

# Evaluation of the EPA's Oversight of Ohio's National Pollutant Discharge Elimination System Permitting Program for Concentrated Animal Feeding Operations

July 7, 2026 | Report No. 26-E-0040



## Abbreviations

CAFO	Concentrated Animal Feeding Operation
C.F.R.	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
NPDES	National Pollutant Discharge Elimination System
Ohio EPA	Ohio Environmental Protection Agency
OIG	Office of Inspector General
U.S.C.	United States Code

## Cover Image

Land application of liquid manure. The image shows a person in a tractor that is pulling a large green piece of farm equipment spreading liquid manure. In the foreground, the image shows green vegetation below a wire fence and golden grain-like vegetation beyond the fence. (EPA image)

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**OFFICE OF INSPECTOR GENERAL**  
U.S. ENVIRONMENTAL PROTECTION AGENCY

July 7, 2026

**MEMORANDUM**

**SUBJECT:** Evaluation of the EPA's Oversight of Ohio's National Pollutant Discharge Elimination System Permitting Program for Concentrated Animal Feeding Operations  
Report No. 26-E-0040

**FROM:** Nicole N. Murley, Deputy Inspector General performing the duties  
of the Inspector General *Nicole N. Murley*

**TO:** Cheryl Newton, Deputy Regional Administrator  
EPA Region 5

The U.S. Environmental Protection Agency Office of Inspector General initiated this [evaluation](#) to determine whether the EPA's oversight verifies that Ohio's National Pollutant Discharge Elimination System, or NPDES, permitting program implements federal regulatory requirements related to nutrient management plans for concentrated animal feeding operations, or CAFOs. We initiated this evaluation based on a complaint that was submitted to the OIG Hotline. The complainant alleged that the EPA was not appropriately overseeing Ohio's implementation of the NPDES permitting program for CAFOs or verifying that NPDES-permitted CAFOs applied manure and process wastewater in accordance with approved nutrient management plans. This evaluation focused on the first part of the complaint, the EPA's oversight of the NPDES permitting program for CAFOs.

**This evaluation supports these EPA mission-related efforts:**

- Compliance with the law.
- Ensuring clean and safe water.

A response to this report is not required because the report contains no recommendations. If your office submits a response, however, it will be posted on the OIG's website, along with our memorandum commenting on the response. The response should be provided as an Adobe PDF file that complies with the requirements of section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that your office does not want released to the public; if the response contains such data, your office should identify the data for redaction or removal along with corresponding justification.

We will post this report to our website at [www.epa.gov/oig](http://www.epa.gov/oig).

## Background

The EPA regulates point sources of water pollution under its NPDES permitting program, as authorized by the Clean Water Act at 33 U.S.C. § 1342. According to the Clean Water Act, point source pollution is water pollution that “can be traced to a specific location,” such as a CAFO. Pollutants from CAFOs can enter waters of the United States through runoff from direct contact with manure or from contact with liquid animal waste in process wastewater.

### Pollutant

In 33 U.S.C. § 1362(6), the Clean Water Act defines pollutant as including “sewage; garbage; biological materials; and chemical, industrial, municipal, and agricultural wastes discharged into water.”

Pursuant to 40 C.F.R. § 122.23(d)(1), a CAFO may only discharge pollutants into waters of the United States if it has an NPDES permit that authorizes it to do so. An NPDES CAFO permit governs the day-to-day management and storage of animal waste and specifies how the permitted CAFO disposes of manure and treats process wastewater.

### Process wastewater

Process wastewater is defined in 40 C.F.R. § 412.2(d) as “water directly or indirectly used in the operation of the CAFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other CAFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs, or bedding.”

Permitted CAFOs that manage and apply manure and process wastewater to approved land application sites must manage and apply manure and process wastewater in accordance with an approved nutrient management plan that addresses nine minimum regulatory requirements.

The EPA authorized Ohio to implement the state’s NPDES permitting program for CAFOs in 1974. While the EPA maintains oversight responsibility for the program, the delegated state agency—the Ohio Environmental Protection Agency, or Ohio EPA—has primary responsibility for day-to-day permitting, compliance monitoring, and enforcement. As of March 2026, the Ohio EPA website listed 20 NPDES-permitted CAFOs. See Appendix A for additional background information and an overview of a prior report that is relevant to this evaluation.

