

Falling Behind: Processing and Enforcing Permits for Animal Agriculture Operations in Maryland is Lagging

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Executive Summary

The Chesapeake Bay is an ecosystem in peril. Pollutants from animal farms, urban and suburban development, sewage treatment plants, and air pollution are deposited into the Bay causing algae blooms that consume the dissolved oxygen and cause dead zones that cannot support aquatic life. The Environmental Protection Agency's (EPA) Chesapeake Bay Total Maximum Daily Load (TMDL), issued in 2010, represents the estuary's last, best chance of recovery. To meet the TMDL, essentially a pollution budget for the Bay, states must force polluters to sharply reduce their discharges. EPA must push the states relentlessly to undertake this environmentally essential work. Unless government shows far more determination than it has in the past three decades, the Bay will die, with dead zones and fish kills spread across the watershed.

The economic sector most resistant to these essential changes is agriculture. Through the American Farm Bureau Federation, its nationally powerful and well-funded trade association, the farm lobby has used every available tool to cripple the TMDL effort. The motivations for these attacks are obvious: approximately half the pollution flowing into Chesapeake Bay comes from agriculture.¹ Regardless of billions of dollars in economic losses that will confront other sectors, especially tourism, if regulators cannot halt the Bay's deterioration, the Farm Bureau has pushed for preferential treatment for its members. Apart from the national litigation challenging EPA TMDL requirements,² another of its most heated battles has been against states' efforts to curtail pollution from large animal feeding operations, most of which raise chickens.

Agriculture contributes half of the pollution in the Bay. Animal agriculture accounts for 19 percent of the nitrogen and 26 percent of the phosphorus.³ According to EPA, approximately one-third of animal agriculture is federally regulated, contributing six percent of the nitrogen and eight percent of the phosphorus delivered to the Bay.⁴ The Clean Water Act (CWA) requires concentrated animal feeding operations (CAFOs), defined as medium or large facilities that discharge into surface waters,⁵ to get permits from the federal government or state agencies and reduce pollution as required by any applicable TMDL.

Effective oversight of animal agriculture in Maryland will eliminate the deposition of hundreds of thousands of pounds of pollutants into the Bay. Maryland regulates more animal agriculture operations than is required by federal law. The state regulates CAFOs, as required by the federal CWA, and Maryland Animal Feeding Operations (MAFOs), as required by state law. To meet the Bay TMDL, Maryland submitted a plan to EPA committing to reduce 248,000 pounds-per-year of nitrogen and 41,000 pounds-per-year of phosphorus from all animal feeding operations by 2025.⁶

Maryland has fallen behind in permitting these facilities, missing a crucial opportunity to reduce pollution to meet the TMDL. Issuing permits is the only way to compel these facilities to follow certain practices on the farm that limit the pollutants flowing into the Bay. Three years into the program and the Maryland Department of the Environment (MDE) has not registered 26 percent of Maryland's CAFOs and MAFOs. At the rate it is going, MDE will not succeed in writing, much less enforcing, permits for many years to come. In particular:

- Many of the applications MDE receives are incomplete: 65 of 540 CAFOs lack the required plans that dictate how the facility is to operate to protect water quality.
- The permit writers are behind: 87 out of a total of 506 complete applications have yet to be processed, leaving operators with no clear requirements to reduce pollution and MDE with no enforceable conditions.
- The CAFO program is understaffed, relying on three permit writers and the same number of inspectors. A loss of even one employee can cut the program's productivity in half, as occurred in 2012.
- MDE has so far given the industry a free ride: it has yet to collect application and annual fees for CAFO permits, which are \$120 for small CAFOs, \$600 for medium CAFOs, and \$1,200 for large CAFOs. There are no fees for MAFO coverage.

MDE's CAFO program is getting off the ground at the same time that state inspection resources are shrinking and agencies are under political pressure to stop attacking the "family" farm. In truth, CAFOs are tightly controlled by the multi-billion dollar chicken processing industry, which specifies exactly how chickens are to be grown, inspects farms regularly, and signs lengthy contracts with farmers, who find themselves stuck in the middle between companies like Perdue, regulators, and the public. Large chicken producers have produced farm families for photo opportunities whenever they find it convenient to obscure their own political clout. The result is an industry that has so far escaped regulation, and that is fighting to hang on to its ability to push the huge costs of its activities into the Bay and onto the backs of other economic sectors and the individual taxpayer.

Recommendations

• ***MDE should immediately begin to assess fees for CAFOs, both those that have permits and those with pending permits.*** States are struggling to adequately fund government programs, and MDE's CAFO program is no exception. The program is understaffed, unable to keep up with permit applications and inspections. As a first and long-overdue step, MDE must begin assessing permit fees. These fees ensure that a facility that pollutes the environment shoulders the full cost of regulating its operations—including processing and inspections—rather than foisting the cost onto the public. MDE has waived application and annual permit fees since the program began in 2010. The agency should immediately end this grace period and ensure that the permit and annual fees are assessed and reflect the anticipated cost of administering the permit.

