

ALTERNATIVE 1

1. Anaerobic Digester. A facility in which microorganisms break down biodegradable material in the absence of oxygen, used for industrial or domestic purposes to manage waste and/or produce energy.
2. Anaerobic Digestion. The biochemical conversion of complex organic materials, such as manure, into methane and other byproducts in the absence of oxygen.
11. Digester Feedstocks. Organic materials that are acceptable for inclusion within an anaerobic digester include livestock manure, waste animal feed, dead animals, yard waste or grass clippings, organic food processing waste, waste grease/trap grease, food waste intended for human consumption, by-products from ethanol, biodiesel, and algal production and other digester feedstocks that may be approved by the Director of the Michigan Department of Natural Resources and Environment or its successor agency.

C. Anaerobic Digesters

1. An anaerobic digester facility is a permitted use of property if all of the following requirements are met:
 - a. On an annual basis, more than fifty percent (50%) of the feedstock for the anaerobic digester facility shall be produced on the farm where the facility is located.
 - b. An anaerobic digester shall meet the following minimum isolation distances:
 - i. Two hundred (200) feet from waters of the state as defined in R 287.651(1)(u)(i) to (viii) of the Department of Agriculture and Rural Development.
 - ii. Two (2) feet above the seasonal highwater table, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard and adopted by reference in R 287.651a.
 - iii. Not within a 10-year time-of-travel zone designated as a wellhead protection area as recognized by the Michigan department of environmental quality, pursuant to the program established under the Michigan safe drinking water act, PA 399 of 1976, MCL 325.1001 to 325.1023, unless approved by the local unit of government administering the wellhead protection program. Where no designated wellhead protection area has been established, construction shall not be closer than the minimum isolation distance as stated on the well permit for a Type I or Type IIa public water supply. Facilities shall not be constructed closer than eight hundred (800) feet to a Type IIb or Type III public water supply unless the structure is located in accordance with

Table 1 of the Natural Resources Conservation Service Technical Guide Waste Storage Facility (No) 313.

- iv. Two hundred (200) feet from nearest non-farm residence.
- c. Operators of an anaerobic digester must be qualified under the State of Michigan with both of the following:
 - i. Complete the Michigan-on-farm anaerobic digester operator certification course.
 - ii. Obtain certification by the Michigan Department of Agriculture and Rural Development as an anaerobic digester operator.
- d. The disposition of digestate may be by direct application to soils, sale, or other transfer of ownership. Application to soils shall be done in accordance with the recommendations within the Generally Accepted Agricultural and Management Practices for Nutrient Utilization, January 2010, as specified in 1981 PA 93, MCL 286.471

C. Anaerobic Digesters

- 1. An anaerobic digester facility is a permitted special use of property if all of the following requirements are met:
 - a. On an annual basis, not less than ten percent (10%) of the feedstock for the anaerobic digester facility shall be produced on the farm where the facility is located.
 - b. An application for special land use approval for an Anaerobic Digester facility shall include a site plan in accordance with Section 18.04 of this ordinance and shall include all of the following:
 - c. An anaerobic digester shall meet the following minimum isolation distances:
 - i. Two hundred (200) feet from waters of the state as defined in R 287.651(1)(u)(i) to (viii) of the Department of Agriculture and Rural Development.
 - ii. Two (2) feet above the seasonal highwater table, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard and adopted by reference in R 287.651a.
 - iii. Not within a 10-year time-of-travel zone designated as a wellhead protection area as recognized by the Michigan department of

environmental quality, pursuant to the program established under the Michigan safe drinking water act, PA 399 of 1976, MCL 325.1001 to 325.1023, unless approved by the local unit of government administering the wellhead protection program. Where no designated wellhead protection area has been established, construction shall not be closer than the minimum isolation distance as stated on the well permit for a Type I or Type IIa public water supply. Facilities shall not be constructed closer than eight hundred (800) feet to a Type IIb or Type III public water supply unless the structure is located in accordance with Table 1 of the Natural Resources Conservation Service Technical Guide Waste Storage Facility (No) 313.

- iv. Two hundred (200) feet from nearest non-farm residence.
- d. Operators of an anaerobic digester must be qualified under the State of Michigan with both the following:
- i. Complete the Michigan-on-farm anaerobic digester operator certification course.
 - ii. Obtain certification by the Michigan Department of Agriculture and Rural Development as an anaerobic digester operator.
- e. The disposition of digestate may be by direct application to soils, sale, or other transfer of ownership. Application to soils shall be done in accordance with the recommendations within the Generally Accepted Agricultural and Management Practices for Nutrient Utilization, January 2010, as specified in 1981 PA 93, MCL 286.471

ALTERNATIVE 2

“Anaerobic Digestion”: The process in which microorganisms in the absence of oxygen convert the energy stored in volatile acids in livestock and poultry manure or other organic materials into biogas.