## Responsible Offices

EPA Region 5 is responsible for oversight of the delegated state programs for Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. To address specific state needs and meet national environmental goals and requirements, Region 5 reviews and evaluates state program performance, provides technical

assistance, and takes direct action, as needed. The Ohio EPA is the delegated authority for Ohio's NPDES permitting program.

Through the Water Pollution Control Grant program, or Section 106 grant program, as established by the Clean Water Act, the EPA provides funds to states for monitoring, enforcement, drinking water, and NPDES permitting programs. According to the Clean Water Act, the Section 106 grant program distributes funds based on "the extent of the pollution problem in the respective [s]tates."<sup>1</sup> According to a Region 5 manager, Region 5 provides Ohio with Section 106 funds that include an allotment for the state's NPDES permitting program. In fiscal year 2025, the EPA allotted approximately \$5 million to Ohio through the Section 106 grant program.

## Scope and Methodology

We conducted this evaluation from September 2025 to April 2026 in accordance with the *Quality Standards for Inspection and Evaluation* published in December 2020 by the Council of Inspectors General on Integrity and Efficiency. Those standards require that we perform the evaluation to obtain sufficient and appropriate evidence to support our findings.

To identify Region 5's program oversight requirements, we reviewed applicable laws and regulations governing CAFO permits in Ohio, including the Clean Water Act and its implementing regulations at 40 C.F.R. §§ 122, 123, and 412. We also reviewed EPA guidance and program documents that we received from Region 5. We requested that the Ohio EPA provide us with the nutrient management plans associated with six CAFO permits that we selected from the Ohio EPA's CAFO permit list. We analyzed those nutrient management plans to determine whether they included the nine minimum requirements under 40 C.F.R. § 122.42(e)(1)(i)-(ix), listed in Appendix A. We also interviewed staff from Region 5, the Ohio EPA, and the Ohio Department of Agriculture to distinguish roles and responsibilities.

## Results

The EPA conducts oversight of the Ohio EPA's NPDES permitting program for CAFOs in accordance with its responsibilities under the Clean Water Act, as described below. The EPA has authorized Ohio to implement the NPDES permitting program, and the Ohio EPA is the delegated state agency responsible for NPDES program administration. The six nutrient management plans that we reviewed covered all nine minimum requirements under 40 C.F.R. § 122.42(e)(1)(i)-(ix), indicating that the EPA's oversight offers reasonable assurance that the Ohio EPA's NPDES permitting program verifies that CAFO nutrient management plans comply with that federal regulation.

To meet the EPA's oversight responsibilities under the Clean Water Act, Region 5 conducts oversight activities of the Ohio EPA's NPDES program. Region 5 and an Ohio EPA manager told us that they maintain regular communication about the Ohio EPA's NPDES program. Each year, the region

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<sup>1</sup> 33 U.S.C. § 1256(b).

coordinates with the state to create grant work plans that identify all activities that the state will perform using the Section 106 grant funds. The region and the Ohio EPA conduct annual joint evaluations of the state's progress on the grant work plan. The most recent joint evaluation was in August 2025. A Region 5 manager told us that, to ensure that the state's NPDES permitting program is consistent with the federal program, the region periodically asks the Ohio EPA to conduct a self-assessment of its NPDES permitting program's legal authorities. The Ohio EPA conducted a self-assessment of its legal authorities in 2020 at the request of Region 5. That self-assessment concluded that the Ohio EPA's administrative rules "are consistent with the Clean Water Act and U.S. EPA's requirements." In 2022, the EPA conducted a permit quality review of the Ohio EPA NPDES permitting program to assess the state's overall NPDES permitting program implementation. Additionally, in 2023, the EPA conducted a review, using the state review framework, of the Ohio EPA's compliance and enforcement program under the Clean Water Act.

Region 5 also oversees Ohio's NPDES permitting program for CAFOs by conducting its own inspections of CAFOs in Ohio. The region coordinates with the Ohio EPA on enforcement actions and has taken its own enforcement actions against noncompliant CAFOs in Ohio. In addition, a Region 5 manager told us that the region periodically reviews NPDES CAFO permits that the Ohio EPA has issued as well as the nutrient management plans associated with those permits. For example, Region 5 reviewed three Ohio NPDES CAFO nutrient management plans in 2020. The region did not find any significant issues with the nutrient management plans during that review. Similarly, the six nutrient management plans that we reviewed addressed the nine minimum requirements identified in federal regulations. Therefore, we conclude that the EPA's oversight provides reasonable assurance that Ohio's program verifies that nutrient management plans for CAFOs include the nine minimum requirements under 40 C.F.R. § 122.42(e)(1)(i)-(ix), and we make no recommendations as a result of this evaluation.

