



# SOLID WASTE AND HAZARDOUS WASTE REGULATIONS FOR GROWING AND PROCESSING HEMP

## GUIDANCE

In order to protect Michigan’s environment and comply with state and federal regulations, industrial hemp (Hemp) growing and processing operations may be subject to Michigan Department of Environment, Great Lakes, and Energy (EGLE) solid waste, hazardous waste, or liquid industrial by-product regulations. The following provides guidance on those requirements as may be applicable to Hemp cultivation and processing operations. Please note, while this list covers most state programs related to waste regulations, other federal, state, and local regulations or programs may apply.

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## DEFINITIONS

**HAZARDOUS WASTE** – means waste or a combination of waste and other discarded material including solid, liquid, semisolid, or contained gaseous material that because of its quantity, quality, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to an increase in mortality or an increase in serious irreversible illness or serious incapacitating but reversible illness, or may pose a substantial present or potential hazard to human health or the environment if improperly treated, stored, transported, disposed of, or otherwise managed.

Industrial hemp means the plant *Cannabis sativa* L. and any part of that plant, including the viable seeds of that plant and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9-tetrahydrocannabinol concentration of not more than 0.3% on a dry weight basis. Industrial hemp includes industrial hemp commodities and products and topical or ingestible animal and consumer products derived from the plant *Cannabis sativa* L. with a delta-9 tetrahydrocannabinol concentration of not more than 0.3% on a dry weight basis.

**LISTED HAZARDOUS WASTE** – certain wastes are automatically a hazardous waste if:

- They are produced from non-specific sources (F listed wastes) – see R299.9920
- They are produced from specific sources (K listed wastes) – see R299.9222
- They are discarded commercial chemical products, off-specification species, container residues, and spill residues (P listed wastes) – see R299.9224
- They are discarded commercial chemical products, container residues, and spill residues (U listed wastes) – see R299.9225

**CHARACTERISTIC HAZARDOUS WASTE** – is a waste which has any of the four hazardous waste characteristics identified in the state and federal regulations, which include:

- Ignitable wastes: Starts burning easily; liquid with a flash point below 140 degrees F.
- Corrosive wastes: Dissolves metals or burns skin; pH less than 2.0 or greater than 12.5
- Reactive wastes: Undergoes rapid or violent chemical reaction
- Toxic wastes: Poisonous to humans or organisms – see R299.9217

**UNIVERSAL WASTE** – means any of the hazardous wastes (see R 299.9228(1)) that can be managed differently than most hazardous wastes (see R 299.9228)

**SOLID WASTE** – means garbage, rubbish, ashes, incinerator ash, incinerator residue, street cleanings, municipal and industrial sludges, solid commercial waste, solid industrial waste, and animal waste that are not a regulated hazardous waste.

**LIQUID INDUSTRIAL BY-PRODUCT** – means any material, that is not a regulated hazardous, waste that is produced by, is incident to, or results from industrial, commercial, or governmental activity or any other activity or enterprise, that is determined to be liquid by method 9095 (paint filter liquids test) as described in "Test methods for evaluating solid wastes, physical/chemical methods," United States Environmental Protection Agency publication no. SW-846, and that is discarded.

Diverted wastes – means a specific list of materials that when managed in compliance with 324.11521b are not a regulated solid waste.

## WASTE REGULATIONS ASSOCIATED WITH INDUSTRIAL HEMP PRODUCTION AND PROCESSING

Large-scale Hemp cultivation operations may generate solid waste, hazardous waste, universal wastes, diverted waste, or a liquid industrial by-product. You may be subject to several regulations based on the Natural Resources and Environmental Act, 1994 PA 451, as amended, specifically:

- Part 111, Hazardous Waste Management
  - [Part 111 Statute](#)
  - [Part 111 Rules](#)
- Part 115, Solid Waste Management
  - [Part 115 Statute](#)
  - [Part 115 Rules](#)
- [Part 121, Liquid Industrial By-Products](#)
- [Act 138, Hazardous Materials Transportation Act](#)

## WASTES GENERATED FROM GROWING AND PROCESSING HEMP

The growing and processing of Hemp in Michigan brings challenges regarding the disposal of generated wastes. Hemp can be processed in a variety of ways. While it is anticipated that most of the waste streams will be eligible for disposal in a municipal solid waste landfill, others may require management in a hazardous waste landfill. Therefore, each waste stream will need to be evaluated by the generator of the waste for the presence of both listed and characteristically hazardous wastes. For example, the use of various flammable chemicals during the processing of Hemp could generate wastes that are characteristically hazardous for ignitability and/or toxicity. It is important to remember that *each* waste stream from *each* generating location will need to be fully evaluated to determine the proper disposal options.

