



**Transport  
LDRs**

**Universal Waste**

**Liquid Industrial Waste**

**Used Oil**





# Michigan Environmental Compliance Conference

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# Environmental Assistance Center (EAC)

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Phone: **1-800-NO2-WASTE**  
(1-800-662-9278)

Hours: 8:00 a.m. to 5:00 p.m.  
Monday through Friday

## Technical Assistance Services Include:

Air	Shoreline Development
Waste	Brownfield Redevelopment
Water	Site Remediation
Wetlands	Storage Tanks

# Waste Session 3

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## Handling Requirements for:

- Transportation
- Land Disposal Restrictions
- Universal Waste
- Used Oil
- Liquid Industrial Waste

## Dos and Don'ts of Managing Waste



A grayscale, low-resolution image of a large truck, possibly a semi-truck, with the word "Transportation" overlaid in a dark teal color. The truck is shown from a front-three-quarter view, and the background is a light, hazy sky. The overall image has a pixelated, low-quality appearance.

# Transportation

# DNRE Transportation Regulations

- Act 451, Michigan Natural Resource and Environmental Protection Act
  - Part 111, Hazardous Waste
  - Part 121, Liquid Industrial Waste
- Act 138, Hazardous Materials Transportation Act



# Hazardous Material

## US DOT vs Act 138

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### US DOT Hazardous Material

- Substances (products & wastes) listed in Hazardous Materials Table found in 49 CFR, 172.101
- Materials exhibiting a hazard during transport
- Hazardous waste is a US DOT hazardous material

### Act 138 Hazardous Material

- Includes only hazardous waste and liquid industrial waste

# Hazardous Material Implementing Authority

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- Michigan State Police, Traffic Safety Division implements US DOT regulations and permits US DOT hazardous material transporters



# Hazardous Material Implementing Authority

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- DNRE implements Act 138 and permits and registers Act 138 hazardous materials transporters.



# Act 138 Hazardous Material Information

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- Act 138 Contacts
  - Barbara Stevens - 586-753-3850
  - Jeanette Noechel - 586-753-3846
  - EAC - 1-800-662-9278  
(1-800- NO2-WASTE)
- Act 138 Web Information
  - Go to [www.michigan.gov/dnre](http://www.michigan.gov/dnre), select “Waste,” then “Hazardous and Liquid Industrial Waste Transporters”

# US DOT Hazardous Material Information

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- **US DOT Contacts**
  - Michigan State Police, Traffic Safety Division - 517-336-6580
  - Intrastate U.S DOT Number Information - 888-464-8736
  - Michigan Center from Truck Safety - 1-800-682-4682
- **US DOT web information**
  - [www.phmsa.dot.gov/hazmat/regs](http://www.phmsa.dot.gov/hazmat/regs)

# Act 138 Transporter Requirements

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- Permit (3 yr) & Registration (1 yr) required for:
  - Hazardous waste transport
  - Liquid industrial waste transport
  - Hazardous and liquid industrial waste transport
- Fleet liability coverage must be maintained for accidental occurrences (no less than \$1,000,000 per occurrence for hazardous wastes and \$750,000 or \$300,000 per occurrence for liquid industrial waste)

# Act 138 Transporter Requirements

**Alliance for Uniform Hazmat Transportation Procedures**  
Uniform Program Credentials

IMPACT ENVIRONMENTAL SVCS INC  
GARY LEPINE  
PO BOX 1700  
TAYLOR, MI 48180

  
**ALLIANCE**  
FOR UNIFORM  
**HAZMAT**  
TRANSPORTATION  
PROCEDURES

USDOT Census #:  
ICC #:  
EPA Transporter ID(S) #: MIK766311119  
Intrastate Motor Carrier #:

Telephone number to call in case of accident or emergency: (877) 424-1460

Uniform Program #:  
Certified By: *Lawrence J. Sullivan*  
Registration Issued: 05/25/2008 Registration Expiration: 06/25/2009  
Issuing Agency: Michigan Dept. of Environmental Quality  
Agency Telephone Number: (566) 753-3850



- Approval of Act 138 permit & registration result in issuance of “Credential” at left
- Credential must be carried at all times by transporter & presented upon inspection
- Credential lists effective period

# Act 138 Transporter Permit/Registration Exemption

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- Self transportation:
  - Applies only to liquid industrial waste (not hazardous waste)
  - Applies only to a motor carrier transporting liquid industrial waste generated on or from property or equipment in which he or she owns an interest

