

PERMIT NO. MIG010000



STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTEWATER DISCHARGE GENERAL PERMIT

CONCENTRATED ANIMAL FEEDING OPERATIONS

In compliance with the provisions of the federal Clean Water Act (federal Water Pollution Control Act, 33 U.S.C. 1251 *et seq.*, as amended); Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); Part 41, Sewerage Systems, of the NREPA; and Michigan Executive Order 2019-06, Concentrated Animal Feeding Operations (CAFOs) are authorized to operate facilities specified in individual Certificates of Coverage (COCs) in accordance with effluent limitations, monitoring requirements and other conditions set forth in this general National Pollutant Discharge Elimination System (NPDES) permit (permit).

The applicability of this permit shall be limited to CAFOs that have not been determined by the Michigan Department of Environment, Great Lakes, and Energy (Department) to need an individual NPDES permit. New swine, poultry, and veal facilities with contaminated areas of the production area exposed to precipitation, including waste storage structures, are not eligible for this permit. "New" means populated after January 20, 2009. Egg processing, egg washing, and duck facilities are not eligible for this permit. Discharges which may cause or contribute to a violation of a water quality standard are not authorized by this permit.

In order to constitute a valid authorization to discharge, this permit must be complemented by a COC issued by the Department and copies of both must be kept at the permitted CAFO. The following will be identified in the COC (as appropriate):

- The rainfall event magnitude at the production area (Part I.B.1.a.2.)
- Data for the application rate table for crops not listed in the permit (Part I.B.3.c.2.)
- Notification of a Total Maximum Daily Load (TMDL) if the permittee's production or land application areas are located within a watershed(s) covered by an approved *Escherichia coli* (*E. coli*), and/or biota, and/or dissolved oxygen, and/or nutrient (nitrogen or phosphorus) TMDL (Part I.C.9.)
- The date by which the use of the Michigan Phosphorus Risk Assessment (MPRA) will be required
- The date by which the permittee must provide documentation of Natural Resources Conservation Standard (NRCS) 313 environmental equivalency for waste storage structures not meeting NRCS 313 and procured after the effective date of the COC
- Percent of outside materials allowed in the anaerobic digester associated with the CAFO permitted under the COC, if that percentage is greater than five (Part I.C.10.)

Unless specified otherwise, all contact with the Department required by this permit shall be to the position indicated in the COC.

This permit takes effect on April 1, 2020. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules.

This permit shall expire at midnight, **April 1, 2025**.

Issued: DRAFT

DRAFT
Christine Alexander, Manager
Permits Section
Water Resources Division

PERMIT FEE REQUIREMENTS

In accordance with Section 324.3120 of the NREPA, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. Payment may be made electronically via the Department's MiWaters system. The MiWaters website is located at <https://miwaters.deq.state.mi.us>. Payment shall be submitted or postmarked by January 15 for notices mailed by December 1. Payment shall be submitted or postmarked no later than 45 days after receiving the notice for notices mailed after December 1.

CONTESTED CASE INFORMATION

The terms and conditions of this permit shall apply to an individual facility on the effective date of a COC for the facility. The Department of Licensing and Regulatory Affairs may grant a contested case hearing on this permit in accordance with the NREPA. Any person who is aggrieved by this permit may file a sworn petition with the Michigan Administrative Hearing System within the Michigan Department of Licensing and Regulatory Affairs, c/o the Michigan Department of Environment, Great Lakes, and Energy, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department of Licensing and Regulatory Affairs may reject any petition filed more than 60 days after issuance as being untimely.

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PART I

Section A. Effluent Limitations and Monitoring Requirements

1. Authorized Discharges and Overflows

During the period beginning on the effective date of this permit and lasting until the expiration of this permit, overflows and discharges are authorized per the following:

a. **Overflows from CAFO Waste Storage Structures**

Overflows from CAFO waste storage structures for cattle, horses, sheep, and existing swine, poultry, and veal facilities identified in Part I.B.1. are properly designed, constructed, and are operated and maintained in accordance with the requirements of this permit, the overflow is caused by precipitation events, and do not cause or contribute to an exceedance of Michigan’s water quality standards.

b. **Discharges from Land Application Areas**

Discharges of CAFO waste to surface waters of the state that do not cause or contribute to an exceedance of Michigan’s water quality standards are authorized from the land application areas managed in accordance with the Nutrient Management Plan (NMP) requirements set forth in Part I.B.3.

2. Monitoring Requirements

<u>Parameter</u>	<u>Units</u>	<u>Daily Maximum</u>	<u>Sample Type</u>	<u>Monitoring Frequency</u>
Storage Structure Overflow				
Volume	Gal	(report)	Report Total Daily Volume	See Part I.A.2.b.
Discharge to Surface Waters of the State				
Volume	Gal	(report)	Report Total Daily Volume	See Part I.A.2.b.
5-Day Carbonaceous Biological Oxygen Demand (CBOD5)	mg/l	(report)	Grab	See Part I.A.2.b.
<i>Escherichia coli (E.coli)</i>	counts/100ml	(report)	Grab	See Part I.A.2.b.
Total Phosphorus (as P)	mg/l	(report)	Grab	See Part I.A.2.b.
Ammonia Nitrogen (as N)	mg/l	(report)	Grab	See Part I.A.2.b.
Total Suspended Solids (TSS)	mg/l	(report)	Grab	See Part I.A.2.b.

a. **Narrative Standard**

The receiving water shall contain no turbidity, color, oil films, floating solids, foams, settleable solids, or deposits as a result of a discharge which are or may become injurious to any designated use.

b. **Monitoring Frequency**

Discharges and overflows shall be monitored once daily by the permittee as specified above on any day on which a discharge occurs. The first sample shall occur within the first six hours of discharge, and then daily thereafter, until the end of the discharge event. All monitoring shall be in accordance with Part II.B.2. of this permit.

c. **Monitoring Location and Reporting Requirements**

Samples, measurements, and observations of all discharges and overflows shall be taken in compliance with the monitoring requirements in Part I.A.2., be representative of the discharge and are taken prior to the discharge entering surface waters. The permittee shall notify the Department in accordance with the reporting requirements set forth in Part II.C.6. of this permit and shall submit the monitoring requirements set forth in Part I.C.1. of this permit.

PART I**Section A. Effluent Limits and Monitoring Requirements****3. Prohibited Discharges**

- a. This permit does not authorize any discharge to the groundwaters of the state. Such discharge may be authorized by a groundwater discharge permit issued pursuant to Part 22, Groundwater Quality, of the NREPA.
- b. This permit does not authorize dry weather discharge or a discharge of CAFO waste and/or runoff that fails to meet the requirements of Part I.A.1. of this permit. Discharges due to overflows from storage structures at new swine, poultry, or veal facilities are prohibited. Discharges from land application activities that do not meet the requirements of Part I.A.1. of this permit or that cause an exceedance of Michigan's Water Quality Standards are prohibited. Any unauthorized discharges shall be monitored in accordance with Part I.A.2.

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Section B. Nutrient Management Plan

The permittee shall implement the following requirements.

1. CAFO Waste Storage Structures

a. Volume Design Requirements

The permittee shall have distinct CAFO waste storage structures for each waste type (liquid or solid, stackable manure) in place and operational at all times that are adequately designed, constructed, maintained, and operated as per Part I.B.1. to contain the total combined volume of all of the following:

- 1) All CAFO waste generated from the operation of the CAFO, in a six-month or greater time period, including residual solids in waste storage structures designed for liquids, normal precipitation and runoff, and drifted snow accumulation in the production area during the same time period. For under-barn storages, inaccessible concrete lined storages, soil lined storages (either earthen or natural clay base), or synthetic lined storages that receive manure, the residual solids shall be at least one foot, unless the permittee demonstrates annually a lesser amount is achievable. This is the operational volume of the storage structure.
- 2) For cattle, horses, and sheep, and existing (populated prior to January 20, 2009) swine, poultry, and veal facilities, all production area waste and all direct and indirect precipitation generated from the 25-year 24-hour rainfall event. The magnitude of the rainfall event will be specified in the COC. This is an emergency volume to be kept available to contain large rainfall events.
- 3) New (populated on or after January 20, 2009) swine, poultry, and veal facilities shall be designed to have all contaminated areas of the production area, including waste storage structures, totally enclosed and not subject to precipitation and, therefore, not needing room for the emergency volume in their storage structures.
- 4) An additional design capacity of a minimum of 12 inches of freeboard for storage structures that are subject to precipitation-caused runoff. For storage structures that are not subject to precipitation-caused runoff, the freeboard shall be a minimum of 6 inches. This is the freeboard volume.
- 5) CAFO waste storage structure design calculations shall not include calculations of evaporation.
- 6) Records documenting the current design volume of every CAFO waste storage structure, including volume for residual solids, design treatment volume, total design volume, volumes of the operational, emergency, and freeboard volumes, and approximate number of days of storage capacity shall be kept in the permittee's Comprehensive Nutrient Management Plan (CNMP) for a minimum of five years from the date of creation.

b. Physical Design and Construction Requirements

1) Depth Gauge

CAFO waste storage structures shall include an easily visible, clearly marked depth gauge. Clear, major divisions shall be marked to delineate the operational, emergency (if applicable), and freeboard volumes as specified above in Part I.B.1.a. The top mark of the gauge shall be placed level with the lowest point on the top of the storage structure wall or dike. The elevation for the gauge shall be re-established as necessary but not less than every five years to adjust for any movement or settling. Materials used must be durable and able to withstand freezing and thawing (e.g. large chain, heavy-duty PVC, steel rod). Any depth gauges that are destroyed or missing must be replaced immediately. Under-barn storages may be measured with a dipstick or similar device. For solid stackable CAFO waste storage, depth gauge levels may be permanently marked on sidewalls.

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2) Structural Design

Records documenting or demonstrating the current structural design as required below, including as-built drawings and specifications, of any CAFO waste storage structures, whether or not currently in use, shall be kept with the permittee's CNMP for a minimum five years from the date of creation. Included in the CNMP submitted to the Department shall be a short description of the structural design of each structure (type of structure; dimensions including depth; liner material, thickness, and condition; depth from the design bottom elevation to the seasonal high water table), a statement whether a professional engineer's evaluation has been completed or not, and a brief description of the results of the evaluation (meets Natural Resources Conservation Service (NRCS) 313 2017 or provides environmental performance equivalent to NRCS 313 2005, 2014, or 2017).

a) New Storage Structures (constructed after the effective date of the COC)

Except as otherwise required by this permit, CAFO waste storage structures shall, at a minimum, be constructed in accordance with NRCS 313 2017.

b) Existing Storage Structures at Newly Permitted CAFOs (facilities without prior NPDES permit coverage)

i) In a permit application for coverage under this permit, the applicant shall either:

(a) For each existing storage structure document through an evaluation by a professional engineer that each structure is constructed in accordance with NRCS 313 2014 or 2017.

Submit to the Department documentation signed by a professional engineer verifying that each structure is constructed in accordance with NRCS 313 2014 or 2017.

Complete as-built plans, specifications, drawings, etc. shall be kept at the facility with the CNMP and do not need to be submitted unless requested by the Department, or

(b) For each existing storage structure, on a form provided by the Department and submitted to the Department, demonstrate environmental performance equivalent to NRCS 313 2014. The demonstration shall be accomplished through an evaluation by a professional engineer.

i) The applicant for a Newly Permitted CAFO must provide the documentation or demonstration required by (a) or (b) above prior to populating livestock to the numbers which would require an NPDES permit (per the definition of Part II.A. Large CAFO).

ii) Previously evaluated storage structures at permitted CAFOs shall have documentation demonstrating that the structure was constructed to, or provides equivalent environmental protection to, NRCS 313 2003, 2005, or 2014.

c) For Previously Permitted CAFOs acquiring previously constructed waste storage structures from an unpermitted facility, the COC shall specify the date by which the permittee shall meet the requirements of i) or ii) below, but that date shall be no more than two years from the acquisition of the structures.

i) For each existing storage structure, document through an evaluation by a professional engineer that each structure is constructed in accordance with NRCS 313 2014 or 2017. Submit to the Department documentation signed by a professional engineer verifying that each structure is constructed in accordance with NRCS 313 2014 or 2017. Complete as-built plans, specifications, drawings, etc. shall be kept at the facility with the CNMP and do not need to be submitted unless requested by the Department, or

ii) For each existing storage structure, on a form provided by the Department and submitted to the Department, demonstrate environmental performance equivalent to NRCS 313 2014. The demonstration shall be accomplished through an evaluation by a professional engineer.