• ***MDE should prioritize processing permits for the facilities with the most potential to pollute the Chesapeake Bay, including the largest facilities and those that are located near an impaired waterway.*** While assessing user fees will help fund the program and allow it to hire more permit writers, the agency will still face a backlog. The agency should prioritize which permits it processes first. It should target the facilities with the most potential to pollute the Chesapeake Bay, including the largest facilities and those near impaired waters.

• ***MDE must identify additional avenues for technical assistance with comprehensive nutrient management plans.*** The CAFO program uses a one-size-fits-all general permit no matter the type or size of the operation or its proximity to an impaired water body. To supplement this basic general permit, CAFOs and MAFOs are required to develop and submit management plans that cover every aspect of the operation. These plans are critical to responsible management of waste. For CAFOs, the plans are developed by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) or by an NRCS-certified technical service provider (TSP). Over the course of the program, the technical assistance available has not kept up with the demand for these plans. The state must immediately identify additional avenues for technical assistance, including requiring MDE, NRCS, and the Maryland Department of Agriculture (MDA) to develop a plan to expedite certification of additional TSPs.

• ***MDE should increase the number of physical, on-site inspections of MAFOs.*** The rate of inspections for MAFOs is significantly lower than the inspection rate for CAFOs. In FY 2012, MDE did not inspect a single MAFO. In 2013, it set an ambitious inspection target rate of more than 50 percent. Yet by July the agency had only inspected 15 percent of MAFOs. MDE should increase the number and frequency of physical, on-site inspections of these operations to ensure that they do not in fact discharge and are properly permitted.

EPA should increase spot inspections of Chesapeake Bay CAFOs and accelerate the promulgation of a new rule to tighten controls on these sources. EPA and the Chesapeake Bay Foundation (CBF) agreed this past summer to postpone a broad nationwide CAFO rule until at least 2018, just seven short years before the Bay restoration deadline will arrive. Instead, EPA will evaluate the Bay states' CAFO programs and inspect a limited number of CAFOs in the watershed. EPA should vigorously assess state programs, including increased spot checks of CAFOs in the region. It must also accelerate the timeline for a new rule, which will bring more CAFOs under federal regulation and begin to account for agriculture's true impact on watersheds across the nation.

Introduction

Chicken farms across the country have consolidated over the past 60 years, with significant consequences for the health of the Bay. The number of chicken farms declined from 1.6 million in 1950 to 27,000 in 2007. But the number of chickens produced over the same time period increased from 360 per farm to 330,000 per farm.⁷ This thousand-fold increase in production per farm is the result of a massive transformation in the sector: the proliferation of animal feeding operations (AFOs) and their largest iteration, CAFOs. The hog sector, and to a lesser extent the dairy and beef sectors, are undergoing similar patterns of consolidation.

Even the sterile regulatory definitions of AFOs shed light on their size and capacity to pollute. A facility meets the definition of an AFO if “[a]nimals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period,” and “vegetation . . . [is] not sustained in the normal growing season over any portion of the lot or facility.”⁸ CAFOs are medium and large AFOs and they are massive. One large CAFO of chickens contains *no fewer* than 125,000 animals,⁹ with a typical facility producing 600,000 per year.¹⁰ The operations are such a concern that Congress specifically wrote them into the Clean Water Act,¹¹ a notable move given that agriculture is generally exempt from the Act.

The newest effort to restore the Bay, known as the TMDL, requires states to reduce nitrogen and phosphorus loadings to the Bay 25 percent by 2025. The Bay TMDL accounts for AFOs as a major source sector, and the state has submitted to EPA its anticipated reductions in pollutants from AFOs. Under this plan, known as a Watershed Implementation Plan (WIP), nitrogen from AFOs will be reduced by 248,000 pounds per year by 2025 and phosphorus by 41,000 pounds per year by 2025.¹² Pursuant to the TMDL, the state must meet 60 percent of its 2025 goals by 2017. Meeting this deadline will require robust regulation of all major sectors, including CAFOs.

This Issue Alert updates CPR’s 2012 White Paper, *Manure In the Bay*,¹³ by examining Maryland’s ability to process and enforce CAFO and MAFO permits. It first looks at the states’ increased responsibility in monitoring these operations due to EPA’s recent abandonment of two CAFO rules. Next, it outlines Maryland’s CAFO program, focusing on the permitting and inspections processes and the user-fee system. It concludes with an analysis of the program’s overall success, finding that the lack of technical assistance in writing comprehensive management plans severely hampers the effectiveness of the program, that the program’s limited resources contribute to excessively long permit-processing times, and that inspections of MAFOs must be ramped up. An [interactive map](#) prepared for CPR by the Chesapeake Commons illustrates these findings.

EPA Relinquishes CAFO Oversight to the States

This Issue Alert focuses on Maryland’s CAFO program because the responsibility for regulating CAFOs largely falls to the states. Under the CWA, CAFOs are point sources that are required to obtain a permit in order to discharge into surface waters. EPA delegates its authority to the states, including Maryland, that meet certain criteria. As the federal oversight agency, however, EPA sets nationwide rules to guide the states. EPA recently backtracked on two nationwide CAFO rules, punting the vast majority of the oversight of these large operations to the states.