# Act 138 Transporter Permit/Registration Exemption

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- Governmental transportation of liquid industrial and hazardous waste in vehicles owned and operated by government employees
- On-site (not on public roadway) transportation

# Hazardous Waste

## Pre-Transport Requirements

(Rule 305)

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- Package, label, and mark each hazardous waste package in accordance with US DOT regulations AND
- Mark each container of  $\leq 119$  gallons with:
  - “HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the US Environmental Protection Agency.”
  - Generator name and address
  - Generator Site Identification Number
  - Manifest Tracking Number
  - Hazardous waste codes identifying the waste

# Placards

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- SQG shipping > 1000 lbs & LQG must have US DOT placards available for transporters.
- Call Michigan State Police, Traffic Safety Division at 517-336-6580 for more info about placards.



# Hazardous and Liquid Industrial Waste Transportation Requirements

(Rule 403 & Section 12103)

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- Employ only Act 138 permitted & registered transporters to transport hazardous and/or liquid industrial waste by public roadway
- Verify Act 138 transporter credential information by going to [www.michigan.gov/dnre](http://www.michigan.gov/dnre), “Waste,” “Hazardous and Liquid Industrial Waste Transporters,” and “Participating Transporters”



# Self Transportation

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- Self transportation of hazardous waste requires Act 138 permit, registration, & fleet liability coverage unless government employee transporting government waste in government vehicle
- Self transportation of liquid industrial waste may be exempt from Act 138 permit & registration, but is subject to having fleet liability coverage



# Self Transportation

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- Self transport of CESQG waste to HHW collection is exempt from Act 138 permit & registration if transported in volumes < 55 gallons in accordance Op Memo 121-2
- Self transport < 55 gallons without a manifest requires explicit records and transport of volumes  $\geq$  55 gallons requires a manifest

# Self Transportation

(Section 12103(4))

Generators transporting own liquid industrial waste in volumes < 55 gallons does not require manifest if:

- Waste is accompanied by record showing the source & quantity of the waste and the designated facility where the waste is being shipped
- Generator obtains signature from the designated facility acknowledging receipt of the waste and provides a copy of the record of shipment to the designated facility
- Generator retains a copy of the shipment record for 3 years from the date of shipment

# Land Disposal Restrictions

The background image is a faded, grayscale photograph of an industrial or construction site. In the foreground, there is a chain-link fence. Behind the fence, several large, rectangular structures, possibly storage tanks or containers, are visible. In the background, there are more industrial buildings and structures, some with flat roofs. The overall scene suggests a restricted access area, likely related to the 'Land Disposal Restrictions' mentioned in the text.

# Land Disposal Restrictions (LDR) Overview

(Rule 311 and 40 CFR 268)

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- Applies to listed & characteristic hazardous wastes from SQGs & LQGs
- Requires generator characterize, provide LDR notice to TSD, and maintain records 3 years
- Requires treatment before land disposal for most wastes
- Determine if treatment required by reviewing if waste codes for each waste stream meets the standards in 40 CFR 268.40, 268.45 (debris), or 268.49 (soil)

# Land Disposal Restrictions (LDR) Overview

(Rule 311 and 40 CFR 268)

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- Land disposal includes any disposal on land (landfill, land treatment, injection well, salt caverns, etc)
- Notification required even for shipment to non-land based TSDs (e.g. incinerator)
- New LDR notification must be sent when there is a waste or facility change
- Notice sent to each TSD for each waste stating waste meets or does not meet LDR standards

# LDR Generator Recordkeeping

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- Generators treating a prohibited waste to meet the standards in 40 CFR 268.48 must have a written waste analysis plan describing the activities they perform to meet the treatment standards
- All generator LDR records are required to be maintained for 3 years from the last date of shipment or on-site treatment and/or disposal, whichever is later



# **Universal Waste**

# Universal Waste Standards

## (Rule 228)

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**Definition:** A set of streamlined standards for managing hazardous waste that are intended to help facilitate easier, less expensive disposal and/or development of recycling markets