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- d) **Waste Storage Structures for Solid Stackable Manure Not Subject to Precipitation**
Waste storage structures that will hold solid stackable manure that is totally enclosed and not subject to precipitation, will also be designed and constructed so that storage shall, at a minimum, include the following
- i) All CAFO waste generated from the operation of the CAFO in a six-month or greater time period;
 - ii) CAFO waste shall be covered or stored inside a structure such that it is protected from wind and will not be contacted by precipitation;
 - iii) all structural wooden components below the roofline of the building and all wood in contact with litter should be pressure treated;
 - iv) the height of the litter stack not to exceed 7 feet, with litter to structural wooden components contact limited to 5 feet.
 - v) storm water shall not run onto or under the stored CAFO waste; and
 - vi) a minimum of two feet separation distance to the seasonal high-water table or a minimum of one-foot separation if an impermeable barrier is used under the stored CAFO waste. Impermeable barriers must be constructed of at least 12 inches of compacted clay, at least four inches of concrete, or another material of similar structural integrity.
- e) **Existing Storage Structures Not Meeting Standards**
Existing storage structures that do not meet the requirements above in Part I.B.1. and will not be upgraded to meet NRCS 313 Standards shall be maintained or permanently closed in accordance with Part I.C.3. Records of usage, maintenance, or closure shall be kept in the CNMP. A notification of discontinued use shall be made via MiWaters (<https://miwaters.deq.state.mi.us>). If a waste storage structure is to be closed, this shall be completed within six months from the notification.
- c. **Inspection Requirements**
The permittee shall develop a Storage Structure Inspection Plan to be kept in the CNMP. CAFO waste storage structures shall be inspected weekly. The results of the inspection shall be recorded on the "CAFO Inspection Record" form provided by the Department and kept in the CNMP for a minimum of 5 years from the date of creation. The plan shall include all of the following weekly inspections:
- 1) The CAFO waste storage structures for cracking, inadequate vegetative cover, woody vegetative growth, evidence of overflow, leaks, seeps, erosion, slumping, animal burrowing or breakthrough, and condition of the storage structure liner or stacking pad
 - 2) The depth of the CAFO waste in the storage structure and the available operating capacity as indicated by the depth gauge.
 - 3) The collection system, lift stations, mechanical and electrical systems, transfer stations, control structures, and pump stations to ensure that valves, gates, and alarms are correctly set and all are properly functioning.
 - 4) Any deficiencies found as a result of these inspections shall be corrected as soon as possible. Deficiencies and corrective actions taken shall be documented on the CAFO Inspection Record and kept in the CNMP for a minimum of 5 years from the date of creation.

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d. Operation and Maintenance Requirements

The permittee shall implement a Storage Structure Operation and Maintenance Program that incorporates all the following management practices. The permittee shall initiate steps to correct any condition that is not in accordance with the Storage Structure Operation and Maintenance Program. A copy of the program shall be included in the CNMP. Specific records below shall be kept with the CNMP for a minimum of 5 years from the date of creation, unless specified otherwise below.

- 1) In the event the level of CAFO waste in the storage structure rises above the maximum operational volume level and enters the emergency volume level, the Department shall be notified. The level in the storage structure shall be reduced and the emergency volume restored within one week, unless a longer time period is authorized by the Department. The removed CAFO waste shall be land applied in accordance with this permit or the Department shall be notified if another method of disposal is to be used. Descriptions of such events shall be recorded and kept in the CNMP for a minimum of 5 years from the date of creation.
- 2) During the period of November 1 to December 31 of each year, there shall be an available operational volume in the CAFO waste storage structures equal to the volume of CAFO waste generated from the operation of the CAFO in a six-month or greater time period (including normal precipitation and runoff in the production area during the same time period). The date of this determination shall be kept in the CNMP for a minimum of 5 years from the date of creation and shall be certified via MiWaters (<https://miwaters.deq.state.mi.us>) to the Department by January 14 of the next calendar year, in accordance with Part II.C.5.
- 3) Vegetation shall be maintained at a height that stabilizes earthen CAFO waste storage structures, provides for adequate visual inspection of the storage structures, and protects the integrity of the storage structure liners. The vegetation shall have sufficient density to prevent erosion. Woody vegetation shall be removed promptly from waste storage berms and other areas where roots may penetrate or disturb waste storage facility liners or waste treatment facilities.
- 4) Dike damage caused by erosion, slumping, or animal burrowing shall be corrected immediately and steps taken to prevent occurrences in the future.
- 5) The integrity of the CAFO waste storage structure liner shall be protected. Liner damages shall be corrected immediately, and steps taken to prevent future occurrences.
- 6) Problems with the collection system, lift stations, mechanical and electrical systems, transfer stations, control structures, and pump stations shall be corrected as soon as possible. Records of these inspections and records documenting any actions taken to correct deficiencies shall be kept with the CNMP for a minimum of five years from the date of creation. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors causing the delayed correction.
- 7) CAFO waste shall be stored only in storage structures as described above.
- 8) CAFO waste storage structures shall not contain human sanitary waste.

2. Best Management Practices Requirements

The following are designed to achieve the objective of preventing unauthorized discharges to surface waters of the state from production areas and land application activities.

a. Conservation Practices

The permittee shall maintain specific conservation practices near or at production areas, land application areas, and heavy use areas within pastures associated with the CAFO that are sufficient to control the runoff of pollutants to surface waters of the state in quantities that may cause or contribute to a violation of water quality standards. These practices shall be consistent with NRCS Conservation Practices and in compliance with the requirements of this permit. The permittee shall include within the CNMP a list of

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conservation practices used near or at production areas and land application areas. This list does not need to include temporary practices or other practices already required by this permit. Records documenting the inspection of the conservation practices (with the exception of those utilized on land application areas) shall be kept in the CNMP for a minimum of 5 years from the date of creation. Conservation practices on land application areas receiving CAFO waste shall be inspected and reported on the "Daily Manure Application Record."

b. Divert Clean Water

The permittee shall design and implement structures and management practices to divert clean storm water to prevent contact with contaminated portions of the production areas. Clean storm water may include roof runoff, runoff from adjacent land, and runoff from feed or silage storage areas where such runoff has not contacted feed, silage, or silage leachate. The permittee shall describe in the CNMP structures and management practices used to divert clean water from the production area and/or beneficial uses of diverted water if it will be collected for reuse.

c. Prevent Direct Contact of Animals with Surface Waters of the State

There shall be no access of animals to surface waters of the state at the production area of the CAFO. The permittee shall develop and implement appropriate controls to protect water quality by preventing access of animals to surface waters of the state and shall describe such controls in the CNMP. Records documenting the proper implementation of controls preventing access of animals to surface waters of the state shall be reported on the "CAFO Inspection Report" form and kept in the CNMP for a minimum of 5 years from the date of creation.

d. Animal Mortality

The permittee shall handle, store, or dispose of dead animals in a manner that prevents contamination of surface waters of the state. Mortalities, including but not limited to any animal refuse or parts other than excrement, must not be disposed of in any liquid CAFO waste storage structure or storm water storage structure that is not specifically designed to treat animal mortalities, with the exception of leachate from properly designed and operated composting structures. Records documenting the proper management of animal mortalities shall be reported on the "CAFO Inspection Report" form and kept in the CNMP for a minimum of 5 years from the date of creation.

e. Chemical Disposal

The permittee shall prevent introduction of hazardous or toxic chemicals (for purposes of disposal) into CAFO waste storage structures. Examples of hazardous and toxic chemicals are pesticides and petroleum products/by-products. Identify in the CNMP appropriate practices that ensure chemicals that are not part of the normal agricultural practice at the production site and other contaminants handled at the CAFO are not disposed of in any CAFO waste or storm water storage or treatment system. Records documenting the proper management of chemicals to prevent their introduction into the CAFO waste storage structures, storm water storage, or treatment system, shall be reported on the "CAFO Inspection Record" and kept in the CNMP for a minimum of 5 years from the date of creation.

f. Inspection, Proper Operation, Maintenance, and Reporting

The permittee shall develop and implement an Inspection, Operation, and Maintenance Program that includes periodic visual inspections, proper operation, and maintenance of all CAFO waste-handling equipment including piping and transfer lines, and all runoff management devices (e.g., cleaning separators, barnyards, catch basins, screens) to prevent unauthorized discharges to surface waters and groundwaters of the state. A copy of the program shall be included in the CNMP. Specific inspection requirements include, but are not limited to, all of the following:

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- 1) Weekly visual inspections of all clean storm water diversion devices and runoff diversion structures and practices as described in Part I.B.2.b.
- 2) Daily visual inspections of water lines, including drinking water and cooling water lines, and above-ground piping and transfer lines, or an equivalent method of checking for water line leaks that incorporates the use of water meters, pressure gauges, or some other monitoring method.
- 3) Weekly inspections of all CAFO waste-handling equipment including piping and transfer lines, all runoff management devices, and devices channeling contaminated stormwater to storage and containment structures shall be accessible such that required visual inspections may occur. This may necessitate frequent removal of vegetation, snow, or other obstructions.
- 4) Any deficiencies shall be corrected as soon as possible.
- 5) Records of these inspections and records documenting any actions taken to correct deficiencies shall be recorded on the "CAFO Inspection Record" form provided by the Department and shall be kept in the CNMP for a minimum of five years from the date of creation. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors causing the delayed correction.

3. Land Application of CAFO Waste

a. Field-by-Field Assessment

1. The permittee shall conduct a field-by-field assessment of all land application areas. Each field shall be assessed prior to use for land application of CAFO waste. The assessment shall include field maps with location information (section, township, county, and crossroads, latitude and longitude of field center), and identify field-specific conditions, including, but not limited to, slopes, soil type, locations of tile outlets, tile risers and tile depth, conservation practices, and offsite conditions, such as buffers and distance or conveyance to surface waters of the state. The assessment shall also identify areas which, due to topography, activities, or other factors, have a potential for erosion. The assessment shall also identify fields, or portions of fields, that will be used for surface application of CAFO waste without incorporation or injection to frozen or snow-covered ground in accordance with Part III, Department 2005 Technical Standard for the Surface Application of CAFO Waste on Frozen or Snow-Covered Ground Without Incorporation or Injection. The results of this assessment, along with consideration of the form and source of the CAFO waste and all nutrient inputs in addition to those from CAFO waste, shall be used to ensure that the amount, timing, and method of application of CAFO waste:
 - a) does not exceed the capacity of the soil to assimilate the CAFO waste;
 - b) is in accordance with field-specific nutrient management practices that ensures appropriate agricultural utilization of the nutrients in the CAFO waste;
 - c) does not exceed the maximum annual land application rates specified in Part I.B.3.c. of this permit; and
 - d) will not result in unauthorized discharges.

All assessments shall be kept in the CNMP for a minimum of 5 years from the date of creation. A particular field may be deleted from the CNMP once the field is no longer used for land application of CAFO waste; however, the field assessments must be kept in the CNMP for 5 years from the date created.

Any new fields shall be assessed prior to their use for land application activities. The Department shall be notified of the new fields prior to their use through submittal of a permit modification request via MiWaters (<https://miwaters.deq.state.mi.us>) that includes the field-by-field assessment, a map showing

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the entire field, its size in acres, location information (section, township, county, crossroads, and latitude and longitude of field center), current (within the last three years) soil tests, planned crops, and realistic crop yield goals. The request will be public noticed for 15 days via MiWaters (<https://miwaters.deq.state.mi.us>). The permittee may use the field 18 calendar days after submittal of the request unless notified otherwise by the Department.

b. Field Inspections

Prior to conducting land application of CAFO waste to fields determined to be suitable under Part I.B.3.a. above, the permittee shall perform the following inspections at the indicated frequency to ensure that unauthorized discharges do not occur as a result of the land application of CAFO waste. Records of inspections, monitoring, and sampling required by this section shall be recorded in the Land Application Log required by Part I.B.3.d.

