

-- Permitting and Environmental Regulations --

**Michigan National Pollutant Discharge Elimination System (NPDES)
Permit Program**

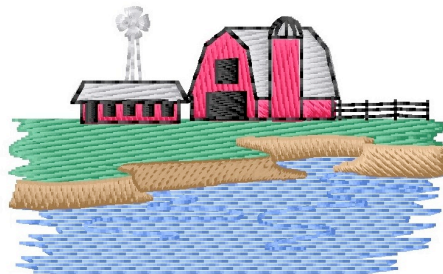
And

Right to Farm Act

Generally Accepted Agricultural Management Practices (GAAMP)

Livestock Engineering Solutions, Inc

Michael A. Veenhuizen, Ph.D.
President; Senior Engineer
2967 S Honey Creek Road
Greenwood, IN 46143
317-535-1829
mveenhuizen@livestockeng.com



Michigan Permitting and Regulations

I. Introduction

Agricultural producers are faced with many challenges in today's rapidly changing world. Changes in environmental regulations have affected producers in many ways. Environmental regulation can become complex with both federal and state regulations as well as compliance requirements. Staying informed is a producer's most effective technique for meeting the challenges of today's agriculture.

Similar to most states, Michigan has enacted clean water regulations. While these regulations usually contain provisions similar to those in the federal legislation, there may be significant differences. The one common thread is that the Clean Water Act (CWA) requirements must be followed and enforced in conjunction with state regulations. The Department of Environmental Quality (DEQ) has the authority in Michigan to propose rules and establish pollution standards for waters of the state to protect surface and groundwater resources.

Michigan statute defines a discharge such that "a person shall not directly or indirectly discharge into the waters of the state a substance that is or may become injurious to any of the following:

- To the public, health, safety and welfare
- To agricultural uses that are being made or may be made of such waters
- To livestock, wild animals, birds, fish, aquatic life, or plants or to the growth or propagation of plants

Anyone discharging or proposing to discharge waste or wastewater into the surface waters of the state is required by law to obtain a National Pollutant Discharge Elimination System (NPDES) permit. To be required to obtain a NPDES permit the discharge or proposed discharge is a part of the wastewater control system design that results in a controlled direct discharge to waters of the state. A controlled direct discharge is a man-made conveyance, such as a pipe, which carries wastewater to waters of the state and releases or discharges into the waters. For example, a wastewater impoundment or runoff collection pond that has a pipe or earthen channel connecting the impoundment to a nearby ditch, stream, or river that allows for wastewater to be released into the waters requires an NPDES permit to operate. The purpose of the NPDES permit program is to control direct discharges through man-made conveyances into the surface waters of the state by imposing effluent limits and other conditions necessary to meet state and federal requirements.

The DEQ has broad powers to prevent and to address pollution of waters of Michigan. The DEQ has the right to enter onto land to inspect or investigate a farm. It should be noted that the DEQ has the right to enter, but entry must occur at reasonable times and for the purpose of inspection and investigation.

Under the CWA, the EPA has delegated the National Pollution Discharge Elimination System (NPDES) permit program to many states. NPDES permits are generated to protect designated uses of the water, to meet specific in-stream criteria, and to require compliance with water quality-based and technology-based requirements for a given discharge. In 1973, the EPA approved a state program for Michigan. The early EPA-approved program did not include a state delegated NPDES permit program for livestock producers or animal feeding operations. Despite the fact that NPDES permits for animal feeding operations were not required at the beginning, the approved program set forth that Michigan livestock producers were to work voluntarily to protect the environment. Accordingly, Michigan uses two tools – Right to Farm Act and the Generally Accepted Agricultural and Management Practices (GAAMPs) – to encourage Michigan livestock producers to voluntarily protect the environment.

II. Animal Feeding Operations

The National Pollutant Discharge Elimination System (NPDES) permit program regulates concentrated animal feeding operations (CAFO) under the requirements of the Clean Water Act (CWA). The NPDES permit program is administered by the Michigan Department of Environmental Quality (DEQ) under the authority of the U.S. Environmental Protection Agency (USEPA).