## Universal Waste Types:

Electric Lamps

Batteries

Pesticides

Consumer Electronics

Mercury Containing Devices

Pharmaceuticals

Antifreeze

See DNRE  
Publication Center  
Universal Waste  
Guidance

See DNRE Publication  
Center Electric Lamp  
Guidance

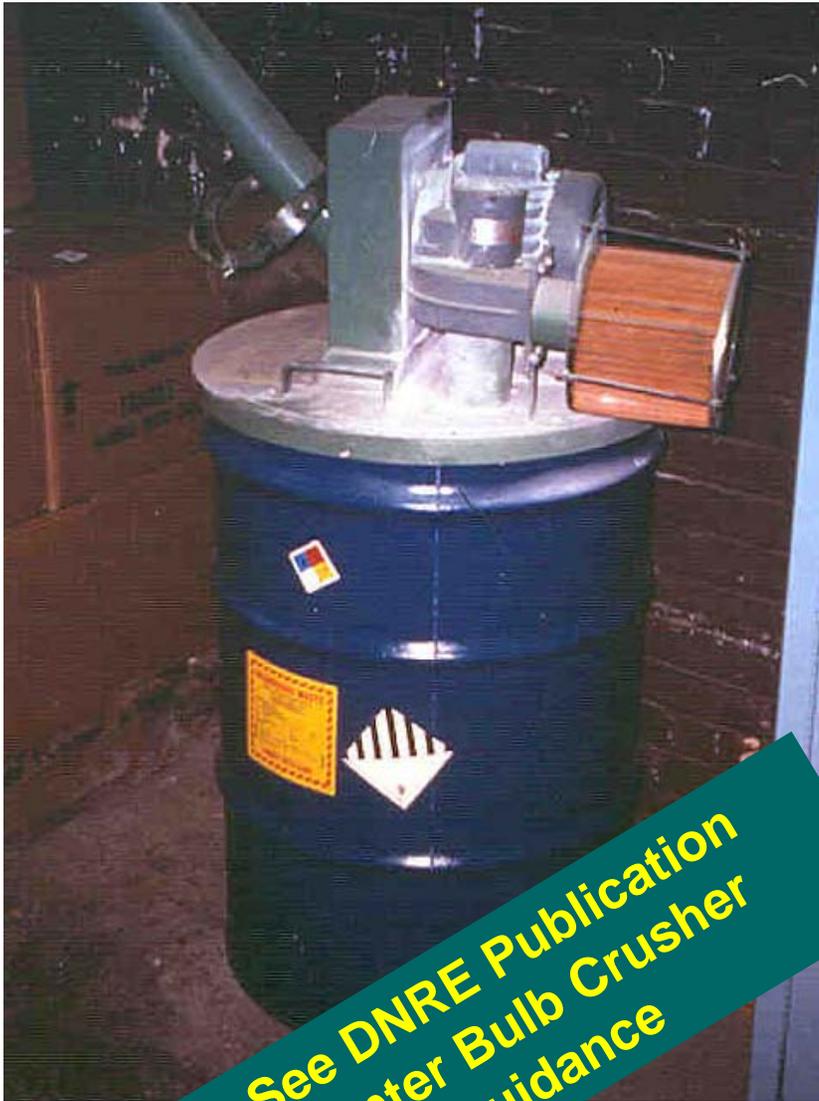


Universal  
Waste  
Electric  
Lamps





**Mismanaged  
Hazardous Waste  
Electric Lamps**



See DNRE Publication  
Center Bulb Crusher  
Guidance

On-site bulb crushers are  
**NOT RECOMMENDED**  
due to possible mercury  
emissions

Discuss requirements with  
WHMD, AQD, and MIOSHA

An air use permit to install is  
required

Crushed bulbs must be  
counted toward generator  
status

# Mercury Devices



***Sales banned***

***Use banned***



***Sales banned***



***Use banned***



Thermostats, automotive mercury switches, sphygmomanometers, & thermometers

# Mercury Collection Options Include

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## Collection options include:

- MDA Clean Sweep Collections ([www.michigan.gov/deqmercuryp2](http://www.michigan.gov/deqmercuryp2))
- Local Household Hazardous Waste Collections
- End of Life Vehicle Solutions Collections ([elvsolutions.org](http://elvsolutions.org))
- Michigan Energy Options ([www.mec.org](http://www.mec.org))

# Consumer Electronics



See DNRE  
Publication Center  
Electronic Equipment  
Guidance



Devices with circuit boards or liquid crystal/plasma displays common to homes and offices and the same devices found in other settings (e.g. computers, cell phones, televisions, stereos, PDAs, DVD players, etc.)