- 1) CAFO waste shall be sampled a minimum of once per year to determine nutrient content and analyzed for total kjeldahl nitrogen (TKN), ammonium nitrogen, and total phosphorus. CAFO waste shall be sampled in a manner that produces a representative sample for analysis. Guidance for CAFO waste sampling protocols can be found in Bulletin NCR 567 available from Michigan State University Extension. Analytical methods shall be as required by Part II.B.2. The CAFO waste test results shall be used to determine land application rates as described in Part I.B.3.c. below. Records of the nutrient levels and analysis methods shall be kept in the Land Application Log and in the CNMP for a minimum of 5 years from the date of creation.
- 2) Soils at land application sites shall be sampled a minimum of once every three years, analyzed to determine phosphorus levels, and the soil test results shall be used to determine land application rates as described in I.B.3.c. below. Sample soil using an 8-inch vertical core and take 20 or more cores in a random pattern spread evenly over each uniform field area. A uniform field area shall be no greater than 20 acres or it can be up to 40 acres if that field has one soil map unit and has been managed as a single field for the last ten years. The 20 cores shall be composited into one sample and analyzed using the Bray P1 method. Records of the phosphorus levels shall be kept in the Land Application Log and in the CNMP for a minimum of 5 years from the date of creation. Additional information on soil sampling can be found in Michigan State University Extension Bulletins E2904 and E498.
- 3) The permittee shall inspect each field no earlier than 48 hours prior to each land application of CAFO waste to that field to evaluate the current suitability of the field for application. This inspection shall include, at a minimum, the state of all tile outlets, evidence of soil cracking, the moisture-holding capacity of the soil, crop maturity, and the condition of designated conservation practices (i.e., grassed waterways, buffers, diversions). Results and findings of all inspections shall be recorded in the Land Application Log.
- 4) The permittee shall visually inspect all tile outlets draining a given field immediately prior to the land application of CAFO wastes to that field. Tile outlets shall be inspected again upon completion of the land application to the field, or at the end of the working day should application continue on that field for more than one day. Include in the Land Application Log written descriptions of tile outlet inspection results and observe and compare color and odor of tile outlet effluents before and after land application.
- 5) All tiled fields to which CAFO wastes have been applied in the prior 30 days shall be visually inspected within 24 hours after the first rain event of one-half inch or greater, for signs of a discharge of CAFO waste. Written descriptions of tile inspection results shall be retained in the Land Application Log. If an inspection reveals a discharge with color, odor, or other characteristics indicative of an unauthorized discharge of CAFO waste, the permittee shall immediately notify the Department in accordance with the reporting procedures set forth in Part II.C.6 of this permit and the

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monitoring requirements of Part I.A.2. of this permit. A copy of the report shall be kept with the Land Application Log.

- 6) The permittee shall inspect all land application equipment daily during use for leaks, structural integrity, and proper operation and maintenance. Land application equipment shall be calibrated annually to ensure proper application rates. Written records of inspections, date of inspections, and calibrations shall be retained in the Land Application Log.

c. Maximum Annual Land Application Rates

During the period beginning on the effective date of this permit and the effective date of an individual COC and lasting until the date identified on the COC, the permittee may use the Bray P1 numerical limits or the Michigan Phosphorus Risk Assessment (MPRA) tool (Version 2.0, Nov. 2012) to determine maximum annual land application rates. The permittee must use one system for its entire land application area. For purposes of this permit, the MPRA is for rate calculations only and "Distance to surface water and/or surface inlets" is interpreted as described in Part I.B.3.h. below. The permittee shall comply with all of the following land application rates:

1) Land Application Rate Prohibitions and Restrictions

All of the following land application rate prohibitions apply.

- a) If the Bray P1 soil test result is 150 parts per million (ppm) phosphorus (P) or more, CAFO waste applications shall be discontinued until nutrient use by crops reduces the Bray P1 soil test result to less than 150 ppm P including when MPRA is used.
- b) Fields where the MPRA risk is HIGH, CAFO waste shall not be applied.
- c) The application rate shall not exceed the nitrogen (N) fertilizer recommendation (removal value for legumes) for the first crop year grown after the CAFO waste is applied as specified in Part I.B.3.c.2) b) below.
- d) The application rate shall not exceed four years of P for each of the four crops planned for the next four years as calculated in Part I.B.3.c.2)b) below.
- e) The total amount of N and P, regardless of source (manure, organic waste, commercial fertilizer, etc.), shall not exceed the first crop year nutrient requirements unless applying multiple crop years of P as allowed in 2) below. Only one year of N can be applied as stated in c) above, unless samples or other relevant data shows additional N is needed for or will be beneficial to the crop. Documentation justifying additional N must be kept in the CNMP for a minimum of 5 years from the date of creation.

2) Phosphorus Levels

- a) If the Bray P1 soil test result is 75 ppm P or more, but less than 150 ppm P or a MPRA risk of MEDIUM, application rates shall be based on the maximum rates of P in annual pounds per acre as calculated using the following formula:

The realistic yield goal per acre, using the units specified in Table 1 below, for the planned crop multiplied by the number in the P column for that crop. The maximum annual application rates as calculated above shall be achieved by using the CAFO waste test results for P to determine the amount of CAFO waste that may be land applied per acre per year.

The result is the maximum annual pounds per acre of P that may be applied for the first crop planned after application of CAFO waste. If the one-year rate is impractical due to spreading equipment or crop production management, the permittee may apply up to two years of P at one time, but no P may be applied to that field for the second year. The two-year P application rate shall be the results calculated using the formula above for each of the two crops planned for the next two years and those two annual results shall be added together to determine the maximum P application rate. In no case may the application rate exceed the N application rate as specified below.

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b) If the Bray P1 soil test result is less than 75 ppm P or a MPRA risk of LOW, the annual rate of CAFO waste application shall not exceed the N fertilizer recommendation (removal value for legumes) for the first crop year grown after the CAFO waste is applied. Information to determine N fertilizer recommendations or removal values can be found in Michigan State University Extension Bulletin E2904. In no case may the application rate exceed four years of P calculated using the formula per Part I.B.3.c.2)a) above for each of the four crops planned for the next four years and those four annual results shall be added together to determine the maximum application rate. The maximum annual application rates as calculated above shall be achieved by using the CAFO waste test results for N to determine the amount of CAFO waste that may be land applied per acre per year.

3) Michigan Phosphorus Risk Assessment (MPRA)

During the period beginning on the date identified in the individual COC and lasting until the expiration of this permit or termination of the individual COC, the permittee shall comply with the Michigan Phosphorus Risk Assessment (MPRA) tool (Version 2.0, Nov. 2012) to determine maximum annual land application rates. For purposes of this permit, the MPRA is for rate calculations only. The MPRA category "Distance to surface water and/or surface inlets" is interpreted as described in Part I.B.3.h. below.

The permittee shall comply with all of the following maximum annual land application rates:

a) Land Application Rate Prohibitions and Restrictions

All of the following land application rate prohibitions apply.

- (1) if the Bray P1 soil test result is 150 parts per million (ppm) or more, CAFO waste shall not be applied;
- (2) fields where the MPRA risk is HIGH, CAFO waste shall not be applied;
- (3) the application rate shall not exceed the nitrogen (N) fertilizer recommendation for the first crop year grown after the CAFO waste is applied. The N fertilizer recommendations or removal rates for legumes shall be found in Michigan State University Extension Bulletin E2904, August 2009. The maximum annual application rates as calculated for N shall be achieved by using the CAFO waste test results for first year available N to determine the amount of CAFO waste that may be land applied per acre per year;
- (4) the application rate shall not exceed four years of P for each of the four crops planned for the next four years as calculated using the formula in Part I.B.3.c.3)b)(3) and;
- (5) the total amount of N and P, regardless of source (manure, organic waste, commercial fertilizer, N credit, organic N carryover, etc.), shall not exceed the nutrient requirements as calculated using the MPRA. The allowable P rate is calculated using the MPRA. Additionally, only one year of N can be applied as stated in Part I.B.3.c.1)c) above, unless samples or other relevant data demonstrate additional N is needed for, or will be beneficial to, the crop. Prior to application, the demonstration justifying additional N must be submitted to the Department via MiWaters (<https://miwaters.deq.state.mi.us>) for review. The demonstration will be public noticed for a period of 15 days. The demonstration shall be kept in the CNMP for a minimum of 5 years from the date of

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creation. The permittee may apply the additional N following 18 calendar days after submittal of the request, unless notified otherwise by the Department.

b) Risk Assessment

(1) CAFO waste may only be applied on fields that achieve a MPRA score of LOW or MEDIUM.

(2) In accordance with Part I.C.9., if the field is located in a watershed with a Nitrogen or Phosphorus impairment with an approved Total Maximum Daily Load (TMDL), CAFO waste may not be applied unless the MPRA risk is LOW.

(3) Allowable application rates of P shall be based on the rates of P in annual pounds (lbs.) per acre (ac) as calculated using the following formula:

$$\text{Phosphorus Amount (lbs. P/ac)} = \text{Realistic Crop Yield Goal/ac} \times \text{P (lb./unit yield for planned crop)}$$

The annual application rates allowable as calculated above shall be achieved by using the CAFO waste test results (required per Part I.B.3.b.1)) for P to determine the amount of CAFO waste that may be land applied per acre per year as calculated using MPRA.

Three and four years of P may only be applied on fields with an MPRA score of LOW
 A multi-year P application rate shall be the results calculated using the formula above for each of the crops planned for the specified years and those annual results shall be added together to determine the maximum P application.

Table 1.				
P ₂ O ₅ values are included for reference purposes.				
Planned Crop	Harvest Form	Unit of Realistic Yield Goal per Acre	P	P ₂ O ₅
			-- lb./unit of yield --	
Alfalfa	Hay	ton	5.72	13.1
Alfalfa	Haylage	ton	1.41	3.2
Apple	Fruit	ton	0.19	0.44
Asparagus	Shoots	ton	1.1	2.51
Barley	Grain	bushel	0.17	0.38
Barley	Straw	ton	1.41	3.2
Beans (dry edible)	Grain	cwt	0.53	1.2
Beans (green, fresh)	Pods	ton	1.22	2.8
Blueberry	Fruit	ton	0.20	0.46
Bromegrass	Hay	ton	5.72	13
Buckwheat	Grain	bushel	0.11	0.25
Canola	Grain	bushel	0.40	0.91
Carrots	Root	ton	0.79	1.81
Cherries (sour)	Fruit	ton	0.3	0.69
Cherries (sweet)	Fruit	ton	0.37	0.85
Clover	Hay	ton	4.4	10
Clover-grass	Hay	ton	5.72	13
Corn	Grain	bushel	0.16	0.37
Corn	Stover	ton	3.61	8.2
Corn	Silage	ton	1.45	3.3
Corn	Sweet	ton	1.23	2.8
Cucumbers	Fruit	ton	0.47	1.1
Grapes	Fruit	ton	0.26	0.6
Millet	Grain	bushel	0.11	0.25
Mint	Hay	Ton	3.81	8.72
Oats	Grain	bushel	0.11	0.25
Oats	Straw	ton	1.23	2.8

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Table 1. P₂O₅ values are included for reference purposes.