Anaerobic Digesters.

Where permitted as an accessory use, manure digesters are permitted subject to the following standards:

- The minimum lot area shall be 10 acres.
- The proposed use shall comply with all the requirements of the applicable district, except that all buildings, structures and facilities used as part of the manure digesting operations shall be setback two hundred (200) feet from any property line. Additionally, no building, structures, or facility shall be located nearer than three hundred (300) feet to an existing residential building on adjacent lots.

Accessory anaerobic digester systems. Accessory methane digester systems are permitted as an accessory use to farming operations in the _____ District:

- Accessory anaerobic digesters shall not be located within 50 feet of any side property line, 75 feet of any rear property line, 150 feet from any residential structure other than that of the property owner, and 100 feet from any street right-of-way.
- There shall be no discharge of any type onto any adjoining properties or streets.
- The applicant shall address and document performance standards for siting to minimize impacts on neighboring properties which shall include considerations of odor, prevailing wind patterns, proximity to nonagricultural properties, operational noise, and specific hours of operation.
- Anaerobic digester systems shall be designed and constructed in compliance with the guidelines outlined in the DEEP _____, and any revisions, supplements and successors thereto.
- Anaerobic digester systems shall be designed and constructed in compliance with applicable local, state and federal codes and regulations. Evidence of all federal and state regulatory agencies' approvals shall be included with the application.
- A certified professional, qualified to do such, shall furnish and explain all details of construction, operation, maintenance and necessary controls related to the anaerobic digester system.
- No anaerobic digester system shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

Regional anaerobic digesters are permitted by special permit in the _____ District, subject to the following:

- The minimum lot area shall be 25 acres.
- A traffic impact study analysis shall be provided, showing the following:
 - (a) Existing traffic volume data for all roadways within 1,000 feet which provide access to the site.

- Anticipated traffic volumes for the area identified in (a) above, resulting from the proposed use as well as background traffic growth.
- Analysis of current and future levels of service for all intersections within the study area.
- Physical analysis of all roadways identified in (a) above, including cartway width, shoulder width, pavement condition, horizontal and vertical curves, anticipated stormwater drainage characteristics, and sight distances.
- The applicant shall submit a transportation study, detailing the effect of the anaerobic digester system on local roadways, including effect of vehicle weight, congestion, and noise.
- The applicant shall provide sufficiently long stacking lanes into the facility, so that vehicles waiting to be loaded/unloaded will not backup onto public streets.
- The applicant shall provide a detailed description of the proposed use in each of the following topics:
 - The nature of the on-site activities and operations, the types of materials stored and used, the frequency and duration period of storage of materials and the methods for use and disposal of materials. In addition, the applicant shall furnish evidence that the use, handling, and disposal of materials will be accomplished in a manner that complies with state and federal regulations.
 - The general scale of operation in terms of its market area, specific space and area requirements for each activity, the total number of employees of each shift, and an overall needed site size.
- Design and installation.
 - The applicant shall address and document performance standards for siting to minimize impacts on neighboring properties which shall include considerations of odor, prevailing wind patterns, proximity to nonagricultural properties, operational noise, and specific hours of operation.
 - Anaerobic digester systems shall be designed and constructed in compliance with the guidelines outlined in the publication _____, of DEEP.
 - Anaerobic digester systems shall be designed and constructed in compliance with applicable local, state and federal codes and regulations. Evidence of all federal and state regulatory agencies' approvals shall be included with the application.
 - A certified professional, qualified to do such, shall furnish and explain all details of construction, operation, maintenance and necessary controls related to the anaerobic digester system.
- Height and setback requirements. Except as otherwise provided, no underground storage, in-ground storage, trench silo, earthen bank, stacking area or aboveground storage facility related to the anaerobic digester system shall be located within 200 feet from any property line. No building, structures, or facility shall be located nearer than 300 feet to an existing residential building unless the owner of such residence waives this restriction in writing.

- Decommissioning. The applicant shall submit a plan for the removal of the manure digestion facility when it becomes functionally obsolete or is no longer in use. The regional anaerobic digester owner shall notify the township immediately upon cessation or abandonment of the operation and shall be responsible for the removal of the manure within six weeks from the date operation ceases.