# Pharmaceuticals

See DNRE Publication  
Center Mixed Medical  
Waste Guidance

- Drugs only
- Does not include medical waste
- Medical waste is infectious or potentially infectious (e.g. sharps/needles, vaccines with live viruses, body tissue, etc.)
- Do not mix medical waste with pharmaceuticals unless disposing of the waste at a permitted & licensed hazardous waste incinerator authorized to incinerate mixed medical waste



# Universal Waste Advantages

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- Volume not included when determining generator status
- Can be accumulated up to 1 year (much longer than LQG 90 days and SQG 180 days)
- Less labeling
- No hazardous waste manifest required, but if liquid requires liquid industrial waste manifest
- Credentialed hazardous waste transporter not required, but if liquid requires credentialed liquid industrial waste transporter

# Universal Waste Requirements for All Handlers

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- Cannot dispose of universal waste
- Cannot treat universal waste except when:
  - Responding to a release
  - Performing treatment exempt from hazardous waste permitting/licensing or authorized under universal waste handler regulations
- Manage wastes in a way to avoid releases
- Can accumulate universal waste for up to one year

# Universal Waste Requirements for All Handlers

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- Send or take universal waste to another handler, destination facility, or foreign destination
- Inform employees about proper handling and emergency procedure for the waste
- If mixing universal waste with other non-hazardous wastes, managing mixture according to the universal waste standards
- Make prior arrangement for shipment to another universal waste handler

# Universal Waste Requirements for All Handlers

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- Label each item or container holding items:
  - Universal waste “item name” OR
  - Waste “item name” OR
  - Used “item name”  
(e.g. “Universal Waste Pharmaceutical”  
or “Waste Pharmaceutical” or “Used  
Pharmaceuticals”)
- Meet liquid industrial waste manifesting requirements if liquid
- Meet US DOT regulations for all shipments

# Universal Waste Requirements for All Handlers

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- Meet other state's requirements if shipping waste out-of-state
- If other state does not recognize the waste stream as a universal waste type (and waste must be manifested as a hazardous waste), note in Box 14 of the out-of-state hazardous waste manifest that waste was managed as a universal waste in Michigan
- Meet exportation requirements if shipping universal waste out to other countries

# Universal Waste Handlers

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## Handler Types:

- Small Quantity Universal Waste Handler
  - No Site Identification Form required
  - Handles < 11,000 pounds (total all universal waste types combined) during entire calendar year

# Universal Waste Handlers

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## Handler Types:

- Large Quantity Universal Waste Handler
  - Site Identification Form required
  - Handles  $\geq 11,000$  pounds (total all universal waste types combined) at any time during calendar year

# Used Oil



# Used Oil

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Used oil is “any oil which has been refined from crude oil, or any synthetic oil, which has been used and as a result of use, is contaminated with physical or chemical impurities” and includes:

- Used Motor Oils
- Used Hydraulic Oils
- Used Transmission & Brake Fluids
- All Synthetic Oils
- Spent Quench Oils
- Spent Gear Oils
- Non-PCB Transformer Oils
- Oil-Water Mixtures if sufficient oil exists for legitimate recycling

See DNRE  
Publication Center  
Used Oil Guidance

# Used Oil

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Used oil does NOT include petroleum based products that were not designed to function as lubricating agents or other protective applications

Used oil does NOT include:

- Fuels (Gasoline, Diesel, Fuel Oils)
- PCB Oils (TSCA)
- Mineral Spirits
- Certain Test/ Calibration Fluids
- Animal Fat or Vegetable Based Oil

# Used Oil

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- Used oil is subject to waste regulation under Parts 111, 121, and 167 of the Michigan Natural Resource and Environmental Protection Act
- Part 111 and 121 establish hazardous waste and liquid industrial management standards for the used oil
- Part 167 requires that the used oil be recycled

# Used Oil

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- Used oil generally does not include used oil containing  $>1000$  PPM halogens
- Used oil with  $> 1000$  PPM halogens is a presumed listed hazardous waste unless sufficient characterization data can be presented to “rebut the presumption” that the halogens are present from mixing used oil with a listed hazardous waste (chlorinated solvents)

# Used Oil

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- “Rebutting the presumption” is complicated for transporters & processors accepting used oil from multiple sources and most will not accept used oil > 1000 PPM halogens
- Total halogens are usually tested using SW 846 or using on-site testing equipment like “Chlor-D-Tect”

# Used Oil

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- If used oil contains  $> 1000$  PPM halogens, it is presumed to have been mixed with listed halogenated hazardous waste unless rebutted
- Can also use knowledge of waste to characterize, if feasible, but adequate documentation is required
- Transporter usually tests oil prior to pick-up to verify liquid industrial waste regulatory status and generators should request and maintain copies of relevant test on file