“What farms are regulated?” A regulated livestock farm is any farm that meets the definition of a concentrated animal feeding operation. For regulatory purposes, an “animal feeding operation” is defined as any facility where:

- Animals are confined and fed for at least forty-five (45) days (consecutive or non-consecutive) or more in any twelve (12) month period, and
- There is no ground cover or vegetation (crops, grass, forage, or post-harvest residue) normally maintained or sustained over the confinement area (lot or facility).

A livestock farm is considered a CAFO and requires a National Pollutant Discharge Elimination System (NPDES) permit if it fits into one of the following categories. CAFOs are broken into three categories – large, medium, and small. All large CAFOs require a NPDES operating permit.

A large CAFO is defined as any confined feeding operation that houses or confines at least:

- 700 mature dairy cows
- 1,000 veal calves
- 1,000 cattle other than mature dairy cows or veal calves (heifers, steers, bulls, and cow/calf pairs)
- 2,500 swine weighing 55 pounds or more
- 10,000 swine weighing less than 55 pounds
- 500 horses
- 10,000 sheep or lambs
- 55,000 turkeys
- 30,000 laying hens or broilers with a liquid manure handling system
- 125,000 broilers with a solid manure handling system
- 82,000 laying hens with a solid manure handling system
- 30,000 ducks with a solid manure handling system
- 5,000 ducks with a liquid manure handling system

A medium CAFO is defined as any confined feeding operation that houses or confines at least:

- 200 - 699 mature dairy cows
- 300 - 999 veal calves
- 300 - 999 cattle other than mature dairy cows or veal calves (heifers, steers, bulls, and cow/calf pairs)
- 750 - 2,499 swine weighing 55 pounds or more
- 3,000 - 9,999 swine weighing less than 55 pounds
- 150 - 499 horses
- 3,000 – 9,999 sheep or lambs
- 16,500 – 54,999 turkeys
- 9,000 – 29,999 laying hens or broilers with a liquid manure handling system
- 37,500 – 124,999 broilers with a solid manure handling system
- 25,000 – 81,999 laying hens with a solid manure handling system
- 10,000 – 29,999 ducks with a solid manure handling system
- 1,500 – 4,999 ducks with a liquid manure handling system

And, where one of the following conditions is met, as defined by the Michigan Department of Environmental Quality (MDEQ) and the United States Environmental Protection Agency (USEPA):

- Pollutants or wastewater are discharged into waters of the United States through a man-made ditch, flushing system, or other similar man-made device; or
- Pollutants are discharged directly into waters of the United States, which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

An animal feeding operation that meets the size definition of a medium CAFO is not required to get a NPDES permit unless one or both of the additional qualifying conditions are true. For example, a cattle feedlot with 700-head finishing cattle is not required to obtain a NPDES permit unless there is a direct discharge to waters of the state through a man-made conveyance similar to the conditions applied to a large CAFO or waters of the state that pass through a facility come in direct contact with the animals or a direct discharge to these waters occurs. The discharge would be a planned or designed discharge to the waters of the state. Lot runoff or overflow from a runoff control impoundment that enters waters of the state or is not controlled so that it does not enter waters of the state would require a NPDES permit. For example, a 700-head feedlot that has runoff from the feedlot after a rainfall event that is not controlled and allowed to either be discharged in to a ditch, stream, or river by a channel or other conveyance would be required to obtain a NPDES discharge permit. The objective is to contain and control runoff and other wastewaters from being released to waters of the state.

A small CAFO is not a CAFO by regulatory definition but can be designated as a CAFO if the animal feeding operation houses or confines animal numbers that are less than a medium CAFO and where one of the following conditions is met:

- Pollutants are discharged into waters of the United States through a man-made ditch, flushing system, or other similar man-made device; or
- Pollutants are discharged directly into waters of the United States, which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

A small CAFO may be required to obtain a NPDES permit if the animal feeding operation has a direct discharge to waters of the state through a man-made conveyance. In most cases, the state regulatory agency (MDEQ) and the United States Environmental Protection Agency (USEPA) do not want to require a NPDES permit for a small CAFO. The preference is to provide compliance assistance or guidance to eliminate the reason for a direct discharge so that a NPDES permit is not required.