## **Agency Response**

Although we did not identify any issues warranting recommendations, we provided the Agency with a copy of our draft report for review. Because there were no recommendations, the Agency was not required to provide a formal response, and the Agency did not submit a response.

## Additional Background Information and Prior Report

The EPA regulates point sources of water pollution under its NPDES permitting program, as authorized by the Clean Water Act at 33 U.S.C. § 1342.<sup>2</sup> According to the EPA’s “Source Water Protection” [web page](#), point source pollution is water pollution that “can be traced to a specific location,” such as a pipe directly releasing treated wastewater into a river. The EPA may authorize states to administer the NPDES permitting program. The EPA or a delegated state agency issues an NPDES permit to a point source facility, specifying the total amount of each pollutant that the facility can discharge into surface water. One program area that NPDES permits cover is CAFOs.<sup>3</sup>

EPA regulations specify requirements for CAFOs based on the size of the animal feeding operation and on the amount and nature of discharged pollutants.<sup>4</sup> Pollutants from CAFOs can enter surface water through runoff from direct contact with manure or from contact with liquid animal waste in process wastewater.<sup>5</sup> An NPDES CAFO permit governs the day-to-day management and storage of animal waste and specifies how the permitted facility disposes of manure and treats process wastewater. Pursuant to 40 C.F.R. § 122.23(d)(1), a CAFO may only discharge pollutants into surface water if it has an NPDES permit that authorizes it to do so. If a CAFO does not discharge pollutants into surface water, it may not need an NPDES CAFO permit, but it is still responsible for complying with the EPA’s CAFO regulations to prevent pollutants from entering surface water.

Permits require CAFOs to use a waste-handling system that manages and stores the manure and process wastewater produced at the facility. The EPA developed recommended designs to help facilities construct appropriate waste-handling systems. Figure 1 provides an example of how a beef cattle feeding CAFO might manage both waste and process wastewater. The following is an excerpt from the EPA’s 2017 *NPDES Compliance Inspection Manual*, which describes some of the key aspects of manure management for one type of confined beef cattle waste-handling system:

Manure produced by beef cattle on open lots is primarily handled as a solid, with removal by scraping and storing the collected manure in mounds on the lot. Open lots for beef cattle should also have runoff collection and retention basins to prevent the discharge of manure-contaminated runoff to adjacent surface waters. Manure handled as a solid, such as broiler, turkey, and solid cattle feedlot manure, is typically

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<sup>2</sup> As defined in 33 U.S.C. § 1362(14), “The term ‘point source’ means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.”