Wastewater from the operation should be managed in compliance with the EGLE guidance document, “Protecting Water Resources when Growing and Processing Hemp ”

Unprocessed Hemp is currently not listed as a hazardous waste under Part 111, of the NREPA. Characterization determinations could change if the unprocessed Hemp were to come into contact with certain listed hazardous wastes, which could have the potential to impact the way Hemp is characterized for disposal. Waste byproducts resulting from chemical treatment have the potential to become a listed waste or a characteristically hazardous waste (see definitions above). EGLE recommends that any treated Hemp or waste byproduct be fully characterized on a case-by-case basis before disposal.

In addition, non-hazardous waste liquids may be regulated under Part 121, Liquid Industrial By-Products. Part 121 includes recordkeeping, generation, storage and transportation requirements.

Act 138 addresses licensing for companies transporting either hazardous waste, or liquid industrial by product, or both.

## REGULATION OF UNWANTED RESIDUALS FROM HEMP GROWING OR PROCESSING

The regulation of unwanted residuals from the growing or processing of Hemp depends on the character and quantity of the wastes generated. If you determine that you generate a regulated hazardous waste, it is in your interest to generate as little as possible and to not store the waste for long periods of time. Refer to

[Chapter 1, Tables 2.4 – 2.6](#) of [The Michigan Guide to Environmental, Health, and Safety Regulations](#) found at [Michigan.gov/ehsguide](http://Michigan.gov/ehsguide) for a summary of the requirements related to:

- Generator status (based on amounts generated monthly and storage amounts)
- Transportation and disposal
- Waste analysis plans
- Inspection requirements
- Labeling
- Secondary containment
- Air emissions controls
- Contingency plans and emergency procedures
- Training
- Reporting
- Closure of accumulation areas

## REGULATION OF LIQUID INDUSTRIAL BY-PRODUCTS

There are two options for managing liquid industrial by-products. The first is to discharge the waste to the municipal sewer. This should be done only after discussing the character and volume of the waste with the owner/operator of the wastewater treatment plant. The second option is to hire a licensed liquid industrial waste hauler to transport your material to an approved designated facility for treatment and/or disposal. See the part 121 statute for regulation and exemptions.

## REGULATION OF SOLID WASTE

If you have determined that your waste is not a regulated hazardous waste or a liquid industrial by-product, then it is likely to be regulated as a solid waste. The following are commonly asked questions regarding the management of solid waste from marihuana processing and growing:

### WHAT CAN I DO WITH LEAVES, STALKS, FLOWERS, STEMS, SEEDS, ROODS, AND SOILS GENERATED FROM MY OPERATION?

Any of the listed items can be disposed into a licensed municipal solid waste landfill or incinerated at a licensed municipal solid waste or hazardous waste incinerator.

### WHERE ARE LICENSED MUNICIPAL SOLID WASTE INCINERATORS LOCATED?

Kent County Waste to Energy  
950 Market Avenue SW  
Grand Rapids, Michigan  
616-336-2502

## PERMITS, LICENSES OR AUTHORIZATIONS

Depending on the character and volume of waste generated, you may require a permit, license or other authorization to manage wastes from your facility:

- Hazardous waste requirements – a generator of a regulated hazardous waste must apply for a Site ID for their facility. The application can be found at [Michigan.gov/documents/deq/deq-whm-hwp-EQP5150\\_214510\\_7.pdf](https://www.michigan.gov/documents/deq/deq-whm-hwp-EQP5150_214510_7.pdf).
- Liquid Industrial by-product requirements
- Solid waste requirements – You do not require a permit or license to manage or store non-hazardous solid waste. In addition, any person hauling non-hazardous solid waste does not require a permit or license from the state of Michigan. Of course, you must comply with all local zoning ordinances and special use permits to operate your facility.

## ADDITIONAL INFORMATION

- **Compliance Assistance Resources** - Viewing our waste characterization and generator status recorded [webinar](#) after printing our webinar [notes](#) and viewing any other webinars you expect relevant to your operations based on your expected/known waste streams and how you concluded they are characterized. All of the webinars are available at [Michigan.gov/EGLEwaste](https://www.michigan.gov/EGLEwaste), under announcements (second to last bullet in the list). You may also find our [Waste Characterization Steps and questions](#) and optional [characterization form](#) helpful in documenting your determinations.
- **Permitting/Licensing/Authorization Resources** - If you are looking to determine what authorizations may be needed from EGLE as a whole (all divisions), it is recommended that you review the [Permit Information Checklist](#) and other resources available at [Michigan.gov/EGLEpermits](https://www.michigan.gov/EGLEpermits). Note too that the guidebook can be accessed on this page too. If you're interested in a hardcopy, you can purchase it online too. However, keep in mind the electronic version (which has direct link at [Michigan.gov/EHSguide](https://www.michigan.gov/EHSguide), has lots of valuable links that provide access to more detailed information that what is available in the print version.
- [Registered Composting Sites](#)
- [Hazardous Waste Site ID Form](#)
- [Part 121 Frequently Asked Questions](#)

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