EPA-CBF Agreement Shifts Majority of CAFO Oversight to State Programs

In 2009, CBF sued EPA for its failure to enforce an interstate agreement to restore the Chesapeake Bay.¹⁴ The parties settled, with EPA agreeing to revise its Bay-specific CAFO regulations, among other concessions. Specifically, EPA agreed to “propose expanding the universe of CAFOs by means which might include . . . making it easier to designate an AFO as a CAFO or increase the number of animal operations that would qualify as CAFOs.”¹⁵ The original settlement called for a proposal by June 2012. After that deadline was extended into 2013, EPA indicated that it was considering a national update of CAFO rules.

Agriculture is responsible for half of the pollution entering the Bay, yet the CWA does not touch most agricultural operations. The contemplated CAFO rule would have brought more facilities under federal regulation, easing the burden on other point sources and helping clean up waterways across the nation. In July 2013, for reasons that have never been explained in a coherent way, CBF and EPA agreed to abandon the nationwide rule.¹⁶ Instead, they arranged for EPA to review CAFO programs in each Bay watershed state by June 2015 to determine whether they were likely to meet the goals of the Bay TMDL. If not, the agency would recommend corrective actions in 2015, and, if it appeared that existing programs were insufficient to meet the TMDL goals, EPA would propose a new rule in 2018.

Under the agreement, EPA is only obligated to review CAFOs in four subwatersheds by 2016, inspecting “no less” than four CAFOs in each.¹⁷ In other words, the agency could inspect just 16 CAFOs—total—in the 64,000-square-mile Bay watershed over the next three years. This troubling agreement not only ignored the watersheds polluted by animal agriculture outside the Bay region, but it also placed the majority of the oversight responsibility on the states.

EPA Withdraws Its CAFO Reporting Rule

Separately, in the summer of 2012, EPA withdrew a rule that would have required CAFOs to report basic information directly to the agency, in addition to the states.¹⁸ Despite decades of CAFO regulation under the CWA, EPA lacks even the most basic information about these operations. This common-sense rule would have required CAFOs to disclose information such as their location, size, ownership, waste management procedures, and history of illegal discharges, as well as whether they had a federal permit. To explain its withdrawal of the rule, the agency said that existing information from state permitting programs was sufficient, rendering an EPA rule redundant. EPA’s explanation runs counter to a 2008 report released by the Government Accountability Office finding that state data are inadequate and EPA “does not have the information it needs to effectively regulate these CAFOs.”¹⁹ As a result of this withdrawal, EPA’s knowledge of CAFOs is limited to the information collected by the states.

Maryland’s CAFO Regulatory Framework

Overview

MDE’s Land Management Administration (LMA) administers Maryland’s CAFO program. The program incorporates both CAFOs and MAFOs. An operation meets the general definition of an AFO if it is a feedlot or facility without crops or other vegetation where non-aquatic animals are confined, fed, and maintained for at least 45 days in any 12-month period. A CAFO is a large or medium AFO that discharges or proposes to discharge²⁰ manure, litter, or process wastewater.²¹ A MAFO is a large animal feeding operation that does not discharge manure, litter, or process wastewater, and does not propose to do so. Size thresholds vary based on the type of animal raised.²²

Because CAFOs are subject to the CWA, Maryland’s regulation of these operations is subject to federal oversight. The law does not require the regulation of MAFOs, which are overseen only

by the state. Under the CWA, Maryland retains the authority to regulate animal agriculture more stringently than the federal standards, and the MAFO program does just that.

Permitting

General Permit

Under the Maryland program, CAFOs were required to submit Notices of Intent (NOIs) to seek coverage under the General Discharge Permit by February 27, 2009; MAFOs were required to submit NOIs by March 1, 2010. Maryland's General Discharge Permit acts as both a state and federal permit, thus large and medium CAFOs and all MAFOs are required to apply for coverage under the same permit.

A general permit is one-size-fits-all, meaning that the same permit governs all CAFOs and MAFOs regardless of their size, location, or animal type. By definition, a general permit cannot account for entities that require different levels of oversight. For example, a general permit applies to a CAFO that discharges into an impaired waterway in exactly the same way as a CAFO that is located near a healthy water segment.

The General Discharge Permit will expire on November 30, 2014. At that time, MDE plans to issue a new General Discharge Permit and all CAFOs and MAFOs will have to reapply for coverage under the permit.²³

Nutrient Management Plans

To supplement the general permit, CAFOs are required to submit a comprehensive nutrient management plan (CNMP). MAFOs are required to submit a nutrient management plan (NMP) and a soil and water quality conservation plan. These plans are the backbone of the permit, dictating how a specific facility is to store and transport animal waste, how and when manure may be applied to a field, and where and how often to test for water and soil quality. They include detailed information about manure application, mortality management, and operation and maintenance requirements; basic information about the facility and its operations; and requirements for periodic reports. A CNMP has a greater focus on water quality, soil erosion, and testing and monitoring than a nutrient management plan.