For the purpose of determining which animals to count to determine the production capacity and whether a NPDES permit is required – *“Two or more livestock facilities that are under common ownership are considered to be one facility if they adjoin each other or they use a common area or system for land applications of manure or process wastewater.”* A common area or system for land application includes the land application fields used for manure nutrient distribution and utilization. For example, if the same person or company owns two 600-head cattle feedlots, and the manure and wastewater from these feedlots is spread on the same land base or crop acres, these two feedlots would be considered as one feedlot for determining the number of animals. The total animal capacity for determining the size of CAFO would be 1,200-head. This would qualify as a large CAFO. Under the current rule, if either of these two feedlots has a direct discharge to waters of the state then a NPDES permit would be required.

Livestock farms that house or confine fewer animals than those required to be a large CAFO are not required to obtain a NPDES permit. However, a small or medium sized animal feeding operation (AFO) can be designated as a CAFO and be required to obtain a permit if it is determined that pollutants are

discharged from the farm through a man-made conveyance. The farm may also be required to obtain a permit if pollutants are discharged into waters of the state through a man-made ditch, flushing system, or other man-made device or pollutants are discharged directly into waters of the United States which originate outside of and pass over, across, or through the facility. A NPDES permit may also be required if an operation that meets the definition of an animal feeding operation and the confined animals come in direct contact with waters of the state.

The goal of all animal feeding operations, whether large, medium, or small as defined by the USEPA, is to collect, contain, and control all manure, wastewater, and polluted runoff so that it does not reach or is not discharged in to waters of the state or United States. Any existing animal feeding operation, new animal feeding operation, or new confined feeding structure construction (buildings and manure and wastewater storages) must be evaluated to determine the potential risk of a discharge to surface water and the responsibility to obtain a NPDES permit.

III. Federal NPDES CAFO Rule -- USEPA

NPDES CAFO Rule:

The EPA's regulation of discharges from CAFOs dates back to the 1970s. During 2003, the EPA revised the Clean Water Act (CWA) permitting requirements and effluent limitations guidelines and standards for concentrated animal feeding operations. The new regulations were issued February 12, 2003. The 2003 CAFO rule expanded the number of animal feeding operations covered by the regulation and requirements to obtain NPDES permit coverage. The revised regulation also added requirements to include land application of manure by CAFOs. Since 2003, the EPA has revised the rule in response to the February 2005 decision by the Second Circuit Court of Appeals regarding legal challenges to the 2003 rule. The court directed the EPA to:

- Remove the requirements for all CAFOs to apply for an NPDES permit, and
- Add requirements for Nutrient Management Plans (NMP) to:
 - be submitted by the CAFO with a permit application,
 - be reviewed by permitting authorities,
 - allow meaningful public review, and
 - be incorporated into the terms of the permit.

The EPA revised the rule and published a new rule in March 2008, with a compliance deadline of February 29, 2009. The final rule included two key changes revising the requirements to obtain an NPDES permit and to submit an NMP with the permit application. The 2003 rule required all CAFOs to obtain an NPDES permit. The 2008 revision changed the requirement from all CAFOs being required to obtain a permit to only those CAFOs that discharge or proposed to discharge to obtain a permit. In addition, the 2008 final rule required an NMP to be submitted with the application, the permitting authority to review the NMP and provide for meaningful public review and comment, and the terms of the NMP to be an enforceable component of the permit.

A legal challenge to the 2008 rule questioned whether the EPA had the authority to require a NPDES permit for CAFOs that have not or do not discharge. The 5th Circuit Court of Appeals recently ruled in a unanimous decision issued on March 15, 2011, that the U.S. Environmental Protection Agency (EPA) had exceeded its authority and that only CAFOs that actually discharge into waters of the U.S. are required to apply for a NPDES permit. The court vacated the EPA's requirement that CAFOs that propose to discharge are required to obtain an NPDES permit. In accordance with the 5th Circuit Court decision, the EPA plans to revise the NPDES CAFO regulations.

