage
- Protected from heat sources
- Labeled "Used Aerosol Can(s)," "Waste Aerosol Can(s)," "Universal Waste - Aerosol Can(s)"
- Must not remain on site for more than one year

Before the one year mark, must be sent to another UW Handler, UW Destination Facility, or Exported (must meet requirements described in UW rules).

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Frequent Questions about Aerosol Can Management

Question: Can aerosol cans be managed under the hazardous waste rules instead of the universal waste rules? Can I still puncture and drain aerosol cans if I manage them as a hazardous waste?

Answer: Generators may continue to manage their hazardous waste aerosol cans under 40 CFR part 262 (and may puncture and drain them if part of a legitimate recycling process) but must comply with all the requirements of 40 CFR part 262. Companies cannot pick and choose among the requirements of the two sets of standards. Off-site handlers that accept aerosol cans for puncturing and draining must follow the universal waste requirements of 40 CFR part 273.

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Frequent Questions about Aerosol Can Management

Question: I puncture and drain most of my aerosol cans, but I have some that I do not want to puncture (because they will mess up the operation of the puncturing device [e.g., adhesives, expandable foam] or I don't want to mix it with the waste collected in the drum under the puncturing device [e.g., incompatibles or pesticides]. Can I manage some aerosol cans as intact universal waste aerosol cans while the other aerosol cans are universal waste that are punctured and drained?

Answer: Yes. It is suggested that a written SOP be developed and training for staff that manage the aerosol cans so they understand which are managed intact as universal waste and which are punctured and drained as universal waste.

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Frequent Questions about Aerosol Can Management

Question: I have some aerosol cans that I'd like to continue to manage as hazardous waste but others I want to manage as universal waste. Is this allowed?

Answer: Yes. It is suggested that a written SOP be developed and training for staff that manage the aerosol cans so they understand which are managed as hazardous waste and which are managed as universal waste. The two different management strategies may not intersect (i.e., a facility may not pick and choose between the management strategies... It is all or none. A hazardous waste aerosol can may not switch mid management to a universal waste and vice versa.)

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Frequent Questions about Aerosol Can Management

Question: My universal waste aerosol cans are shipped out of state to a state that has not yet adopted aerosol cans as a universal waste. What should I do?

Answer: If universal waste aerosol cans are shipped out of North Carolina, to a state (or through one), that has not yet adopted the regulations, the universal waste aerosol cans may still be managed as a universal waste on-site in North Carolina, but would need to be transported as a hazardous waste (or by any other state requirements) until the receiving state (or any states the waste travels through) adopts the regulation.

Frequent Questions about Aerosol Can Management

Question: Who do I contact if I have questions about aerosol can management?

Answer: Contact your local Hazardous Waste Section Inspector. Click on this link for a map showing the Inspector region and contact information:

https://files.nc.gov/ncdeq/Waste+Management/DWM/HW/Compliance/Compliance_Map_by_Inspector.pdf

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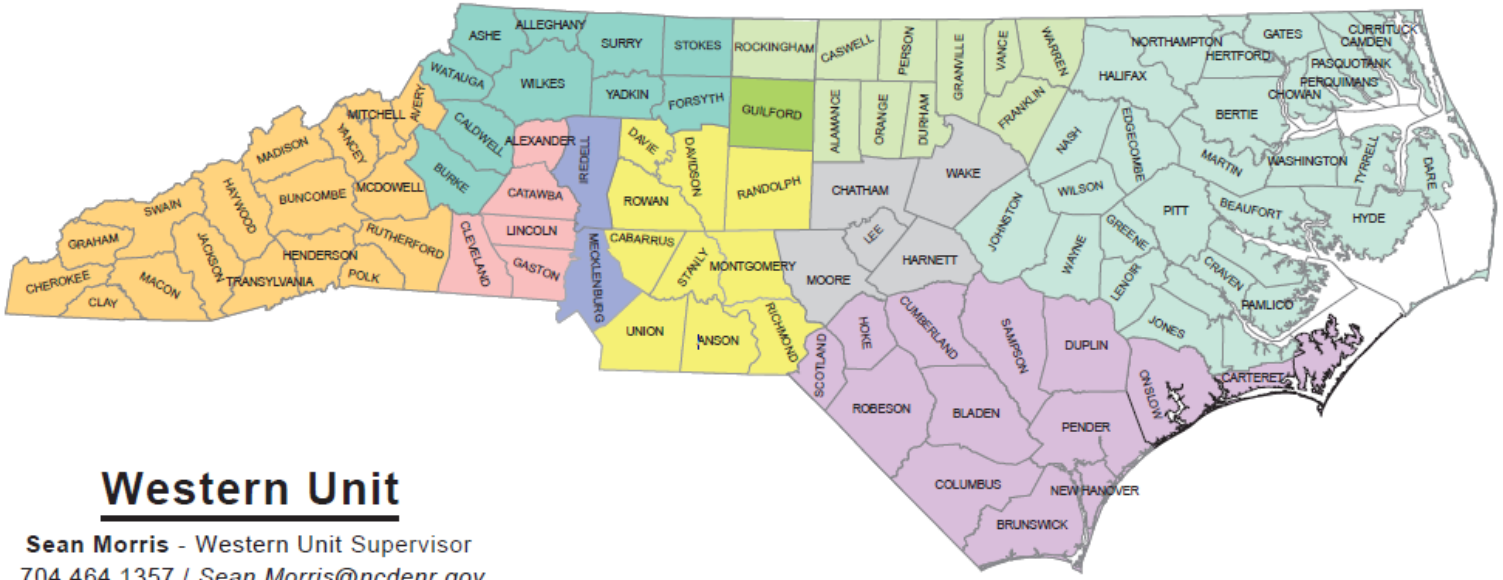
North Carolina Department of Environmental Quality
Division of Waste Management
Hazardous Waste Section - Compliance Branch

REGIONAL INSPECTOR MAP

Brent Burch - Branch Head / 828.321.9585 / *Brent.Burch@ncdenr.gov*



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https://files.nc.gov/ncdeq/Waste+Management/DWM/HW/Compliance/Compliance_Map_by_Inspector.pdf

Adding Aerosol Cans to the Universal Waste Regulations

For More Information (Federal Rule, FAQ, History):

https://www.epa.gov/hw/increasing-recycling-adding-aerosol-cans-universal-waste-regulations

For North Carolina Guidance Documents:

https://deq.nc.gov/about/divisions/waste-management/hw/technical-assistance-education-guidance/documents

Go to "Aerosol Cans" and "Universal Waste"