Only the NRCS or an NRCS-certified technical service provider (TSP) can write a CAFO CNMP. In contrast, a nutrient management plan can be written by anyone, including an agricultural operator who has been certified by MDA. The state has 23 county field service centers, which house employees of NRCS, MDA, and local soil conservation districts.²⁴ NRCS planners write CNMPs for free. TSPs charge a fee, and farmers can apply for limited cost-share programs. Maryland's NRCS recently cut the number of planners on staff, so farmers are increasingly reliant on TSPs to develop the CNMPs that are required by law. As discussed in detail below, the number of CAFOs in Maryland far exceeds the technical assistance needed to develop CNMPs. Since the program began three years ago, 30 CAFOs have taken approximately 1,000 days or more to submit their CNMP.

For operations without the required plans, operators are required to sign a General Compliance Schedule and submit to MDE a CNMP status form. The General Compliance Schedule requires CAFOs to submit a current nutrient management plan within 20 days and makes portions of the

general permit enforceable.²⁵ CAFO operators must submit a status form twice a year detailing the progress they have made toward obtaining a CNMP. MDE says it will “evaluate on a case by case basis the submitted application information and [the] proposed schedule for the completion of an overdue CNMP to determine whether further action by MDE, including enforcement action, is appropriate.”²⁶ Once the CNMP is completed, the operator must submit it to MDE within 30 days.

Expected Processing Time

The CAFO program has three permit writers; MDE projects that they will average one permit registration per week.²⁷ Once the CNMP and NOI are submitted to MDE, the agency processes the two and portions of the CAFO CNMP become enforceable conditions of the permit itself.²⁸ MDE promises that once an application is complete—that is, it contains the NOI and required plans—“it can take up to 180 days to process, generally less.”²⁹ As discussed in detail below, the agency often falls short of this deadline: Over the course of the program it has taken MDE an average of 452 days to process an application.

Inspections

EPA requires state agencies to inspect CAFOs at least once every five years,³⁰ which is consistent with MDE’s policy. EPA also encourages state agencies to inspect facilities that do not discharge and therefore are not subject to federal regulation, many of which qualify as MAFOs in Maryland. According to EPA, medium and large facilities without federal permits should be inspected at least once to determine if they discharge, with the largest facilities inspected once every five years.³¹

MDE employs three people who inspect an average of 100 sites each per person per year. The loss of even one inspector can dramatically reduce the number of inspections. For example, inspections decreased by nearly 50 percent in 2012 compared to the previous year because of the loss of one inspector and the hiring and training of a new one.³²

For those operations without the required plans, CAFO operators are required to sign a General Compliance Schedule. The conditions contained in the General Compliance Schedule allow inspectors to perform full inspections of the operation.

User Fees

The CAFO program was designed to collect fees from users to underwrite the cost of the program. The application and annual fees for CAFO permits are \$120 for small CAFOs, \$600 for medium CAFOs, and \$1,200 for large CAFOs. These fees ensure that a regulated facility that pollutes the Bay bears the full cost of its operations, including the cost of permitting and inspections. MAFOs are not subject to fees. Remarkably, MDE has waived these fees since the inception of the CAFO program.

MDE's CAFO Program Off to a Slow Start

An analysis of Maryland's CAFO program reveals that the program is falling behind. Three years in and MDE has not permitted 26 percent of CAFOs and MAFOs. Twelve percent of the applications MDE receives from CAFOs are incomplete, lacking the required plans that dictate how the facility is to operate. When applications are complete, MDE is slow to process the permits. It takes MDE an average of 452 days to process an application, compared to the 180 days it promises. MDE has kept up with EPA's recommendation to inspect 20 percent of CAFOs per year, but the staff is limited and unable to adequately inspect MAFOs and other operations that did not submit an NOI.

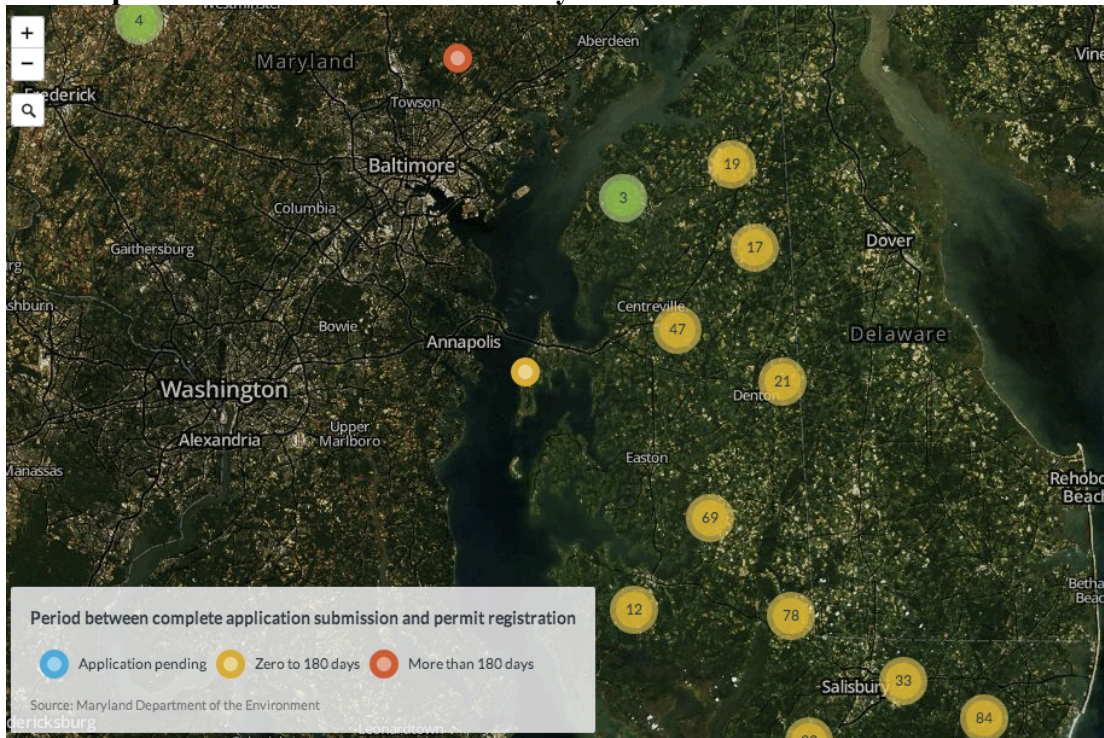
The table below provides an overview of CAFO and MAFO registration as of Nov. 18, 2013.