“What does all of this mean?” Regulatory requirements for CAFOs have changed significantly over the last nine (9) years. In 2003, the USEPA required all CAFOs to obtain an NPDES permit. Initially, Michigan did not agree that an NPDES permit program was required for livestock farms that do not discharge. In place of an NPDES permit program Michigan implemented a voluntary program to meet the performance standards outlined in the EPA NPDES permit program. The Michigan Agricultural Environmental Assurance Program (MAEAP) provided a proactive environmental assurance program that included education, on-farm technical assistance, environmental risk assessments, site-specific action plans, Comprehensive Nutrient Management Plans (CNMP), plus Environmental Assurance Certification.

Currently, Michigan implements an NPDES permit program for concentrated animal feeding operations (CAFOs). Legal challenges to the permitting authority of the EPA by environmental groups and industry has required the EPA to revise the rule such that there is currently not a final rule in place. Since 2003, the regulatory requirements for CAFOs have changed from all CAFOs being required to obtain an NPDES permit to CAFOs that discharge or propose to discharge to now only those CAFOs that actually discharge into waters of the U.S. being required to obtain NPDES permit coverage. The uncertainty and evolving changes may complicate the Michigan permitting program and require changes to correctly implement the requirements of the EPA NPDES permit program.

Future Changes: NPDES CAFO Reporting Rule (Proposed)

On October 14, 2011, the Environmental Protection Agency (EPA) proposed a new NPDES CAFO Reporting Rule. The Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) permit program to authorize and regulate the discharge of pollutants from point sources to waters of the United States. The EPA points out that the CWA includes the term “CAFO” in the definition of “point source.” Specifically, a “point source” is defined as “any discernible, confined and discrete conveyance, including but not limited to any * * * concentrated animal feeding operation * * * from which pollutants are or may be discharged.” It is concluded by this reference to the definition of a “point source” that the EPA considers CAFOs a point source and therefore has the authority to require specific reporting.

The purpose of this proposed rule is to collect facility-specific information that is intended to improve the EPA’s ability to more effectively implement and manage an NPDES program for CAFOs and achieve the water quality protection goals of the Clean Water Act. The EPA points out that, different from other regulated industries, the EPA does not have facility specific information for all CAFOs in the United States necessary to be able to carry out the programmatic functions of an NPDES program. The EPA proposes to collect facility specific information for all CAFOs whether the facility is permitted or unpermitted (has a valid NPDES permit). According to the EPA, a livestock farm is a CAFO if it meets the definition of a large or medium CAFO described above. The information proposed to be collected includes:

- CAFO contact information
 - Name and address of owner and operator
- Location of the CAFO’s production area
 - Address
 - Latitude and longitude
- NPDES permitting information
- Type and number of animals
- Number of acres available for land application
 - Land owned
 - Land rented or leased

The proposed rule was published in the Federal Register on Friday, October 21, 2011. The EPA solicited comments on the proposed rule up to December 20, 2011.

IV. Michigan Regulations

The Michigan Department of Environmental Quality (DEQ) administers the National Pollutant Discharge Elimination System (NPDES) permit program required by the U.S. EPA Clean Water Act (CWA) and has the authority to regulate animal feeding operations and require NPDES permits for concentrated animal feeding operations (CAFOs). Animal feeding operations that meet the definition of a CAFO require either a General NPDES permit or an Individual NPDES permit. A General NPDES permit is a permit by rule and does not require a farm specific permit. All Michigan CAFOs that are not required to obtain an individual NPDES permit are covered under Michigan General Permit MIG019000 issued November 18, 2005.

An NPDES General Permit Program for Concentrated Animal Feeding Operations establishes uniform criteria and standard conditions and requirements for all CAFOs authorized under a general NPDES permit rule. An Individual NPDES permit allows for specific permit conditions and additional protective measures to protect human health and the environment or for a farm to construct or operate in a manner different than the standard conditions in a general permit regulation.

Part of the nationally administered NPDES permit program addresses activities that cause or can cause discharges of contaminants to waters of the state. In December 2003, the EPA released a final regulation for CAFOs. These farms are defined as point sources by the CWA and when the U.S. EPA rule was finalized in 2003, required all large CAFOs to seek permit coverage. Michigan defined the livestock industry as a “zero discharge” industry and did not agree that NPDES permits were required. In place of the NPDES permit program Michigan developed a voluntary program – Michigan Agricultural Environmental Assurance Program (MAEAP). This program provided a proactive environmental assurance program with an objective of meeting the EPA’s Unified Strategy CAFO standards for operations with 1,000-head animal units or more, as well as smaller operations.