Planned Crop	Harvest Form	Unit of Realistic Yield Goal per Acre	P	P ₂ O ₅
			-- lb./unit of yield --	
Onions	Bulb	ton	1.14	2.6
Orchard grass	Hay	ton	7.48	17
Peaches	Fruit	ton	0.24	0.55
Pears	Fruit	ton	0.23	0.53
Peas	Fruit	ton	2.01	4.6
Peppers, Green	Fruit	Ton	0.6	1.37
Plums	Fruit	ton	0.2	0.46
Potato	Tubers	cwt	0.06	0.13
Rye	Grain	bushel	0.18	0.41
Rye	Straw	ton	1.63	3.7
Rye	Silage	ton	0.66	1.5
Sorghum	Grain	bushel	0.17	0.39
Sorghum-Sudangrass	Hay	ton	6.6	15
Sorghum-Sudangrass	Haylage	ton	2.02	4.6
Soybean	Grain	bushel	0.35	0.8
Spelts	Grain	bushel	0.17	0.38
Squash	Fruit	ton	0.76	1.74
Sugar beets	Roots	ton	0.57	1.3
Sunflower	Grain	bushel	0.53	1.2
Timothy	Hay	ton	7.48	17
Tomatoes	Fruit	ton	0.57	1.3
Triticale	Silage	Ton	3.08	7.0
Wheat	Grain	bushel	0.28	0.63
Wheat	Straw	ton	1.45	3.3

For crops not listed in Table 1, the permittee shall provide in the permit application, the harvest form, unit of realistic yield goal per acre, P lb./unit of yield (in a format similar to that of Table 1) and supporting data. The Department will review the proposal, and upon approval, will list the approved numbers in the COC. The permittee may propose alternate land application rates and methodologies in the permit application. The Department will review the proposal and acceptable rates and methods, and upon approval, will public notice the proposal via MiWaters (<https://miwaters.deq.state.mi.us>) for a 15 day period. The alternate land application rates and methodologies will be included in the COC issued under this permit.

Methodology and calculations consistent with this Part I.B.3.c. and their results, shall be recorded in the Land Application Log.

d. Land Application Log

The results of land application inspections, monitoring, testing, and recordkeeping shall be recorded in the Department provided forms, "Daily Manure Application Record" and the "Land Application Summary for Previous Crop Year" which shall be kept up-to-date and kept in the CNMP for a minimum of 5 years from the date of creation. The permittee shall document in the log in writing, at a minimum, records required by Part I.B.3. and all of the following information and inspection results in the specified documents:

1) Daily Manure Application Record

- a) The time, date, quantity, method, location (Section, Township, County, latitude and longitude of field center), crop grown, and application rate for each location at which CAFO wastes are land applied.
- b) A written description of weather conditions at the time of application and for 24 hours prior to and following application based on visual observation.

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- c) A review of the condition of conservation practices
 - d) A statement whether the land was frozen or snow-covered at the time of application.
- 2) Land Application Summary for Previous Crop Year
- a) The crop, the realistic yield goal, and actual yield for each location at which CAFO wastes are land applied, and the second-year crop (if applicable).
 - b) Methodology and calculations showing the total nitrogen and phosphorus actually applied to each field receiving CAFO waste, identifying each source of manure used to calculate the application rate, identify all sources of nutrients, including sources other than CAFO waste.
 - c) The total amount of nitrogen and phosphorus actually applied to each field receiving CAFO waste, irrespective of source, including documentation of calculations for the total amount applied.
 - d) The reporting of additional N applied under the demonstration per Part I.B.3.c.3)a)
- 3) Forecast Records
Printouts or electronically maintained records of weather forecasts from the time of land application. Weather forecasts may also be saved as electronic files, in which case the files do not need to be physically located in the Land Application Log, but the log shall reference the location where the files are stored and shall be made available upon Department request.
- e. Land Application Summary
The permittee shall submit the required "Land Application Summary" form via MiWaters (<https://miwaters.deq.state.mi.us>) within 30 days from each quarter ending March 31, June 30, September 30, and December 31 of each year and will include the following for each field on which CAFO waste was applied:
- 1) Dates of Application;
 - 2) Field Location (latitude and longitude of center of field);
 - 3) Acres applied;
 - 4) Amount and units of manure applied per acre.
- f. Prohibitions
Appropriate prohibitions, in compliance with the following, shall be included in the CNMP:
- 1) CAFO waste shall not be applied on land that is flooded or saturated with water at the time of land application.
 - 2) CAFO waste shall not be applied during rainfall events.
 - 3) CAFO waste shall not be applied during the months of January, February, or March 1 through March 19.
 - 4) CAFO waste applications during March 20 to March 31 shall be in compliance with the following:
 - (a) CAFO waste shall not be applied on ground that is frozen or snow-covered;
 - (b) 24 hours prior to the land application of CAFO waste, the Department shall be notified, through a Department form via MiWaters (<https://miwaters.deq.state.mi.us>);

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(c) All land application practices shall follow the requirements per Part I.B.3.

- 5) CAFO waste shall not be surface applied without incorporation or injection to frozen or snow-covered ground, except in accordance with the Department 2005 "Technical Standard for the Surface Application of CAFO Waste on Frozen or Snow-Covered Ground Without Incorporation or Injection" as required per Part III and to fields where the MARI score is Low or Very Low potential for manure movement from the field.
- 6) CAFO waste shall not be transferred to a recipient for land application of the CAFO waste during the months of January, February, or March.
- 7) CAFO waste shall not be transferred to another person (a recipient as described in Part I.C.8.) where such waste will be surface applied without incorporation or injection to frozen or snow-covered ground unless the recipient agrees to follow Part III. Department 2005 Technical Standard for the Surface Application of CAFO Waste on Frozen or Snow-Covered Ground Without Incorporation or Injection.
- 8) CAFO waste application shall be delayed if rainfall exceeding one-half inch, or less if a lesser rainfall event is capable of producing an unauthorized discharge, is forecasted by the National Weather Service (NWS) during the planned time of application and within 24 hours after the time of the planned application. Forecast models to be used can be found on the internet at <http://www.weather.gov/mdl/synop/products.php>. Model data to be used for one-half inch shall be:
 - GFS MOS (MEX) Text Message by Station Forecast: If the Q24 is 4 and the P24 is 70 or more for the applicable time period, or the Q24 is 5 or greater (with any P24 number), then CAFO waste land application shall be delayed until the Q24 is less than 5, or both the Q24 is less than 4 and the P24 is less than 70 for the applicable time period. If the first two Q12 values are 4 and the corresponding P12 values are 70 or more for the applicable time period, or the Q12 values are 5 or greater (with any P12 numbers), then CAFO waste land application shall be delayed until the first two Q12 values are less than 5 or both the Q12 values are less than 4 and the corresponding P12 values are less than 70 for the applicable time period. For further details and instructions, utilize the "Instructions for Determining Precipitation Forecasts for CAFO Permits" located at https://www.michigan.gov/documents/deq/wrd-npdes-CAFO-PrecipitationInstructions_513072_7.pdf. The station to be used shall be that which is closest to the land application area. If no station is close, then use the closest 2 or 3 stations.

Different model data shall be used if it is determined that rainfall less than one-half inch on a particular field is capable of causing an unauthorized discharge. For example, using a Q24 rating of 3 or greater may be appropriate on higher risk fields. If the NWS website is revised and the required forecast models are not available, the permittee shall contact the Department for information on which forecast models to use. Instructions for using this website are available from the Department. Other forecast services may be used upon approval of the Department.

g. Methods

CAFO waste shall be subsurface injected or incorporated into the soil within 24 hours of application. CAFO waste subsurface injected into frozen or snow-covered ground shall have substantial soil coverage of the applied CAFO waste. The following exceptions apply:

- 1) Injection or incorporation may not be feasible where CAFO wastes are applied to pastures, perennial crops such as alfalfa, cover crops, or where no-till practices are used. CAFO waste may be applied to pastures or perennial crops such as alfalfa, cover crops, or where no-till practices are used, only if the CAFO waste will not enter surface waters of the state. CAFO waste shall not be applied if the waste may enter surface waters of the state.
- 2) On ground that is frozen or snow-covered, CAFO waste may be surface applied and not incorporated within 24 hours only if there is a field-by-field demonstration, in accordance with Part

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III. Department 2005 Technical Standard for the Surface Application of CAFO Waste on Frozen or Snow-Covered Ground Without Incorporation or Injection, showing that such land application will not result in a situation where CAFO waste may enter surface waters of the state. Demonstrations shall be kept with the Land Application Log and submitted to the Department prior to use of the field. CAFO waste surface applied to ground that is frozen or snow-covered shall be limited to no more than 1 crop year of P per winter season, including pastures, perennial crops such as alfalfa, cover crops, or where no-till practices are used.

h. Setbacks

The permittee shall comply with any of the following setback requirements:

- 1) CAFO waste shall not be applied closer than 100 feet to any open tile line intake structures, sinkholes, agricultural well heads, or any ditches that are conduits to surface waters of the state (with the exception of surface waters of the state that are up-gradient of the land application),
- 2) The permittee may substitute the 100-foot setback required in 1) above, with a 35-foot wide vegetated buffer. CAFO waste shall not be applied within the 35-foot buffer.
- 3) CAFO waste shall not be applied within grassed waterways and swales that are conduits to surface waters of the state.

Setbacks shall be measured from the ordinary high-water mark, where applicable, or from the upper edge of the bank if the ordinary high-water mark cannot be determined. Setbacks for each field shall be shown on the CNMP field maps.

i. Non-Production Area Storm Water Management

The permittee shall implement practices including preventative maintenance, good housekeeping, and periodic inspections of at least once per year, to minimize and control pollutants in storm water discharges associated with the following areas:

- 1) Immediate access roads and rail lines used or traveled by carriers of raw materials, waste material, or by-products used or created by the facility.
- 2) Sites used for handling material other than CAFO waste.
- 3) Refuse sites.
- 4) Sites used for the storage and maintenance of material handling equipment.
- 5) Shipping and receiving areas.

Records and descriptions of non-production area storm water management practices shall be kept in the CNMP for a minimum of 5 years from the date of creation.

4. Comprehensive Nutrient Management Plan (CNMP)

The CNMP shall apply to both production areas and land application areas and shall be a written document that describes the practices, methods, and actions the permittee takes to meet all of the requirements of the Nutrient Management Plan (NMP) per Part I.B.

a. Approval

The CNMP shall be developed and approved by a Certified CNMP Provider.

b. Submittal

The CNMP shall be submitted to the Department with the application for coverage under this permit. All or parts of the CNMP shall be submitted via MiWaters (<https://miwaters.deq.state.mi.us>) on the template provided by the Department.

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c. Contents

The CNMP submitted to the Department shall include all of the information and requirements specified in the NMP Section per Part I.B., an Executive Summary (a general description of the operation), and a map of the production area that includes all of the items specified in the permit application and that shows all clean water and production area waste flow paths, contaminated collection areas, pipes, control structures, valves, etc.

d. Annual Review and Report

The permittee shall annually review the CNMP and update the CNMP as necessary to meet the requirements of Part I.B.