Table 1. Snapshot of CAFO and MAFO Permitting as of November 2013³³

	NOIs	Processed Permits	To Be Processed	Lacking Conservation Plans
Total	588	419	87	82
CAFO	540	406	69	65
MAFO	48	13	18	17

An interactive feature prepared for CPR by the Chesapeake Commons maps the location of the CAFOs and MAFOs in Maryland, showing how long it takes between submission of an NOI and completion of a CNMP and the time it has taken MDE to process the permits.³⁴ The map, which is depicted below, is available at <http://www.progressivereform.org/mdcafomap.cfm>.

Figure 1. Map of CAFOs and MAFOs in Maryland



Incomplete Permits

The CNMPs that CAFOs are required to submit supplement the general permit and are key to effective pollution control. They provide the specifics on how CAFOs are to operate in a way that protects water quality. According to MDE, 540 CAFO NOIs were submitted as of November 18, 2013. Of these, 65 CAFOs—12 percent—lack the required CNMPs.

According to public data available at MDE’s website, 30 facilities took approximately 1,000 days or more to submit a CNMP after an NOI. Again, 65 CAFOs are still discharging without a CNMP.

Table 2 shows the time between submitting an NOI and submitting a CNMP. The [interactive map](#) depicts these numbers graphically.

Table 2. Days Between Submission of NOI and CNMP³⁵

Days	0–480	481–961	962–1442	1443–1923
Facilities	263	132	21	9

Those operations with incomplete applications enter into compliance schedules with MDE and must submit bi-annual status forms. As demonstrated by Table 2, however, these compliance schedules are not an effective way to ensure that CNMPs are obtained within a reasonable time period. MDE may take enforcement actions against facilities that fail to obtain CNMPs. While this enforcement option is appropriate for a facility that makes no effort to obtain a CNMP, it may be less so against an operator who is late due to the lack of technical assistance available.

The requirement that a third party with technical expertise write the CNMP, as opposed to the operator directly, helps ensure that the plan is both technically sound and written by a neutral observer. But NRCS planners and NRCS-certified TSPs are unable to keep up with the demand for these plans. As the state updates the General Discharge Permit, it must identify alternatives to allow timely and sufficient technical assistance with CNMPs while maintaining the objectivity that a third party brings to the process. A first step would be to require MDE, MDA, and NRCS to develop a plan for expediting certification of TSPs.

Long Permit Processing Times

Once applications are complete, MDE processes the permits. Of the 506 complete permit applications, MDE had processed 82 percent, or 419, as of November 18, 2013. The agency is generally on track to process the remaining applications before the general permit expires.

The number of days it takes the agency to process the permits, however, is excessive. MDE promises to take 180 days or less to process a permit. In reality, it takes the agency an average of 452 days, and it now faces a daunting backlog of applications. Whereas it took an average of 360 days to process an application in 2012, it now takes an average of 614. The pace has not slowed—the agency has processed an increasing number of applications annually since 2011—but the backlog is building and the average time to process is increasing.

Table 3 shows the average number of days it takes MDE to process an application. The [interactive map](#) depicts these numbers graphically.

Table 3. Days to Process Applications³⁶

Years	Average Number of Days to Process a Complete Application	Number of CAFOs and MAFOs Registered
2010–2013	452	425
2010	413	27
2011	368	121
2012	360	132
2013	614	145

The CAFO program employs three permit writers who process one permit per week at most. To speed up the processing times, MDE must ensure that the program is fully funded and fully staffed by immediately assessing user fees. As it overcomes the backlog, it must also concentrate on the facilities with the most potential to pollute, including the largest operations and those located near an impaired waterway.