Currently, all large CAFOs are required to obtain an NPDES permit in place of the alternative permitting approach for CAFOs that included the Michigan MAEAP program to achieve the environmental protection objectives of the NPDES permit program. The components of the NPDES permit program are described below.

Although these requirements are specifically required by and applied to large CAFOs and medium or small CAFOs that are required to obtain a permit, these requirements provide a framework for compliance that all animal feeding operations should consider. Not all of these requirements may be required for smaller operations to operate in a manner that protects the environment but serious consideration of how these practices can improve a farm’s environmental compliance is needed.

NPDES Permit Approval – Concentrated Animal Feeding Operations

The applicability of a general NPDES permit in Michigan is limited to large CAFOs. Large CAFOs receive an individual “certificate of compliance” (COC) that authorizes the farm to operate in accordance with the conditions set forth in the general permit. A valid authorization (COC) to operate under a general NPDES permit must be issued by the DEQ. The COC will identify the following information and compliance schedule.

- The rainfall event size (25-year, 24-hour or 100-year, 24-hour rainfall) and magnitude at the production area.
- The date by which existing CAFOs shall attain six months storage

- The date by which existing storage structures shall meet NRCS Practice Standard No. 313
- The date by which the permittee shall have an operator certified by the Department
- The date by which the permittee shall submit an approved CNMP

The terms and conditions of the general NPDES permit become effective the date the certificate of coverage (COC) is issued. The DEQ posts the COC and supporting documents associated with the permit application on the DEQ website for fourteen (14) days prior to issuance to allow for public comment. Any person may file comments with the DEQ on the proposed COC and permit application during the fourteen-day period. In addition, any person may request that a public hearing be held regarding the proposed COC. Comments or requests may be rejected as untimely if filed after the fourteen-day period. If a person disagrees with or finds the permit to be unacceptable, they may file a sworn petition with the Office of Administrative Hearings of the Michigan Department of Environmental Quality, identifying the conditions of the permit that are being challenged and the grounds for the challenge.

Individual NPDES Permit

An individual NPDES permit provides the opportunity to include site-specific approval conditions to:

- Require additional protective measures to protect human health and the environment, or
- Allow farms to construct or operate in a manner different than the standard conditions of a general NPDES permit regulation.

The DEQ may require any person who has authorization by a certificate of coverage and a general NPDES permit, to apply for and obtain an individual NPDES permit if any of the following circumstances apply:

- A discharge is a significant contributor to pollution as determined by DEQ on a case-by-case basis
- A change has occurred in the availability of demonstrated technology or practices for the control or abatement of waste applicable to a point source discharge
- Effluent standards and limitations are developed or established for a point source discharge covered by an NPDES permit

V. Permit Operational Standards

Authorized Discharge and Overflows

A discharge is allowed from a storage structure or land application field if specific requirements are met and the discharge does not cause or contribute to a violation of Michigan's Water Quality Standards. A release from a storage structure is allowed under the following conditions.

- The structures are properly designed, constructed, operated and maintained
- Either chronic or catastrophic rainfall events occur causing an overflow to occur
- The production area is operated in accordance with the requirements of the permit

Runoff from precipitation events from land application areas that are managed in accordance with the Nutrient Management Plan (NMP) are allowed under the "Ag Storm Water Exemption."

If a discharge does occur, specific monitoring of the discharge is required to be recorded and reported.

Prohibited Discharge

Dry weather discharges or discharges that are not due to a chronic or catastrophic rainfall event are prohibited. An overflow that causes a storage structure failure is not an authorized discharge.