The permittee shall submit an annual report for the preceding January 1 through December 31 (reporting period) to the Department by April 1 of each year. The annual report shall be submitted via MiWaters (<https://miwaters.deq.state.mi.us>) on the "Annual Report Form for Concentrated Animal Feeding Operations (CAFO)" provided by the Department. The annual report shall include, but is not limited to, all of the following:

- 1) the average number of animals, maximum number of animals at any one time, and the type of animals, whether in open confinement or housed under roof (beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, turkeys, other);
- 2) estimated amount of total CAFO waste generated by the CAFO during the reporting period (tons or gallons);
- 3) estimated amount of total CAFO waste transferred to other persons (manifested waste) by the CAFO during the reporting period (tons or gallons);
- 4) total number of acres for land application covered by the CNMP developed in accordance with this permit;
- 5) total number of acres under control of the CAFO that were used for land application of CAFO waste during the reporting period;
- 6) a field-specific spreading plan which identifies where and how much CAFO waste will be applied to fields for the upcoming 12 months, what crops will be grown on those fields, and the realistic crop yield goals of those crops. The plan must account for all CAFO waste expected to be generated in the upcoming 12 months including waste to be transferred under manifest;
- 7) the Land Application Summary for Previous Crop Year per Part I.B.3.d.2.;
- 8) a statement indicating whether the current version of the CAFO's CNMP was developed and approved by a certified CNMP provider; and
- 9) a summary of all CAFO waste discharges from the production area that have occurred during the reporting period, including date, time, and approximate volume.

e. CNMP Revisions

Prior to revisions to the CNMP, the CAFO owner or operator must provide the most current version of the CNMP and identify changes from the previous version to the Department for review. If the Department determines the revisions are significant, the Department must notify the public and make the changes available for review and comment. Significant revisions of the CNMP shall be public noticed for a 15-day period and may result in a permit modification. The CNMP shall be submitted via MiWaters (<https://miwaters.deq.state.mi.us>). Significant change includes the following:

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- 1) Addition of new land application areas not previously included in the CAFO's CNMP per Part I.B.3.a.
- 2) Any changes to the maximum field-specific annual rates of application or to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop, as expressed in accordance with the narrative rate approach per Part I.B.3.c.
- 3) Addition of any crop or other uses not included in the terms of the CAFO's CNMP and corresponding field-specific rates of application per Part I.B.3.c.3)b).
- 4) Changes to site-specific components of the CAFO's CNMP, where such changes are likely to increase the risk of nitrogen and phosphorus transport from the site to surface waters of the state per Part I.B.3.c.
- 5) An increase in the number of animals that results in a 10 percent or greater increase in the volume of either the manure alone or the total CAFO waste generated per year as compared to the volumes identified in the application or the most recently submitted Significant Change due to this Part I.B.4.e.5).
- 6) An increase in the number of animals that results in a 10 percent or greater decrease in the waste storage capacity time, as identified in the application or the most recently submitted Significant Change due to this Part I.B.4.e.6) or results in a waste storage capacity of less than 6 months.
- 7) The construction or procurement of a new animal housing facility or waste storage facility.

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Section C. Other Requirements

1. Reporting of Overflows and Discharges from CAFO Waste Storage Structures and Land Application

If, for any reason, there is an overflow from CAFO waste storage structures and/or a discharge of pollutants to a surface water of the state from CAFO waste storage structures, production areas, or land application areas, the permittee shall report the overflow and/or discharge to the Department in accordance with the reporting requirements set forth in Part II.C.6. Discharges to surface waters shall also be reported to the Clerk of the local unit of government and the County Health Department within 24 hours after the discharge begins. The permittee shall also submit the completed "CAFO Discharge Monitoring Report" form to the Department via MiWaters (<https://miwaters.deq.state.mi.us>). In addition, the permittee shall keep a copy of the report in the CNMP for a minimum of 5 years from the date of creation. The report shall include all of the following information:

- a. a description of the overflow and/or discharge and its cause, including a description of the flow path to the surface water of the state;
- b. the period of overflow and/or discharge, including exact dates and times, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the overflow and/or discharge;
- c. monitoring results as required by Part I.A.2.;
- d. in the event of a discharge through tile lines, the permittee shall identify and document, for field(s) from which the discharge occurred, the location of tile and depth of tile. The permittee shall also document field conditions at the time of the discharge, determine why the discharge occurred, and how to prevent future discharges; and
- e. if the permittee believes that the discharge is an authorized discharge, the permittee shall include a demonstration that the discharge meets the requirements of Part I.A.1.a. and/or Part I.A.1.b., as appropriate.

2. Construction or Procurement of New Waste Storage Structures or Facilities

Before the construction, procurement, or alteration of a waste storage structure, facility, or portions thereof, notification shall be submitted to the Department via MiWaters (<https://miwaters.deq.state.mi.us>). New waste storage and transfer structures shall be built to NRCS 313 2017 Standard. Complete as-built plans, specifications, drawings, etc. shall be kept in the CNMP. As-built plans must be signed and stamped by a licensed professional engineer and state that the structure was built to the NRCS 313 2017 standard. Signed and stamped design drawings do not constitute as-built plans. Required supporting documentation may include soils reports documenting suitability of liner material, groundwater investigations reports, pictures, survey notes, concrete batch tickets, etc.

3. Closure of Structures and Facilities

The following conditions shall apply to the closure of lagoons, CAFO waste storage structures, earthen or synthetic lined basins, other manure and wastewater facilities, and silage facilities (collectively referred to as "structure(s)") for the remainder of this Part I.C.3.

No structure shall be permanently abandoned. Structures shall be maintained at all times until closed in compliance with this section. All structures must be properly closed if the permittee ceases operation. In addition, any structure that is not in use for a period of twelve (12) consecutive months must be properly closed, unless the permittee intends to resume use of the structure at a later date and either: (a) maintains the structure as though it were actively in use, to prevent compromise of structural integrity and ensure compliance with final effluent limitations, or (b) removes CAFO waste to a depth of one foot or less and refills the structure with clean water to preserve the integrity of the synthetic or earthen liner. In either case, the permittee shall conduct routine inspections, maintenance, and recordkeeping in compliance with this permit as though the structure were in use. The permittee shall notify the Department via MiWaters (<https://miwaters.deq.state.mi.us>) 30 days prior

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Section C. Other Requirements

to closing structures, or upon deciding that the structures will be maintained as specified in (a) or (b) above. Thirty days prior to restoration of the use of the structure, the permittee shall notify the Department via MiWaters (<https://miwaters.deq.state.mi.us>) and provide the opportunity for inspection.

The permittee shall accomplish closure by removing all waste materials to the maximum extent practicable. This shall include agitation and the addition of clean water as necessary to remove the waste materials. The permittee shall utilize as guidance the closure techniques contained in NRCS Conservation Practice Standard No. 360, Waste Facility Closure. All removed materials shall be utilized or disposed of in accordance with the permittee's approved CNMP, unless otherwise authorized by the Department.

Unless the structure is being maintained for possible future use in accordance with the requirements above, completion of closure for structures shall occur as promptly as practicable after the permittee ceases to operate or, if the permittee has not ceased operations, 12 months from the date on which the use of the structure ceased, unless otherwise authorized by the Department.

4. Standards, Specifications and Practices

The published standards, specifications, and practices referenced in this permit are those which are in effect upon the effective date of this permit, unless otherwise provided by law. NRCS Conservation Practice Standards referred to in this permit are currently contained in Section IV, Conservation Practices and Michigan Construction Specifications, of the Michigan NRCS Field Office Technical Guide.

5. Facility Contact

The "Facility Contact" was specified in the application. The permittee may replace the facility contact at any time and shall notify the Department via MiWaters (<https://miwaters.deq.state.mi.us>) within 10 days after replacement (including the name, address, and telephone number of the new facility contact). The Department shall be notified in writing within 10 days after a change in any of the contact information (such as address or telephone number) from what was specified in the application.

- a. The facility contact shall be any of the following (or a duly authorized representative of this person):
 - For a corporation or a company, a principal executive officer of at least the level of vice president, or a designated representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the permit application or other NPDES form originates.
 - For a partnership, a general partner.
 - For a sole proprietorship, the proprietor.
 - For a municipal, state, or other public facility, either a principal executive officer, the mayor, village president, city or village manager or other duly authorized employee.
- b. A person is a duly authorized representative only if both of the following requirements are met:
 - The authorization is made in writing to the Department by a person described in paragraph a. of this section.
 - The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the facility (a duly authorized representative may thus be either a named individual or any individual occupying a named position).

Nothing in this section obviates the permittee from properly submitting reports and forms as required by law.

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Section C. Other Requirements

6. Expiration and Reissuance

On or before October 1, 2024 a permittee seeking continued authorization to discharge under this permit beyond the permit's expiration date shall submit to the Department an application for reissuance via MiWaters (<https://miwaters.deq.state.mi.us>). Without a timely application for reissuance, the permittee's authorization to discharge will expire on April 1, 2025. With a timely application for reissuance, the permittee shall continue to be subject to the terms and conditions of the expired permit until the Department takes action on the application, unless this permit is terminated or revoked. Upon determination by the Department to grant or deny coverage under this permit, the proposed decision will be public noticed for a period of 15 days via MiWaters (<https://miwaters.deq.state.mi.us>)

If this permit is terminated or revoked, the Department will notify the permittee in writing and all authorizations to discharge under the permit shall expire on the date of termination or revocation. If this permit is modified, the Department will notify the permittee in writing of any required action. Upon the effective date of the modified permit, the permittee shall be subject to the terms and conditions of the modified permit, unless the Department notifies the permittee otherwise.

If the discharge authorized under this permit is terminated, the permittee shall submit to the Department an NPDES Permit Notice of Termination request via MiWaters (<https://miwaters.deq.state.mi.us>). However, the permittee may submit a request for termination via MiWaters (<https://miwaters.deq.state.mi.us>) if all the following are met:

- a. the facility has ceased operation;
- b. the facility is no longer a CAFO; and
- c. the permittee has demonstrated to the satisfaction of the Department that there is no remaining potential for a discharge of CAFO waste that was generated while the operation was a CAFO.

7. Requirement to Obtain Individual Permit

The Department may require any person who is authorized to discharge by a COC and this permit to apply for and obtain an individual NPDES permit if any of the following circumstances apply:

- a. the discharge is a significant contributor to pollution as determined by the Department on a case-by-case basis;
- b. the discharger is not complying, or has not complied, with the conditions of the permit;
- c. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of waste applicable to the point source discharge;
- d. effluent standards and limitations are promulgated for point source discharges subject to this permit; or
- e. the Department determines that the criteria under which the permit was issued no longer apply.

Any person may request the Department to take action pursuant to the provisions of Rule 2191 (Rule 323.2191 of the Michigan Administrative Code).

8. Requirements for Land Application Not Under the Control of the CAFO Permittee

In cases where CAFO waste is sold, given away, or otherwise transferred to another person (recipient) such that the land application of that CAFO waste is no longer under the operational control of the CAFO owner or operator that generates the CAFO waste (generator), the "Manifest for CAFO Waste" form shall be completed and used to track the transfer and use of the CAFO waste. CAFO waste shall not be transferred to a recipient for land application of that waste during the months of January, February, or March.

PART I**Section C. Other Requirements**

- a. Prior to transfer of the CAFO waste, the CAFO owner or operator shall utilize the "Manifest for CAFO Waste" form provided by the Department to record all of the following:
 - 1) a manifest document number;
 - 2) the generator's name, mailing address, and telephone number;
 - 3) the name, address, and contact information of the recipient of the CAFO waste;
 - 4) the generator shall provide to the recipient, the nutrient content of the CAFO waste to be transferred, in sufficient detail to be used in determining the agronomic land application rates;
 - 5) the total quantity, by units of weight or volume, and the number and size of the loads or containers used to transfer that quantity of CAFO waste;
 - 6) a statement that informs the recipient of his/her responsibility to properly manage the land application of the CAFO waste as necessary to ensure there is no illegal discharge of pollutants to surface waters of the state;
 - 7) the following certification by the generator: "I hereby declare that the CAFO waste is accurately described above and is suitable for land application";
 - 8) other certification statements as may be required by the Department;
 - 9) the latitude and longitude center of the site or sites used by the recipient for land application or other disposal or use of the CAFO waste; and
 - 10) signatures of the generator and recipient with dates of signature.
- b. Prior to manifesting CAFO waste, the generator shall receive from the recipient, the soil phosphorus levels using the Bray P1 test method, no older than three years, that the recipient will use to determine the agronomic rates of land application of the CAFO waste.
- c. The generator shall do all of the following with respect to the manifest:
 - 1) sign and date the manifest certification prior to transfer of the CAFO waste;
 - 2) obtain a dated signature of the recipient on the manifest and the date of acceptance of the CAFO waste;
 - 3) obtain a copy of the completed signed "Manifest for CAFO Waste" form;
 - 4) obtain the completed "Daily Manure Application Record" per Part I.B.3.d.1) from the recipient for each field on which the generator's CAFO waste was applied;
 - 5) provide a signed copy to the recipient; and
 - 6) advise the recipient of his or her responsibilities to complete the "Manifest for CAFO Waste" form; if not completed at time of delivery, obtain a copy of the "Manifest for CAFO Waste" form from the recipient within 30 days of the transfer of the CAFO waste.
- d. One "Manifest for CAFO Waste" form may be used for multiple loads or containers of the same CAFO waste transferred to the same recipient. The "Manifest for CAFO Waste" form shall list separately each address or location (latitude and longitude of field center) used by the recipient for land application or other disposal or use of the CAFO waste. Each separate address or location listing shall include the quantities of CAFO waste transferred to that location and dates of transfer.