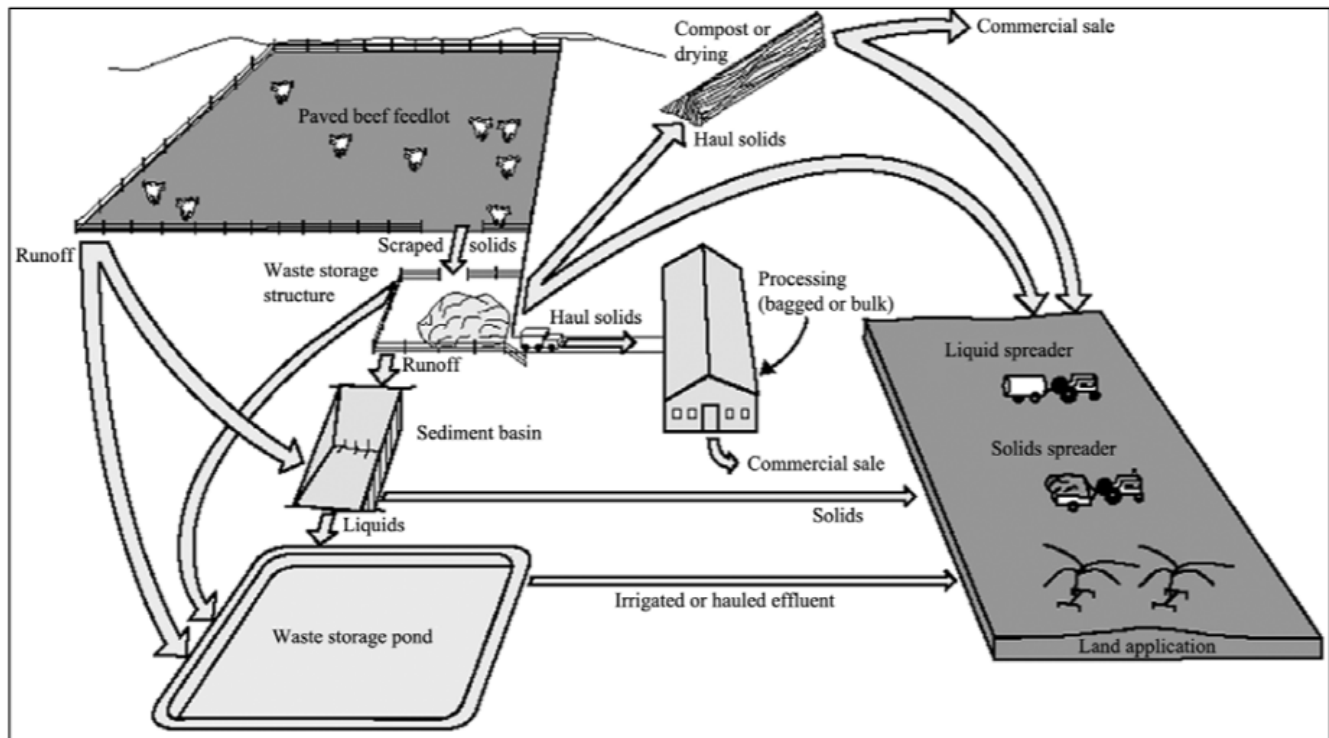
<sup>3</sup> For the other NPDES program areas, see the EPA [web page](#), “All NPDES Program Areas,” last accessed April 14, 2026.

<sup>4</sup> As defined in 40 C.F.R. § 122.23(b)(2), a “[c]oncentrated animal feeding operation (‘CAFO’) means an [Animal Feeding Operation] that is defined as a Large CAFO or as a Medium CAFO by the terms of this paragraph, or that is designated as a CAFO in accordance with paragraph (c) [40 C.F.R. § 122.23(c)] of this section.”

<sup>5</sup> As defined in 40 C.F.R. § 122.23(b)(5), manure is “manure, bedding, compost and raw materials or other materials commingled with manure or set aside for disposal.”

surface applied to cropland using either tractor-drawn or truck mounted box-type manure spreaders. Manure handled as a semi-solid or slurry, such as dairy cattle manure scraped from free-stall barns, is typically applied to cropland using tractor-drawn or truck-mounted tanks. Manure handled as a liquid, such as flushed dairy and swine manure, and effluent from open cattle feedlots may be applied to cropland using tractor-drawn or truck-mounted tanks or irrigation systems. Due to the volume of manure when handled as a liquid, irrigation is a fairly common method for land application of liquid manure due to the reduction in labor requirements.

**Figure 1: One type of confined beef cattle waste-handling system**



Source: The EPA's 2017 [NPDES Compliance Inspection Manual](#), appendix AD. (EPA adaptation of a U.S. Department of Agriculture image)

### ***Nutrient Management Plans for Permitted Concentrated Animal Feeding Operations***

EPA regulations require that permitted CAFOs that manage and apply manure and process wastewater to approved land application sites do so in accordance with an approved nutrient management plan. The EPA's regulation at 40 C.F.R. § 122.42(e)(1) states that "[a]ny permit issued to a CAFO must include a requirement to implement a nutrient management plan that, at a minimum, contains best management practices ... and applicable effluent limitations and standards, including those specified in 40 C.F.R. part 412." Appendix H of the EPA's [NPDES Permit Writers' Manual for Concentrated Animal Feeding Operations](#) provides a checklist that outlines the nine minimum requirements that a permitted facility's nutrient management plan must address under 40 C.F.R. § 122.42(e)(1)(i)-(ix). Table 1 describes those nine requirements.