Inspections Lack Focus on MAFOs and Unpermitted Facilities

As Table 4 below shows, MDE has kept up with EPA’s recommendation to inspect 20 percent of all CAFOs per year, inspecting 24 percent of all “notified” CAFOs in 2012 and 14 percent as of July 2013. The agency has not been as successful at inspecting MAFOs; it did not inspect a single one in 2012. While the focus on MAFO inspections increased in 2013—the agency set a goal of inspecting 36 MAFOs—it had only inspected eight as of July 2013.³⁷

Table 4. Inspections³⁸

	FY10	FY11	FY12	FY13 target	FY13 total so far
“Notified” (i.e., NOI submitted) CAFO sites inspected	49	58	129	76	78
“Notified” MAFO sites inspected	2	3	0	36	8
Non-notified sites inspected	289		8	112	140
Non-notified sites inspected and found to be CAFOs or MAFOs	1	37	8	n/a	7
Follow-up inspections and complaints	n/a	n/a	45	n/a	92
Total inspections conducted (including sites found not to be CAFOs or MAFOs)	52	319	174	316	325
Minor violations found	5	76	55	n/a	57
Significant violations found	0	5	7	n/a	5

The CAFO program employs three inspectors and the loss of even one inspector greatly diminishes its ability to inspect facilities. MDE lost an inspector in 2012, which resulted in half of many inspections as the year before. The majority of reduced inspections were to facilities that had not submitted an NOI. These inspections are especially important at the beginning of a regulatory program when the requirements are unfamiliar. A facility may well be a CAFO or

MAFO yet did not submit an NOI because the operator did not understand or was not aware of the requirement.

Conclusion

When it comes to regulating AFOs, MDE is a leader among the Bay states. It has a stand-alone program that covers more operations than is required by federal law. Since MDE created the CAFO program in 2010, the number of registrations, inspections, and general oversight has improved. Three years in, however, the program is lagging. MDE has not registered 26 percent of Maryland's CAFOs and MAFOs. Issuing permits is the only way to compel these facilities to follow certain practices on the farm that reduce the pollutants flowing into the Bay. Without a permit, a CAFO has no enforceable conditions limiting its discharge.

Specifically, 12 percent of the applications MDE receives from CAFOs are incomplete, lacking the plans that dictate how the facility is to operate to protect water quality. When applications are complete, MDE is slow to process the permits. It takes MDE an average of 452 days to process an application compared to the 180 days it promises applicants. MDE has kept up with EPA's recommendation to inspect 20 percent of CAFOs per year, but the program's staff is limited, which can drastically affect the number of inspections conducted. MDE has not been as effective at inspecting MAFOs.

Much of the agency's delay can be attributed to understaffing, a direct consequence of a lack of funds. As a first and long-overdue step, the agency must begin assessing user fees immediately. A steady and reliable source of funds will allow the agency to hire sufficient permit writers and inspectors. As it works to overcome the backlog, it must also prioritize the facilities with the most potential to pollute. It should focus first on the largest operations and those located near an impaired waterway.

The agency must also tackle the problem of insufficient technical assistance in developing CNMPs. These plans are the backbone of the regulatory program and Maryland will not be able to adequately cut pollution from animal agriculture without them. USDA's NRCS has been unable to provide sufficient personnel to assist CAFO operators in developing CNMPs and the state must immediately identify additional avenues for technical assistance. As a start, MDE, MDA, and NRCS should develop a plan to expedite the certification of TSPs.

Allowing CAFOs to slip off the regulatory agenda would prevent the reduction of hundreds of thousands of pounds of pollution in Maryland alone. No amount of pollution reduction can be left on the table if the watershed is to meet the TMDL.

Endnotes

¹ *Learn the Issues: Agriculture*, CHESAPEAKE BAY PROGRAM, available at <http://www.chesapeakebay.net> (last visited Oct. 24, 2013).

² See Anne Havemann, Center for Progressive Reform Case Brief #1308, *Case Brief: American Farm Bureau Federation v. EPA* (Oct. 2013), available at http://www.progressivereform.org/articles/FBF_CaseBrf1308.pdf (summarizing the federal district court decision upholding the TMDL against a challenge by the Farm Bureau).

³ NONPOINT SOURCE POLLUTION, OFFICE OF WETLANDS, OCEANS, AND WATERSHED, ENVTL. PROTECTION AGENCY, EPA841-R-10-002, GUIDANCE FOR FEDERAL LAND MANAGEMENT IN THE CHESAPEAKE BAY WATERSHED 2–4 (May 12, 2010), available at http://water.epa.gov/polwaste/nps/upload/chesbay_chap02.pdf.

⁴ Specifically, according to EPA:

About one-third of animal manure is [federally] regulated (contributing 6 percent of nitrogen and 8 percent of phosphorus delivered to the Bay). The remaining nitrogen and phosphorus from agriculture is from non-animal agriculture (e.g. rowcrops) and smaller animal feeding operations or emissions which are not subject to the regulatory restrictions imposed on CAFOs.

OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, ENVTL. PROTECTION AGENCY, CHESAPEAKE BAY: COMPLIANCE AND ENFORCEMENT STRATEGY 9 (May 2010), available at http://www2.epa.gov/sites/production/files/documents/chesapeake-strategy-enforcement_0.pdf.