# Used Oil

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- If > 1000 PPM halogens present, additional, costly testing is required to “rebut” whether used oil was mixed with hazardous waste:
  - Analyze for all halogenated Appendix VIII constituent
  - If > 100 PPM used oil fails and must be managed as a hazardous waste
- Conclusion: Do not mix used oil with other wastes to facilitate required recycling and avoid being required to manage the mixture as a hazardous waste

# Labels are required to say “Used Oil”

## Not “Waste Oil”

See DNRE Publication  
Center Release  
Requirements in



# Liquid Industrial Waste

See DNRE Publication  
Liquid Waste Generator  
Guidance



# Liquid Industrial Waste Generator Standards

(includes most Used Oil)

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- Characterize wastes and maintain records for 3 years from last off-site shipment or on-site treatment and/or disposal
- Keep records of all liquid industrial waste produced, treated and/or disposed on-site
- Keep records of hazardous waste generator status to verify regulatory status of CESQG exempted hazardous waste that are liquid

# Liquid Industrial Waste Generator Standards

(includes most Used Oil)

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- Obtain and utilize Site Identification Number if manifesting liquid industrial waste for disposal
- Container or tank accumulation only
- Label containers/tanks with words “Used Oil” or their contents

# Liquid Industrial Waste Generator Standards

(includes most Used Oil)

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- Containers/tanks must be compatible with the wastes, closed, and in good condition
- Protect waste from weather, physical damage, fire, and vandals
- Accumulation conducted to prevent escape of wastes to air, water, sewers or the ground

# Liquid Industrial Waste Generator Standards

(includes most Used Oil)

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- Report releases that could threaten health, safety, welfare, or environment
- Respond to releases to stop, contain, and clean up the spill
- Manifest off-site shipments unless consolidated manifesting or self transporting with a trip log

# Liquid Industrial Waste Generator Standards

(includes most Used Oil)

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- Use Act 138 permitted & registered liquid industrial waste transporter
- Ship waste only to a designated facility with a Site Identification Number unless treating and/or disposing of the waste on-site

**See DNRE Publication Liquid  
Waste Generator Guidance**

# Liquid Industrial Waste Generator Standards

(includes most Used Oil)

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- If disposing of liquid industrial waste on-site to the POTW, maintain record of POTW authorization for the discharge
- Manage in accordance with EPA Spill Control and Countermeasures requirements; Part 31 Water Resources Pollution Incident Prevention Plan requirements, and any tank installation/registration requirements

A wooden gavel is positioned diagonally across the frame, resting on the spine of a stack of books. The gavel's head is at the top left, and its handle extends towards the bottom right. The books are stacked horizontally, with the top book's pages visible. The background is a plain, light-colored surface. The text "Dos & Don'ts" is overlaid in the lower-left quadrant of the image.

# **Dos & Don'ts**

# Do

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- Follow exemption requirements
- Maintain required records (characterization, manifests, land disposal restriction, monthly generator status, etc.)
- Minimize waste to minimize regulatory burden
- Notify DNRE of reportable releases

# Do

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- Train staff to handle hazardous waste and respond to emergencies
- Confirm questionable exemptions with DNRE staff
- Utilize universal waste standard where possible
- Institute measures to prevent releases

# Do

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- Document correction of observed violations to DNRE ASAP
- Review waste characterization at the time of each process or material change
- Routinely dispose of wastes
- Ship hazardous waste using manifest & via credentialed transporter

# Do

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- Preventing repeat violations during subsequent inspections
- Keeping waste characterizations on- site
- Ensure YOU understand the regulations

# Do Not

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- Store greater than 90/180 days (SQG/LQG)
- Overlook re-characterizing and/or illegally dispose
- Install hazardous waste tanks without certification

# Do Not

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- Operate as a SQG or LQG without required secondary containment, training, and emergency planning
- Rely solely on your vendor to ensure compliance
- Transport hazardous waste and/or liquid industrial waste without the required permit and registration

# Need Help?

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- Go to [www.michigan.gov/dnrewaste](http://www.michigan.gov/dnrewaste)
- Contact the DNRE EAC at 1-800-662-9278
- Search the DNRE Publication Center
- Contact DNRE district waste inspection staff
- Contact hazardous waste vendors
- Contact waste consultants