PART I**Section C. Other Requirements**

- e. The generator shall not sell, give away, or otherwise transfer CAFO waste to a recipient if any of the following are true:
- 1) the recipient fails or refuses to provide accurate and complete information on the manifest in a timely manner;
 - 2) the "Manifest for CAFO Waste" form indicates improper land application, use, or otherwise transferred;
 - 3) the generator learns that there has been improper land application, use, or otherwise transferred of the manifested CAFO waste; and/or
 - 4) appropriate jurisdiction has determined that the recipient has improperly land applied, used, or otherwise transferred of a manifested CAFO waste.
- f. If the generator has been prohibited from selling, giving, or otherwise transferring CAFO waste to a particular recipient under Part I.C.8.e, above, and the generator wishes to resume selling, giving, or otherwise transferring CAFO waste to that particular recipient, then one of the following shall be accomplished:
- 1) For improper paperwork only, such as incomplete or inaccurate information on the "Manifest for CAFO Waste" form, the recipient must provide the correct, complete information.
 - 2) For improper land application, use, or disposal of the CAFO waste by the recipient, the generator must submit a demonstration, to the Department via MiWaters (<https://miwaters.deq.state.mi.us>), that the improper land application, use, or disposal has been corrected, and the Department has responded to the demonstration with its approval of the demonstration.
- g. The CAFO generator shall submit the required "Land Application Summary" form for fields on which the recipient applied the generator's CAFO waste via MiWaters (<https://miwaters.deq.state.mi.us>) within 30 days from each quarter ending March 31, June 30, September 30, and December 31 of each year and will include the following:
- 1) recipient name and phone or e-mail contact information;
 - 2) date of transfer; and
 - 3) If CAFO waste is used for land application of manure:
 - a) dates of land application;
 - b) field location (latitude and longitude of center of field);
 - c) soil test results (and year of test) of fields;
 - d) amount (and units) of manure applied; and
 - e) manure source; or
 - 4) If CAFO waste is not used for land application of manure:
 - a) other use (digester, composting, broker, etc.); and
 - b) volume or tons of CAFO waste transferred.

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h. The requirements of Part I.C.8. do not apply to quantities of CAFO waste less than one (1) pickup truck load, one (1) cubic yard, or one (1) ton per recipient per day.

9. Total Maximum Daily Load (TMDL) Waters

a. Nitrogen or Phosphorus TMDL

The Department expects that full compliance with the conditions of this permit will allow the permittee to meet the pollutant loading capacity(ies) set forth for nitrogen or phosphorus in an approved Total Maximum Daily Load (TMDL). The permittee's COC will indicate if the permittee's production area or land application areas are located within a watershed(s) covered by an approved nitrogen or phosphorus TMDL.

b. *E. coli*, Biota, Dissolved Oxygen TMDL. The permittee's COC will indicate if the permittee's production area or land application areas are located within a watershed(s) covered by an approved *E. coli*, biota, or dissolved oxygen TMDL. The Department has developed and published the "Total Maximum Daily Load (TMDL) Guidance for Concentrated Animal Feeding Operations (CAFO)" regarding how to evaluate operations and determine additional pollutant control measures. The permittee shall complete the following actions within 24 months of receiving notification from the Department:

- 1) Conduct a comprehensive evaluation of its operations. A comprehensive evaluation shall identify sources of pollutants that have the potential to reach surface waters from production areas and/or land application areas.
- 2) Determine whether additional pollutant control measures need to be identified and implemented to meet the permittee's pollutant loading (or "concentration" in the case of *E. coli*) capacity(ies) set forth in the approved TMDL. Pollutant control measures, shall at a minimum, include those that prevent surface runoff and subsurface drainage of CAFO waste from land application areas.
- 3) Submit a written TMDL Evaluation Report via MiWaters (<https://miwaters.deq.state.mi.us>) to the Department based on one of the following:
 - a) If the permittee, based on the comprehensive evaluation, determines that the pollutant loading or concentration allocation(s) established in the approved TMDL are being met, then the written TMDL Evaluation Report justifying that determination shall be submitted to the Department for approval, or
 - b) If the permittee determines that the pollutant loading or concentration allocation(s) established in the approved TMDL is being exceeded, then the written TMDL Evaluation Report submitted to the Department shall identify additional pollutant control measures that need to be implemented by the permittee to achieve compliance with the pollutant loading or concentration allocation(s) established in the approved TMDL. The permittee's written TMDL Evaluation Report shall also include an implementation schedule for each identified additional pollutant control measure.

Upon approval of the Department, and if the written report identifies needed additional pollutant control measures, the permittee shall implement the additional pollutant control measures according to the implementation schedule. The approved written TMDL Evaluation Report detailing the additional pollutant control measures and the associated implementation schedule shall be kept in the CNMP for a period of 5 years from the date of creation, and shall be an enforceable part of this permit.

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Section C. Other Requirements

10. Treatment System

The CAFO may include an anaerobic digester-based treatment system. The application for coverage under this permit shall include a description of the construction and operation of the anaerobic digester-based treatment system, including a schematic or flow diagram of the process, a listing of all outside materials (non-CAFO waste) to be added to the digester, the percentage input to the digester comprised of outside materials, and a contingency plan in the event of system failures including computer malfunctions. The contingency plan shall address the actions to be taken by the permittee if the digester-based treatment system must be bypassed for any reason, including handling and storage of partially digested contents, and notifications per Part II.C.9.c. and d. of this permit.

Outside materials up to 20 percent the total digester volume may be added to the digester to enhance operation. Quantities of outside materials more than 5 percent of the total digester volume will be listed in the COC issued under this permit. The Department may prohibit the use of certain outside materials. The permittee shall keep in the CNMP for a minimum of 5 years from the date of creation, the reports of the quantities and identity of outside materials added to the digester. Outside materials not listed in the application shall not be added to the digester without prior approval from the Department. The outputs from the treatment system shall be stored and managed in accordance with the permit. The digester shall be operated consistently with the information provided in the application for coverage under this permit.

11. Document Availability

Copies of all documents required by this permit, including the CNMP, Land Application Log, inspection records, soil tests received by the recipient of manifested CAFO waste, etc., shall be kept at the permitted facility for a minimum of 5 years from the date of creation and made available to the Department upon request.

PART II

Section A. Definitions

Animal Feeding Operation (AFO) means a lot or facility that meets both of the following conditions:

1. Animals, other than aquatic animals, have been, are, or will be stabled or confined and fed or maintained for a total of 45 calendar days or more in any 12-month period.
2. Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over the portion of the lot or facility where animals are confined. Two or more AFOs under common ownership are considered to be a single AFO if they adjoin each other or if they use a common area or system for the disposal of wastes. Common area includes land application areas.

Concentrated Animal Feeding Operation (CAFO) means any AFO that requests coverage under the permit for which the Department determines that this permit is appropriate for the applicant's operation. A CAFO includes both production areas and land application areas.

CAFO Process Wastewater means water directly or indirectly used in the operation of a CAFO for any of the following:

1. Spillage or overflow from animal or poultry watering systems.
2. Washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities.
3. Direct contact swimming, washing, or spray cooling of animals.
4. Dust control.
5. Any water which comes into contact with, or is a constituent of, any raw materials, products, or byproducts, including manure, litter, feed, milk, eggs, or bedding.

CAFO Waste means CAFO process wastewater, manure, production area waste, effluents from the properly and successfully operated treatment system, or any combination thereof.

Certificate of Coverage (COC) is a document, issued by the Department, which authorizes a discharge under a general permit.

Certified CNMP Provider is a person that attains and maintains certification requirements through a program approved by the United States Department of Agriculture Natural Resources Conservation Service (NRCS).

CNMP means Comprehensive Nutrient Management Plan and is the plan developed by the permittee to implement the requirements of the NMP.

Department means the Michigan Department of Environment, Great Lakes, and Energy (Formerly Michigan Department of Environmental Quality).

Discharge as used in this permit means the addition of any waste, waste effluent, wastewater, pollutant, or any combination thereof to any surface water of the state.

Grassed Waterway means a natural or constructed channel for storm water drainage that originates and is located within a field used for growing crops, and that is used to carry surface water at a non-erosive velocity to a stable outlet and is established with suitable and adequate permanent vegetation.

Incorporation means a mechanical operation that physically mixes the surface-applied CAFO waste into the soil so that a significant amount of the surface-applied CAFO waste is not present on the land surface within one hour after mixing. Incorporation also means the soaking into the soil of "liquids being used for irrigation water" such that liquids and significant solid residues do not remain on the land surface. "Liquids being used for irrigation water" are contaminated runoff, milk house waste, or liquids from CAFO waste treated to separate liquids and solids. "Liquids being used for irrigation water" does not include untreated liquid manures.

Land Application means spraying or spreading of biosolids, CAFO waste, wastewater and/or derivatives onto the land surface, injecting below the land surface, or incorporating into the soil so that the biosolids, CAFO waste, wastewater and/or derivatives can either condition the soil or fertilize crops or vegetation grown in the soil.

Land Application Area means land under the control of an AFO owner or operator, whether it is owned, rented, leased, or subject to an access agreement to which CAFO waste is or may be applied. Land application area includes land not owned by the AFO owner or operator but where the AFO owner or operator has control of the land application of CAFO waste.

PART II

Section A. Definitions

Large CAFO is an AFO that stables or confines as many as or more than the numbers of animals specified in any of the following categories:

1. 700 mature dairy cattle (whether milked or dry cows)
2. 1,000 veal calves
3. 1,000 cattle other than mature dairy cows or veal calves. Cattle include heifers, steers, bulls, calves, and cow/calf pairs
4. 2,500 swine each weighing 55 pounds or more
5. 10,000 swine each weighing less than 55 pounds
6. 500 horses
7. 10,000 sheep or lambs
8. 55,000 turkeys
9. 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system
10. 125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system
11. 82,000 laying hens, if the AFO uses other than a liquid manure handling system
12. 30,000 ducks, if the AFO uses other than a liquid manure handling system
13. 5,000 ducks, if the AFO uses a liquid manure handling system

Large CAFOs are required to obtain NPDES permits under Michigan Rule No. 323.2196.

Manure means animal excrement and is defined to include bedding, compost, and raw materials, or other materials commingled with animal excrement or set aside for disposal.

Maximum Annual Phosphorus Land Application Rate means the maximum quantity, per calendar year, of phosphorus (usually expressed in pounds per acre) that is allowed to be applied to crop fields where CAFO waste is spread, including the phosphorus contained in the CAFO waste.

MGD means million gallons per day.

New CAFO means a CAFO that is newly built and was not in production (i.e., animals were not on site) prior to January 30, 2004. New CAFO also means existing facilities where, due to expansion in production, the process or production equipment is totally replaced or new processes are added that are substantially independent of an existing source at the same site, after February 27, 2004. This does not include replacement due to acts of God or upgrades in technology that serve the existing production. This definition does not apply to "New" as used for swine, poultry, and veal facilities in Part I.B.1.a.3).

NMP means Nutrient Management Plan and is the section in the permit that sets forth requirements and conditions to ensure that water quality standards are met.

No-Till Practices means where the field will not receive tillage from time of land application until after harvest of the next crop.

NRCS means the Natural Resources Conservation Service of the United States Department of Agriculture.

NRCS 313 means the NRCS Michigan Statewide Technical Guide, Section IV, Conservation Practice No. 313, Waste Storage Facility, dated either June 2003, November 2005, August 2014, or November 2017.

Overflow means a release of CAFO waste resulting from the filling of CAFO waste storage structures beyond the point at which no more CAFO waste or storm water can be contained by the structure.

Pastureland is land that is primarily used for the production of forage upon which animals graze. Pastureland is characterized by a predominance of vegetation consisting of desirable forage species. Sites such as loafing areas, confinement areas, or feedlots which have animal densities that preclude a predominance of desirable forage species are not considered pastureland. Heavy-use areas within pastures adjacent to, or associated with, the CAFO are part of the pasture and are not part of the production area. Examples of heavy-use areas include animal travel lanes and small areas immediately adjacent to feed and watering stations.