⁵ Whether a CAFO is medium or large depends on the number of animals raised at the site. 40 C.F.R. § 122.23.

⁶ MARYLAND’S PHASE II WATERSHED IMPLEMENTATION PLAN FOR THE CHESAPEAKE BAY TMDL, at 13, tbl.3 & 16, tbl.4 (Oct. 26, 2012) [hereinafter PHASE II WIP], available at http://mde.maryland.gov/programs/Water/TMDL/TMDLImplementation/Documents/FINAL_PhaseII_Report_Docs/Final_Documents_PhaseII/Final_Phase_II_WIP_MAIN_REPORT_102612.pdf.

⁷ PEW ENVIRONMENT GROUP, BIG CHICKEN: POLLUTION AND INDUSTRIAL POULTRY PRODUCTION IN AMERICA (2011) [hereinafter PEW, BIG CHICKEN], available at http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/PEG_BigChicken_July_2011.pdf.

⁸ 40 C.F.R. § 122.23(b)(1)(ii).

⁹ 40 C.F.R. § 122.23(b)(4)(x).

¹⁰ PEW, BIG CHICKEN, *supra* note 7.

¹¹ 33 U.S.C. § 1362(14).

¹² PHASE II WIP, *supra* note 6, at 13, tbl.3 & 16, tbl.4.

¹³ Rena Steinzor & Yee Huang, CPR Briefing Paper #1206, *Manure in the Bay: A Report on Industrial Animal Agriculture in Maryland and Pennsylvania* (June 2012), available at http://www.progressivereform.org/articles/CAFOs_1206.pdf.

¹⁴ *Fowler v. EPA*, No. 1:09-cv-00005-CKK (D.D.C. 2009).

¹⁵ Settlement Agreement between EPA & CBF, at 19, available at http://www.eenews.net/assets/2013/06/18/document_pm_01.pdf.

¹⁶ *Concentrated Animal Feeding Operations Regulations Revision Rule*, RIN 2040-AF20, REG. DEV. & RETROSPECTIVE REV. TRACKER, ENVTL. PROTECTION AGENCY, <http://yosemite.epa.gov/oepi/rulegate.nsf/byRIN/2040-AF20> (last visited Oct. 31, 2013).

¹⁷ *New EPA Commitments Related to Animal Agriculture in Chesapeake Bay Watershed*, available at <http://www.nationalchickencouncil.org/wp-content/uploads/2013/06/New-EPA-Commitments-Related-to-Animal-Agriculture-in-Chesapeake-Bay-Wate-.pdf>.

¹⁸ National Pollution Discharge Elimination System (NPDES) Concentrated Animal Feeding Operation (CAFO) Reporting Rule; Proposed Rule; Withdrawal, 77 Fed. Reg. 42,679 (July 20, 2012).

¹⁹ U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-08-944, CONCENTRATED ANIMAL FEEDING OPERATIONS: EPA NEEDS MORE INFORMATION AND A CLEARLY DEFINED STRATEGY TO PROTECT AIR AND WATER QUALITY FROM POLLUTANTS OF CONCERN (2008).

²⁰ After *National Pork Producers Council v. EPA*, 635 F.3d 738 (5th Cir. 2011), the agency clarified that “propose to discharge” means that a facility is designed, constructed, operated, or maintained such that a discharge to surface waters of the state *will* occur.

²¹ Whether a facility is a *large* CAFO depends solely on the number of animals confined. A facility is a *medium* CAFO if it meets both parts of a two-part definition: (1) number of animals confined, and (2) specific discharge criteria. 40 C.F.R. § 122.23.

²² See *AFO Size Chart*, LAND MGMT. ADMIN., MD. DEP'T OF THE ENV'T, http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/AFO_Size_Chart.pdf (charting how many animals qualifies a facility as small, medium, or large).

²³ *Facts About . . . Animal Feeding Operations Permitting Process: Frequently Asked Questions*, MD. DEP'T OF THE ENV'T, 1 (Mar. 29, 2013), [http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/AFO_FAQs\[1\].pdf](http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/AFO_FAQs[1].pdf).

²⁴ *Natural Resources Conservation Services Contact List*, http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/USDA_NRConservationServicesContacts.pdf (last visited Sept. 20, 2013).

²⁵ LAND MGMT. ADMIN. MD. DEP'T OF THE ENV'T, NO. CO-10-, GENERAL COMPLIANCE SCHEDULE FOR APPLICANTS FOR CAFO COVERAGE, available at http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/CAFO_Compliance_Schedule%201.pdf (last visited Oct. 23, 2013).

²⁶ MD. DEP'T OF THE ENV'T, COMPREHENSIVE NUTRIENT MANAGEMENT PLAN STATUS FORM, available at http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/CNMP_Status_Form.pdf (last visited Oct. 23, 2013).

²⁷ *MDEStat Meeting April 8, 2013*, MD. DEP'T OF THE ENV'T, at tbl.6, available at http://www.mde.state.md.us/aboutmde/MDEStat/MDEStatData/Documents/OS_MDEStat%20MeetingLMA4_08_2013_KR.pdf.