**Table 1: Nine minimum regulatory requirements for nutrient management plans**

Regulatory citation	Regulatory language
40 C.F.R. § 122.42(e)(1)(i)	Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities.
40 C.F.R. § 122.42(e)(1)(ii)	Ensure proper management of mortalities (i.e., dead animals) to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities.
40 C.F.R. § 122.42(e)(1)(iii)	Ensure that clean water is diverted, as appropriate, from the production area.
40 C.F.R. § 122.42(e)(1)(iv)	Prevent direct contact of confined animals with waters of the United States.
40 C.F.R. § 122.42(e)(1)(v)	Ensure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.
40 C.F.R. § 122.42(e)(1)(vi)	Identify appropriate site-specific conservation practices to be implemented, including, as appropriate, buffers or equivalent practices to control runoff of pollutants to waters of the United States.
40 C.F.R. § 122.42(e)(1)(vii)	Identify protocols for appropriate testing of manure, litter, process wastewater, and soil.
40 C.F.R. § 122.42(e)(1)(viii)	Establish protocols to land apply manure, litter, or process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater.
40 C.F.R. § 122.42(e)(1)(ix)	Identify specific records that will be maintained to document the implementation and management of the minimum elements described in paragraphs (e)(1)(i) through (e)(1)(viii) of this section.

Source: 40 C.F.R. § 122.42(e)(1). (EPA OIG table)

### ***The EPA’s Oversight Responsibilities for State NPDES Permitting Programs***

If the EPA authorizes a state to administer the NPDES permitting program, the delegated state agency has primary responsibility for day-to-day permitting, compliance monitoring, and enforcement. The EPA maintains oversight responsibility for the state’s program to ensure that the state continues to meet statutory and regulatory requirements. The Clean Water Act requires that states administer NPDES permitting programs in accordance with federal regulations.<sup>6</sup> According to the EPA’s [NPDES State Program Guidance for Development and Review of State Program Applications and Evaluation of State Legal Authorities](#), the EPA’s oversight activities should include reviewing state permits, participating in inspections and enforcement actions at permitted facilities, performing periodic audits of state performance, and conducting comprehensive annual reviews of state NPDES permitting programs. To carry out its oversight responsibilities, the EPA should receive and review information that the state NPDES permitting programs provide. This includes electronic data related to NPDES permitting, compliance monitoring, and enforcement. In addition, the states must provide the EPA with access to “[a]ny information obtained or used in the administration of a State program” upon the EPA’s request for such information.<sup>7</sup>

<sup>6</sup> 33 U.S.C. § 1342(c)(2).

<sup>7</sup> 40 C.F.R. § 123.41.

## ***The Ohio EPA's NPDES Permitting Program for Concentrated Animal Feeding Operations***

The EPA authorized Ohio to implement the NPDES permitting program in 1974, and the Ohio EPA administers the program in Ohio. The Ohio EPA receives and reviews NPDES permit applications, issues permits, electronically transfers NPDES data to the EPA, and conducts compliance monitoring and enforcement actions. The EPA provides grant funds to help the Ohio EPA implement water quality programs, including the NPDES program. A Region 5 manager told us that the Ohio EPA must annually report to the EPA on the activities performed under the grant's work plan to demonstrate progress.

The Ohio EPA's NPDES permitting program can issue individual permits, which cover single facilities, and general permits, which can cover multiple facilities with similar operations and wastewater discharges. As of March 2026, Ohio had no general CAFO permits. As of the same date, the Ohio EPA [website](#) listed 20 individual NPDES CAFO permits.

### ***Prior Report***

In EPA OIG Report No. [19-N-0154](#), *EPA Region 5 Needs to Act on Transfer Request and Petition Regarding Ohio's Concentrated Animal Feeding Operation Permit Program*, issued May 15, 2019, we described that Region 5 did not make a timely decision on Ohio's request to transfer the NPDES permitting program for CAFOs from the Ohio EPA to the Ohio Department of Agriculture. We also reported that the EPA was not timely in responding to a citizen petition requesting the EPA to withdraw Ohio's NPDES permitting program for CAFOs and related permitting authorities. We noted that Region 5's lack of timely decisions on program transfer requests and petitions leaves state programs without clarity and petitioners unaware of petition status. We recommended that the regional administrator of Region 5 issue a decision regarding Ohio's request to transfer its NPDES permitting program for CAFOs and respond to the citizen petition. The EPA responded to the citizen petition in 2020 and declined Ohio's program transfer request in 2022. On December 5, 2022, the regional administrator of Region 5 notified the OIG that all recommendations for this report had been implemented and resolved.

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