Perennial means a plant that has a life cycle of more than two years.

PART II

Section A. Definitions

Production Area is the portion of the CAFO that includes all areas used for animal product production activities. This includes but is not limited to the animal confinement area, the manure storage area, the raw materials storage area, treatment systems, and the waste containment areas. The animal confinement area includes open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milk rooms, milking centers, cow yards, barnyards, medication pens, walkers, animal walkways (not within pasture areas), and stables. The manure storage area includes lagoons, runoff ponds, storage sheds, stockpiles, under-house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes feed silos, silage bunkers, and bedding materials (including new sand used for bedding). The waste containment area includes settling basins and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of "production area" is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities. Production areas do not include pasture lands or land application areas.

Production Area Waste means manure and any waste from the production area and any precipitation (e.g., rain or snow) which comes into contact with, or is contaminated by, manure or any of the components listed in the definition for "production area." Production area waste also includes treatment system feedstock and runoff from treatment system areas. Production area waste does not include clean water that is diverted, nor does it include water from land application areas.

Realistic Crop Yield Goals means expected crop yields based on soil productivity potential, the crop management practices utilized, and crop yield records for multiple years for the field. Yield goals shall be adjusted to counteract unusually low or high yields. When a field's history is not available, another referenced source shall be used to estimate yield goal. A realistic crop yield goal is one which is achievable in three out of five crop years. If the goal is not achieved in at least three out of five years, then the goal shall be re-evaluated and revised.

Regional Administrator is the Region 5 Administrator, United States Environmental Protection Agency (USEPA), located at R-19J, 77 West Jackson Boulevard, Chicago, Illinois 60604.

Silage Leachate means a liquid, containing organic constituents, that results from the storage of harvested plant materials, which usually has a high-water content.

Solid Stackable Manure means manure and manure mixed with bedding that can be piled up or stacked and will maintain a piled condition. It will also have the characteristic that it can be shoveled with a pitchfork.

Swale means a shallow, channel-like, linear depression within a field used for growing crops that is at a low spot on a hillslope and is used to transport storm water. It may or may not be vegetated.

Waste Storage Structure means both pond-type storage structures and fabricated storage structures.

Tile means a conduit, such as corrugated plastic tubing, tile, or pipe, installed beneath the ground surface to collect and/or convey drainage water.

Vegetated Buffer means a narrow, permanent strip of dense perennial vegetation, established parallel to the contours of and perpendicular to the dominant slope of the field, for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters of the state.

Water Quality Standards means the Part 4 Water Quality Standards developed under Part 31 of Act No. 451 of the Public Acts of 1994, as amended, being Rules 323.1041 through 323.1117 of the Michigan Administrative Code.

25-year, 24-hour rainfall event or **100-year, 24-hour rainfall event** means the maximum 24-hour precipitation event with a probable recurrence interval of once in 25 years or 100 years, respectively as determined by the "NOAA ATLAS-14 Precipitation Frequency Data Server (PFDS)" <https://hdsc.nws.noaa.gov/hdsc/pfds/>.

PART II

Section B. Monitoring Procedures

1. Representative Samples

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304(h) of the Federal Act (40 CFR Part 136 – Guidelines Establishing Test Procedures for the Analysis of Pollutants), unless specified otherwise in this permit. Test procedures used shall be sufficiently sensitive to determine compliance with applicable effluent limitations. Requests to use test procedures not promulgated under 40 CFR Part 136 for pollutant monitoring required by this permit shall be made in accordance with the Alternate Test Procedures regulations specified in 40 CFR 136.4. These requests shall be submitted to the Manager of the Permits Section, Water Resources Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30458, Lansing, Michigan, 48909-7958. The permittee may use such procedures upon approval.

The permittee shall periodically calibrate and perform maintenance procedures on all analytical instrumentation at intervals to ensure accuracy of measurements. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Control/Quality Assurance program.

3. Instrumentation

The permittee shall periodically calibrate and perform maintenance procedures on all monitoring instrumentation at intervals to ensure accuracy of measurements.

4. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: 1) the exact place, date, and time of measurement or sampling; 2) the person(s) who performed the measurement or sample collection; 3) the dates the analyses were performed; 4) the person(s) who performed the analyses; 5) the analytical techniques or methods used; 6) the date of and person responsible for equipment calibration; and 7) the results of all required analyses. Records shall be kept in the CNMP for a minimum of five years from the date of creation.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of five (5) years from the date of creation, or longer if requested by the Regional Administrator or the Department.

PART II

Section C. Reporting Requirements

1. Start-up Notification

If the permittee will not populate with animals during the first 60 days following the effective date of the certificate of coverage issued under this permit then the permittee shall notify the Department within 14 days following the effective date of the certificate of coverage issued under this permit. Subsequently, the Department shall be notified 60 days prior to population with animals.

2. Submittal Requirements for Self-Monitoring Data

Part 31, Water Resources Protection, of the NREPA, specifically Section 324.3110(3), and R 323.2155(2) of Part 21, Wastewater Discharge Permits, promulgated pursuant to Part 31, Water Resources Protection, of the NREPA, allows the Department to specify the forms to be utilized for reporting the required self-monitoring data. Unless instructed on the effluent limitations page to conduct "Retained Self-Monitoring" the permittee shall submit self-monitoring data via the Department's Electronic Environmental Discharge Monitoring Reporting (e2-DMR) system.

The permittee shall utilize the information provided on the e2-Reporting website at <https://secure1.state.mi.us/e2rs/> to access and submit the electronic forms. Both monthly summary and daily data shall be submitted to the Department no later than the 20th day of the month following each month of the authorized discharge period(s). The permittee may be allowed to submit the electronic forms after this date if the Department has granted an extension to the submittal date.

3. Retained Self-Monitoring Requirements

If instructed on the effluent limits page (or otherwise authorized by the Department in accordance with the provisions of this permit) to conduct retained self-monitoring, the permittee shall maintain a year-to-date log of retained self-monitoring results and, upon request, provide such log for inspection to the staff of the Department. Retained self-monitoring results are public information and shall be promptly provided to the public upon request.

The permittee shall certify, in writing, to the Department, on or before January 10th (April 1st for animal feeding operation facilities) of each year, that: 1) all retained self-monitoring requirements have been complied with and a year-to-date log has been maintained; and 2) the application on which this permit is based still accurately describes the discharge. With this annual certification, the permittee shall submit a summary of the previous year's monitoring data. The summary shall include maximum values for samples to be reported as daily maximums and/or monthly maximums and minimum values for any daily minimum samples.

Retained self-monitoring may be denied to a permittee by notification in writing from the Department. In such cases, the permittee shall submit self-monitoring data in accordance with Part II.C.2., above. Such a denial may be rescinded by the Department upon written notification to the permittee. Reissuance or modification of this permit or reissuance or modification of an individual permittee's authorization to discharge shall not affect previous approval or denial for retained self-monitoring unless the Department provides notification in writing to the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. Such increased frequency shall also be indicated.

Monitoring required pursuant to Part 41, Sewerage Systems, of the NREPA, or Rule 35 of the Mobile Home Park Commission Act (Public Act 96 of 1987) for assurance of proper facility operation shall be submitted as required by the Department.

PART II

Section C. Reporting Requirements

5. Compliance Dates Notification

Within 14 days of every compliance date specified in this permit, the permittee shall submit a notification to the Department via MiWaters (<https://miwaters.deq.state.mi.us>) indicating whether or not the particular requirement was accomplished. If the requirement was not accomplished, the notification shall include an explanation of the failure to accomplish the requirement, actions taken or planned by the permittee to correct the situation, and an estimate of when the requirement will be accomplished. If a report is required to be submitted by a specified date and the permittee accomplishes this, a separate notification is not required.

6. Noncompliance Notification

Compliance with all applicable requirements set forth in the Federal Act, Parts 31 and 41 of the NREPA, and related regulations and rules is required. All instances of noncompliance shall be reported as follows:

a. 24-Hour Reporting

Any noncompliance which may endanger health or the environment (including maximum and/or minimum daily concentration discharge limitation exceedances) shall be reported, verbally, within 24 hours from the time the permittee becomes aware of the noncompliance. A submission via MiWaters (<https://miwaters.deq.state.mi.us>) shall also be provided within five (5) days.

b. Other Reporting

The permittee shall report, via MiWaters (<https://miwaters.deq.state.mi.us>), all other instances of noncompliance not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring, within five (5) days from the time the permittee becomes aware of the noncompliance.

Reporting shall include: (1) a description of the discharge and cause of noncompliance; and (2) the period of noncompliance, including exact dates and times, or, if not yet corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

7. Spill Notification

The permittee shall immediately report via MiWaters (<https://miwaters.deq.state.mi.us>) any release of any polluting material which occurs to the surface waters or groundwaters of the state, unless the permittee has determined that the release is not in excess of the threshold reporting quantities specified in the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code), by calling the Department at the number indicated on the second page of this permit (or, if this is a general permit, on the COC); or, if the notice is provided after regular working hours, call the Department's 24-hour Pollution Emergency Alerting System telephone number, 1-800-292-4706.

Within ten (10) days of the release, the permittee shall submit to the Department via MiWaters (<https://miwaters.deq.state.mi.us>), a full written explanation as to the cause of the release, the discovery of the release, response (clean-up and/or recovery) measures taken, and preventative measures taken or a schedule for completion of measures to be taken to prevent reoccurrence of similar releases.

8. Upset Noncompliance Notification

If a process "upset" (defined as an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee) has occurred, the permittee who wishes to establish the affirmative defense of upset, shall notify the Department by telephone within 24 hours of becoming aware of such conditions; and within five (5) days, provide in writing, the following information:

- a. that an upset occurred, and that the permittee can identify the specific cause(s) of the upset;
- b. that the permitted wastewater treatment facility was, at the time, being properly operated and maintained (note that an upset does not include noncompliance to the extent caused by operational error,

PART II

Section C. Reporting Requirements

improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation); and

- c. that the permittee has specified and acted on all responsible steps to minimize or correct any adverse impact in the environment resulting from noncompliance with this permit.

No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

In any enforcement proceedings, the permittee, seeking to establish the occurrence of an upset, has the burden of proof.

9. Bypass Prohibition and Notification

- a. Bypass Prohibition

Bypass is prohibited, and the Department may take an enforcement action, unless:

- 1) bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- 2) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass; and
- 3) the permittee submitted notices as required under 9.b. or 9.c. below.

- b. Notice of Anticipated Bypass

If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible, at least ten (10) days before the date of the bypass and provide information about the anticipated bypass as required by the Department. The Department may approve an anticipated bypass, after considering its adverse effects, if it will meet the three (3) conditions listed in 9.a. above.

- c. Notice of Unanticipated Bypass

The permittee shall submit notice to the Department of an unanticipated bypass by calling the Department at the number indicated on the second page of this permit (if the notice is provided after regular working hours, use the following number: 1-800-292-4706) as soon as possible, but no later than 24 hours from the time the permittee becomes aware of the circumstances.

- d. Written Report of Bypass

A written submission shall be provided within five (5) working days of commencing any bypass to the Department, and at additional times as directed by the Department. The written submission shall contain a description of the bypass and its cause; the period of bypass, including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass; and other information as required by the Department.

- e. Bypass Not Exceeding Limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to ensure efficient operation. These bypasses are not subject to the provisions of 9.a., 9.b., 9.c., and 9.d., above. This provision does not relieve the permittee of any notification responsibilities under Part II.C.11. of this permit.

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Section C. Reporting Requirements

f. Definitions

- 1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
- 2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

10. Bioaccumulative Chemicals of Concern (BCC)

Consistent with the requirements of R 323.1098 and R 323.1215 of the Michigan Administrative Code, the permittee is prohibited from undertaking any action that would result in a lowering of water quality from an increased loading of a BCC unless an increased use request and antidegradation demonstration have been submitted and approved by the Department.