Nutrient Management Plan (NMP)

The nutrient management plan is a key component of the permit. An approved nutrient management plan (NMP) or comprehensive nutrient management plan (CNMP) is required by the Michigan Department of Environmental Quality as a part of the permit conditions. The owner or operator of the animal feeding operation must implement the components of the NMP. These components include:

Storage Structures

- Storage structures are required to be designed, constructed, maintained and operated to provide at least six-months storage capacity for all manure and process wastewater generated, normal precipitation and runoff from the production area, and additional freeboard or storage capacity above the design capacity
- Records of storage capacity and design
- Physical design and construction of storage structures
 - All existing and new storage structures must include depth gauges
 - All existing and new storage structures must be inspected, evaluated and certified to be constructed in accordance with NRCS Standard No. 313, Waste Storage Facility
 - For existing storage structures, a producer may demonstrate environmental performance equivalence to NRCS Standard No. 313 through an evaluation by a professional engineer.
 - Applicants verified under MAEAP may submit the “Evaluation of Existing Components” for review by the MDEQ.
- Inspections -- Weekly storage structure inspections
- Operation and Maintenance
 - Exceedance of maximum operational capacity must be reported
 - Prior to the winter months at least six months storage capacity must be established. The requirements state that a farm must have at least six-months storage sometime between November 1 and December 31 each year
 - Vegetation management and berm or dike repair
 - Liner integrity protection
 - Prompt response to deficiencies

Best Management Practices

Best management practices are required as part of the NMP to minimize and prevent pollutants from being discharged to waters of the State from the production area and land application sites.

- Conservation practices near the production area and land application areas
- Clean water diversions
- Prevent direct contact of animals with waters of the state
- Animal mortality management
- Chemical handling and disposal
- Inspections
 - Weekly inspection of clean water diversions
 - Daily visual inspection of water lines
 - Inspection records and documentation
- Land application sites
 - Individual field assessment prior to use for land application
 - Field inspections prior to each land application event
 - Manure and process wastewater sampling and analysis – annually
 - Soil sampling and analysis – once every three years
 - Subsurface drainage tile inspections prior to and upon completion of land application
 - Subsurface drainage tile inspections after a precipitation event of at least ½ inch within 30 days of the land application event
 - Application equipment inspections

- Land application rates based on field specific criteria to prevent dry weather discharges, prevent wet weather discharges that cause a water quality violation, and not exceed the soil nutrient or water holding capacity.
- Land application rates based on the controlling nutrient based on the agronomic application of nitrogen and phosphorus. Phosphorus applications based on Bray P1 soil test levels. Manure and process wastewater application is not allowed at Bray P1 soil test levels that exceed 150 ppm.
- Frozen or snow covered ground application prohibited unless conducted in accordance with the approved state technical standards.
- Timing of land application activities dependent on weather conditions and anticipated precipitation prior to, during, or after land application
- Land application of manure and process wastewater must be incorporated into the soil within 24 hours of application. An exception is allowed for pastures, forage crops, and where no-till practices are used.
- Land application setback of at least 100 feet from a down gradient surface water feature unless replaced with a 35-foot vegetative buffer
- Records of land application information
- Storm water management of non-production areas

Comprehensive Nutrient Management Plan (CNMP)

A comprehensive nutrient management plan (CNMP) is required for all large CAFOs and NPDES permits. The CNMP must be developed and written to address both the production area and land application sites. This is a written plan that describes and includes details of the practices, methods, and actions necessary to meet all of the requirements of the Nutrient Management Plan. A Certified CNMP provider must approve this plan.

The CNMP is required to be reviewed annually, typically by a third-party reviewer or plan preparer, to determine if updates are necessary to meet the NMP requirements or document changes to the NMP. It is the responsibility of the producer to be sure that the review is completed. An annual report to the DEQ is required each year to report on activities from the previous January 1 through December 31 (calendar year).

VI. Right to Farm Act and GAAMP

The Right to Farm Act provides a producer a basis for defense against a claim of nuisance. In conjunction with the land use changes defense in the Right to Farm Act, Michigan developed Generally Accepted Agricultural Management Practices (GAAMP) in three areas. The GAAMPs are based on the best available technology and scientific research. The three areas where GAAMPs have been developed include:

- Nutrient utilization
- Pesticide utilization and pest management, and
- Manure management and utilization that includes the production, collection, storage, transfer, treatment, utilization, and record keeping. A key requirement of the GAAMPs is to promote practices that manage the manure and wastewater handling system to minimize any negative effects on the environment.