²⁸ See LAND MGMT. ADMIN., MD. DEP'T OF THE ENV'T, GENERAL DISCHARGE PERMIT FOR ANIMAL FEEDING OPERATIONS, Part III.C.b, available at http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/AFO_General_Permit.pdf (“A CAFO may be registered for coverage under this General Permit only upon Department acceptance of the NOI, approval of the required CNMP . . .”).

²⁹ “This includes the thirty calendar day public notification period.” *Facts About . . . Animal Feeding Operations Permitting Process: Frequently Asked Questions*, MD. DEP'T OF THE ENV'T, 4 (Mar. 29, 2013),

[http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/AFO_FAQs\[1\].pdf](http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/AFO_FAQs[1].pdf).

³⁰ Memorandum from Granta Y. Nakayama, Assistant Adm'r, Office of Enforcement and Compliance Assurance, EPA to Regional Adm'rs, Deputy Regional Adm'rs, Regional Enforcement Division Dirs., and Regional Water Division Dirs. 2 – 6 (Oct. 17, 2007), *available at* <http://www.epa.gov/compliance/resources/policies/monitoring/cwa/npdescms.pdf>; *see also* *Water Pollution Control Grants (Section 106)*, OFFICE OF WATER, ENVTL. PROTECTION AGENCY, http://water.epa.gov/grants_funding/cwf/pollutioncontrol.cfm (last visited Nov. 6, 2013) (providing information about federal grants and guidance to state agencies).

³¹ Memorandum from Granta Y. Nakayama, *supra* note 30.

³² MD. DEP'T OF THE ENV'T, MDE FY 2012 ANNUAL ENFORCEMENT AND COMPLIANCE REPORT 89 (2012), *available at* <http://www.mde.state.md.us/aboutmde/DepartmentalReports/Documents/FY12AnnualEnforcementReport.pdf>.

³³ Interview with Gary Kelman, AFO Program Dir., Md. Dep't of Env't (Nov. 18, 2013) (notes on file with author).

³⁴ Data used to create the “Falling Behind” map and microsite was found on MDE’s AFO Public Information Search Tool, *available at* <http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Pages/CAFO.aspx> (last visited Nov. 15, 2013). All available data at that site can be retrieved by leaving all fields blank and pressing search under the “AFO Search Box” at the bottom of the page. On Nov. 15, 2013, the search returned 560 records and the data was processed into a machine-readable format where it could be incorporated into ArcDesktop 10.2.

Farm locations are approximate. All CAFOs and MAFOs were mapped by geocoding the publicly available street address (provided in the results of the NOI search) to ESRI’s United States Geocoding service in ArcGIS Online, resulting in an X and Y coordinates for each farm operation. These points were mapped using the Mapbox application programming interface. Two lag times were calculated using data from the MDE Public Information Search. The first was the amount of time taken (days) for MDE to issue a permit from when the agency received the Farmer’s Notice of Intent application. This was calculated by subtracting the “NOI Received Date” field from the “AFO Registered Date” field. The second calculation was run by subtracting the “CNMP Received Date” from the “AFO Registered Date” field yielding the total amount of time (days) it took for MDE to receive a comprehensive nutrient management plan. Finally a color gradient from cold to hot was applied to the farm locations based on the lag time for both variables, days to process the NOI application or the days it took to receive a Comprehensive Nutrient Management plan.

Data from MDE’s AFO Public Information page changes regularly. Because the data is not obtainable in a tabular format, the data was processed before it could be shared via the web mapping application. Minor variations occur between what is available to the public online and the more up-to-date data MDE collects directly from operators.

³⁵ This data is available on MDE’s AFO Public Information Search Tool, *supra* note 34. It was analyzed by the Chesapeake Commons on Nov. 18, 2013. Minor variations occur between what is available to the public online and the numbers provided by Gary Kelman at MDE.

³⁶ This data is available on MDE’s AFO Public Information Search Tool, *supra* note 34. It was analyzed by the Chesapeake Commons on Nov. 18, 2013.

³⁷ *MDEStat Meeting July 8, 2013*, MD. DEP'T OF THE ENV'T, at tbl.5, available at http://www.mde.state.md.us/aboutmde/MDEStat/MDEStatData/Documents/OS_MDEStat%20LMAMeeting_8July_2013KR.pdf.

³⁸ *Id.*

About the Center for Progressive Reform

Founded in 2002, the Center for Progressive Reform is a 501(c)(3) nonprofit research and educational organization comprising a network of scholars across the nation dedicated to protecting health, safety, and the environment through analysis and commentary. CPR believes sensible safeguards in these areas serve important shared values, including doing the best we can to prevent harm to people and the environment, distributing environmental harms and benefits fairly, and protecting the earth for future generations. CPR rejects the view that the economic efficiency of private markets should be the only value used to guide government action. Rather, CPR supports thoughtful government action and reform to advance the well-being of human life and the environment. Additionally, CPR believes people play a crucial role in ensuring both private and public sector decisions that result in improved protection of consumers, public health and safety, and the environment. Accordingly, CPR supports ready public access to the courts, enhanced public participation, and improved public access to information.

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