11. Notification of Changes in Discharge

The permittee shall notify the Department, via MiWaters (<https://miwaters.deq.state.mi.us>), as soon as possible but no later than 10 days of knowing, or having reason to believe, that any activity or change has occurred or will occur which would result in the discharge of: (1) detectable levels of chemicals on the current Michigan Critical Materials Register, priority pollutants or hazardous substances set forth in 40 CFR 122.21, Appendix D, or the Pollutants of Initial Focus in the Great Lakes Water Quality Initiative specified in 40 CFR 132.6, Table 6, which were not acknowledged in the application or listed in the application at less than detectable levels; (2) detectable levels of any other chemical not listed in the application or listed at less than detection, for which the application specifically requested information; or (3) any chemical at levels greater than five times the average level reported in the complete application (see the first page of this permit, for the date(s) the complete application was submitted). Any other monitoring results obtained as a requirement of this permit shall be reported in accordance with the compliance schedules.

12. Changes in Facility Operations

Any anticipated action or activity, including but not limited to facility expansion, production increases, or process modification, which will result in new or increased loadings of pollutants to the receiving waters must be reported to the Department by a) submission of an increased use request (application) and all information required under R 323.1098 (Antidegradation) of the Water Quality Standards or b) by notice if the following conditions are met: (1) the action or activity will not result in a change in the types of wastewater discharged or result in a greater quantity of wastewater than currently authorized by this permit; (2) the action or activity will not result in violations of the effluent limitations specified in this permit; (3) the action or activity is not prohibited by the requirements of Part II.C.10.; and (4) the action or activity will not require notification pursuant to Part II.C.11. Following such notice, the permit or, if applicable, the facility's COC may be modified according to applicable laws and rules to specify and limit any pollutant not previously limited.

13. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the permittee shall submit to the Department via MiWaters (<https://miwaters.deq.state.mi.us>) within 30 days of the actual transfer of ownership or control a written agreement between the current permittee and the new permittee containing: (1) the legal name and address of the new owner; (2) a specific date for the effective transfer of permit responsibility, coverage and liability; and (3) a certification of the continuity of or any changes in operations, wastewater discharge, or wastewater treatment.

If the new permittee is proposing changes in operations, wastewater discharge, or wastewater treatment, the Department may propose modification of this permit in accordance with applicable laws and rules.

PART II

Section C. Reporting Requirements

14. Operations and Maintenance Manual

For wastewater treatment facilities that serve the public (and are thus subject to Part 41 of the NREPA), Section 4104 of Part 41 and associated Rule 2957 of the Michigan Administrative Code allow the Department to require an Operations and Maintenance (O&M) Manual from the facility. An up-to-date copy of the O&M Manual shall be kept at the facility and shall be provided to the Department upon request. The Department may review the O&M Manual in whole or in part at its discretion and require modifications to it if portions are determined to be inadequate.

At a minimum, the O&M Manual shall include the following information: permit standards; descriptions and operation information for all equipment; staffing information; laboratory requirements; record keeping requirements; a maintenance plan for equipment; an emergency operating plan; safety program information; and copies of all pertinent forms, as-built plans, and manufacturer's manuals.

Certification of the existence and accuracy of the O&M Manual shall be submitted to the Department at least sixty days prior to start-up of a new wastewater treatment facility. Recertification shall be submitted sixty days prior to start-up of any substantial improvements or modifications made to an existing wastewater treatment facility.

15. Signatory Requirements

All applications, reports, or information submitted to the Department in accordance with the conditions of this permit and that require a signature shall be signed and certified as described in the Federal Act and the NREPA.

The Federal Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

The NREPA (Section 3115(2)) provides that a person who at the time of the violation knew or should have known that he or she discharged a substance contrary to this part, or contrary to a permit, COC, or order issued or rule promulgated under this part, or who intentionally makes a false statement, representation, or certification in an application for or form pertaining to a permit or COC or in a notice or report required by the terms and conditions of an issued permit or COC, or who intentionally renders inaccurate a monitoring device or record required to be maintained by the Department, is guilty of a felony and shall be fined not less than \$2,500.00 or more than \$25,000.00 for each violation. The court may impose an additional fine of not more than \$25,000.00 for each day during which the unlawful discharge occurred. If the conviction is for a violation committed after a first conviction of the person under this subsection, the court shall impose a fine of not less than \$25,000.00 per day and not more than \$50,000.00 per day of violation. Upon conviction, in addition to a fine, the court in its discretion may sentence the defendant to imprisonment for not more than 2 years or impose probation upon a person for a violation of this part. With the exception of the issuance of criminal complaints, issuance of warrants, and the holding of an arraignment, the circuit court for the county in which the violation occurred has exclusive jurisdiction. However, the person shall not be subject to the penalties of this subsection if the discharge of the effluent is in conformance with and obedient to a rule, order, permit, or COC of the Department. In addition to a fine, the attorney general may file a civil suit in a court of competent jurisdiction to recover the full value of the injuries done to the natural resources of the state and the costs of surveillance and enforcement by the state resulting from the violation.

16. Electronic Reporting

Upon notice by the Department that electronic reporting tools are available for specific reports or notifications, the permittee shall submit electronically via MiWaters (<https://miwaters.deq.state.mi.us>) all such reports or notifications as required by this permit, on forms provided by the Department.

PART II

Section D. Management Responsibilities

1. Duty to Comply

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit, more frequently than, or at a level in excess of, that authorized, shall constitute a violation of the permit.

It is the duty of the permittee to comply with all the terms and conditions of this permit. Any noncompliance with the Effluent Limitations, Special Conditions, or terms of this permit constitutes a violation of the NREPA and/or the Federal Act and constitutes grounds for enforcement action; for permit or Certificate of Coverage (COC) termination, revocation and reissuance, or modification; or denial of an application for permit or COC renewal.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2. Facilities Operation

The permittee shall, at all times, properly operate and maintain all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance include adequate laboratory controls and appropriate quality assurance procedures.

3. Power Failures

In order to maintain compliance with the effluent limitations of this permit and prevent unauthorized discharges, the permittee shall either:

- a. provide an alternative power source sufficient to operate facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit; or
- b. upon the reduction, loss, or failure of one or more of the primary sources of power to facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit, the permittee shall halt, reduce or otherwise control production and/or all discharge in order to maintain compliance with the effluent limitations and conditions of this permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any adverse impact to the surface waters or groundwaters of the state resulting from noncompliance with any effluent limitation specified in this permit including, but not limited to, such accelerated or additional monitoring as necessary to determine the nature and impact of the discharge in noncompliance.

5. Containment Facilities

The permittee shall provide facilities for containment of any accidental losses of polluting materials in accordance with the requirements of the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code). For a Publicly Owned Treatment Work (POTW), these facilities shall be approved under Part 41 of the NREPA.

PART II

Section D. Management Responsibilities

6. Waste Treatment Residues

Residuals (i.e. solids, sludges, biosolids, filter backwash, scrubber water, ash, grit, or other pollutants or wastes) removed from or resulting from treatment or control of wastewaters, including those that are generated during treatment or left over after treatment or control has ceased, shall be disposed of in an environmentally compatible manner and according to applicable laws and rules. These laws may include, but are not limited to, Part 31, Water Resources Protection; Part 55, Air Pollution Control; Part 111, Hazardous Waste Management; Part 115, Solid Waste Management; Part 121, Liquid Industrial By-Products; Part 301 Inland Lakes and Streams; and Part 303 Wetlands Protection, of the NREPA. Such disposal shall not result in any unlawful pollution of the air, surface waters, or groundwaters of the state.

7. Right of Entry

The permittee shall allow the Department, any agent appointed by the Department, and the Regional Administrator or their designee, upon the presentation of credentials and, for animal feeding operation facilities, following appropriate biosecurity protocols:

- a. to enter upon the permittee's premises where an effluent source is located or any place in which records are required to be kept under the terms and conditions of this permit; and
- b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect process facilities, treatment works, monitoring methods and equipment regulated or required under this permit; and to sample any discharge of pollutants.

8. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Act and Rule 2128 (R 323.2128 of the Michigan Administrative Code), reports prepared in accordance with the terms of this permit and required to be submitted to the Department, shall be available for public inspection via MiWaters (<https://miwaters.deq.state.mi.us>). As required by the Federal Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Act and Sections 3112, 3115, 4106 and 4110 of the NREPA.

9. Duty to Provide Information

The permittee shall furnish to the Department via MiWaters (<https://miwaters.deq.state.mi.us>), within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or the facility's COC, or to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

PART II

Section E. Activities Not Authorized by this Permit

1. Discharge to the Groundwaters

This permit does not authorize any discharge to the groundwaters. Such discharge may be authorized by a groundwater discharge permit issued pursuant to the NREPA.

2. POTW Construction

This permit does not authorize or approve the construction or modification of any physical structures or facilities at a POTW. Approval for the construction or modification of any physical structures or facilities at a POTW shall be by permit issued under Part 41 of the NREPA.

3. Civil and Criminal Liability

Except as provided in permit conditions on "Bypass" (Part II.C.9. pursuant to 40 CFR 122.41(m)), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond the permittee's control, such as accidents, equipment breakdowns, or labor disputes.

4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee may be subject under Section 311 of the Federal Act except as are exempted by federal regulations.

5. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Federal Act.

6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other Department of Environment, Great Lakes, and Energy permits, or approvals from other units of government as may be required by law.

PART III
Technical Standard for the Surface Application of
Concentrated Animal Feeding Operations Waste on Frozen or Snow-Covered Ground Without
Incorporation or Injection

When Concentrated Animal Feeding Operation (CAFO) waste is surface-applied to frozen or snow-covered ground, without incorporation or injection, and that application is followed by rainfall or temperatures rising above freezing, the CAFO waste can run off into lakes, streams, or drains. Documented evidence shows that this runoff can cause resource damage to the surface waters of the state. Therefore, in accordance with Title 40 of the Code of Federal Regulations, Section 123.36, Establishment of Technical Standards for Concentrated Animal Feeding Operations, and State Rule 323.2196(5), CAFO Permits, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Bureau, establishes the following Technical Standard. This Technical Standard shall be used for field-by-field assessments, as required by National Pollutant Discharge Elimination System permits issued to CAFOs, to ensure that the land application of CAFO waste to frozen or snow-covered ground, without incorporation or injection, will not result in CAFO waste entering the waters of the state.

Based on the frozen and/or snow-covered conditions, the minimal settling and breaking down of the waste during these conditions, and the inability to predict or control snowmelt and rainfall, there are no practices that can ensure the runoff from fields with surface-applied waste on frozen or snow-covered ground will not be polluted. This standard assumes that surface runoff from snowmelt and/or rainfall will occur, and that the runoff will be polluted if CAFO waste is surface-applied on frozen or snow-covered ground. Therefore, the way to prevent these discharges is to apply CAFO waste only to fields, or portions of fields, where the runoff will not reach surface waters.

A field-by-field assessment must be completed, and all of the following requirements must be met and documented:

1. The Natural Resources Conservation Service's Manure Application Risk Index (MARI)* has been completed to identify fields, or portions of fields, that scored 37 or lower on the MARI.
2. An on-site field inspection of the entire field, or portion of field, that scored 37 or lower under the MARI has been completed. The inspection will take into consideration the slope and location of surface waters, tile line risers, and other conduits to surface water.
3. Based on the on-site field inspection, the Comprehensive Nutrient Management Plan (CNMP) will include documentation on topographic maps, the fields or portions of fields where the runoff will not flow to surface waters, and designate those areas as the only areas authorized for surface application without incorporation to frozen or snow-covered ground.
4. The findings of the inspection and documentation in the CNMP will be approved by a certified CNMP provider.

This assessment must be incorporated into the CNMP, and submitted as part of the CNMP Executive Summary each year.

* Grigar, J., and Lemunyon, J. A Procedure for Determining the Land Available for Winter Spreading of Manure in Michigan. NRCS publication. (Available on the EGLE NPDES website)

ORIGINAL SIGNED

Richard A. Powers, Chief
Water Bureau

April 19, 2005

Date