The Michigan Right to Farm program anticipated that environmental complaints may be lodged against livestock producers and established a procedure to respond to complaints and environmental concerns. Michigan is one of the first states to create a Memorandum of Understanding (MOU) between the Michigan Department of Agriculture (MDA) and the Department of Environmental Quality (DEQ) to implement and enforce the program. The Michigan Department of Agriculture is responsible for the

educational program, implementation and verification of complaints. The DEQ is responsible for enforcing provisions of the Federal CWA and to issue penalties against farms that are in violation of the Right to Farm Act GAAMPs and fail to implement corrective actions.

Michigan livestock farms are considered to be a zero discharge industry and originally Michigan did not agree that all large CAFOs were required to obtain a NPDES permit. In support of this position, Michigan proposed and implemented an Agricultural Environmental Assurance Program (MAEAP) that provided a voluntary process of meeting the EPA's Unified Strategy CAFO standards for operations with 1,000-head animal units or more, as well as smaller operations. The MAEAP includes proactive environmental assurance programs that provide education, on-farm technical assistance, environmental risk assessments, site-specific action plans, Comprehensive Nutrient Management Plans (CNMP), plus Environmental Assurance Certification.

Compliance with the GAAMP requirements is an important component to a defense against a claim of nuisance. All animal-feeding operations should strive to achieve compliance with all GAAMP requirements to take advantage of this protection.

In addition to the GAAMP requirements it is recommended that a review of the NPDES permit requirements be a part of a sound environmental program. Although the NPDES permit requirements are specifically required by and applied to large CAFOs and medium or small CAFOs that are required to obtain a permit, these requirements provide a framework for compliance that all animal feeding operations should consider. Not all of these requirements may be required for smaller operations to operate in a manner that protects the environment, but how these practices can improve a farm's environmental compliance needs serious consideration.

VII. Conclusion

Michigan's animal feeding operation regulatory program includes a mandatory NPDES permit program for large CAFOs and a voluntary Generally Accepted Agricultural Management Practices (GAAMP) program. The Michigan Department of Environmental Quality (DEQ) is authorized by USEPA to implement the federal NPDES permit program for CAFOs. NPDES permits are required to protect designated uses of water, to meet specific in-stream criteria, and to require compliance with water quality-based and technology-based requirements for a given discharge.

The current animal feeding capacity or proposed capacity for a new or expanding animal feeding operation will determine which program applies to you. Currently all large CAFOs are required to have an NPDES permit through the Michigan Department of Environmental Quality. For example, a cattle feedlot with 1,000 head or more is required to obtain an NPDES permit. A feedlot with 500 head is not required to obtain an NPDES permit but should investigate the GAAMP program. If the 500-head feedlot is considering expansion plans that will increase the animal numbers to greater than 1,000 head, then an NPDES permit is required to expand and continue to operate. This same scenario applies to all livestock species.

If an NPDES permit is required it is never too early to start planning and taking action. The permitting process can be lengthy usually requiring from three (3) to four (4) months to complete. In some situations, the process may take longer depending on individual site conditions. For a successful

permit project, evaluate your options and become familiar with the program requirements as early as possible during your decision process.

For animal feeding operations that do not meet the definition of a large CAFO it is best to comply with the Michigan Department of Agriculture GAAMP program and requirements. As noted earlier this is a voluntary program that provides significant rewards to all animal-feeding operations. Participation in the GAAMP program is strongly recommended to establish a sound environmental compliance record and promote good community relations. All farms, independent of their size, can realize the advantages of the GAAMP program.

Recent changes to the federal CAFO rule may require Michigan to revise its current rules and adopt rules that apply the NPDES permit program only to CAFOs that actually discharge to the waters of the United States. Currently, all large CAFOs are required to obtain an NPDES permit. Current proposals by the EPA may require that additional changes be made to the CAFO rule to maintain compliance with the federal CAFO rule requirements for reporting.

The regulatory requirements and permitting programs for animal feeding operations make up a dynamic process and require constant attention. Staying current with many of these changes may be a challenge for many animal feeding operation owners and operators. Maintaining a network of professional advisors, service and product suppliers, and fellow producers can help to ease the challenge and burden associated with staying up-to-date about recent changes and enhance your productivity and profitability.