



1616 P Street, NW  
Suite 300  
Washington, DC 20036  
T +202.683.2500  
F +202.683.2501  
[foodandwaterwatch.org](http://foodandwaterwatch.org)

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## Recommendations For New State Animal Feeding Operations Water Discharge General Permit

Dear Governor Moore, Secretary McIlwain, Secretary Atticks and state regulators,

Maryland's factory farms are the cause of significant and adverse economic, public health and environmental impacts. We, the undersigned organizations, urge you to address these ongoing impacts by instructing the Maryland Department of Environment (MDE) to initiate a rulemaking to improve regulation of industrial-scale Animal Feeding Operations (AFOs).

The general water discharge permit for the AFOs that house tens of millions of poultry in Maryland expires on July 7, 2025. Thus, MDE is currently in the process of revising how it controls water pollution from these facilities. At this crossroads, you have the power to finally address the flaws in the state's regulatory scheme and put a stop to the factory farm waste polluting our state's environment.

The last time these AFO rules were updated was in 2020. Since then we've seen reports that agencies have failed to inspect, monitor, or even fine poorly performing factory farms that are harming Maryland's waterways and air quality. The Moore administration must use the general discharge permit review period to scrutinize how state agencies may be falling short in holding factory farms accountable and tackling the continued degradation of the Chesapeake Bay.

To reduce harm from factory farm pollution and close loopholes that have allowed AFOs to skirt environmental regulations, MDE must make four overarching amendments to its AFO regulations. First, MDE must update the Best Management Practices (BMPs) applicable to AFOs that land apply waste or use industrial ventilation systems that spew pollutants into the environment. Second, the state must require mandatory effluent monitoring and instruct AFOs

to report monitoring data to a publicly available database. This step is crucial to correct the gross lack of transparency that has historically been an obstacle to holding polluters accountable. Third, MDE must give special attention to unique pollution and safety risks created by the operation of anaerobic digesters on AFOs. And fourth, MDE must act to control pollution stemming from the transfer of AFO waste to third parties. These changes are critical to protecting our communities.

That is why we are recommending that the Moore administration instruct MDE to initiate a rulemaking to consider the following regulatory changes:

- I. Require that AFOs implement BMPs to better control waste pollution.
  - A. Prohibit solid storage on bare ground.

AFOs handle a variety of solid wastes including poultry litter, dry manure, silage, compost, and mortalities. Storing solids on bare ground, a practice sometimes known as “staging”, contributes to groundwater pollution and runoff as contaminants leach from the stockpiled materials into water that seeps into the ground or is transported into the environment as runoff.<sup>1</sup> Most pollutants are lost during the first month of storage.<sup>2</sup> Existing protections are internally inconsistent and inadequate to protect against harms from “temporary” solid storage piles that leach pollutants.<sup>3</sup> To protect water quality and close the staging loophole that allows

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<sup>1</sup> See EPA, Managing Manure Nutrients at Concentrated Animal Feeding Operations, 2-20 (discussing ways to mitigate seepage and runoff from solid storage structures); Livestock and Poultry Environmental Learning Center, Silage Runoff Characteristics (Mar. 5, 2019), <https://lpecl.org/silage-runoff-characterization/> (“Silage leachate is a high strength waste which contributes to surface and groundwater contamination of various pollutants from runoff, direct leaching through concrete storage structures, and infiltration of runoff.”); Brandon H. Gilroyed et al., Composting for Biocontained Cattle Mortality Disposal and Associated Greenhouse Gas and Leachate Emissions (2016), [file:///Users/drepogle/Downloads/Gilroyedetal\\_2016\\_Compostingforbiocontained.pdf](file:///Users/drepogle/Downloads/Gilroyedetal_2016_Compostingforbiocontained.pdf).

<sup>2</sup> Kansas State University, Leachate from Silage and Wet Feed Storage (Sept. 2020), [https://bookstore.ksre.ksu.edu/pubs/leachate-from-silage-and-wet-feed-storage\\_MF3542.pdf](https://bookstore.ksre.ksu.edu/pubs/leachate-from-silage-and-wet-feed-storage_MF3542.pdf); Patrick T. Murphy et al., *Staging of Swine Carcasses to Mitigate Leachate Contamination in the Environment* (2025) (sealing mortalities in tarp prevented water pollution).

<sup>3</sup> See MDE, General Discharge Permit for AFOs at Section IV.B.6 (allowing CAFOs to stockpile dry waste on fields for 2 wks, MAFOs for a month), IV.A.1.a (requiring compliance with COMAR 15.20.07.02, which in turn requires compliance with the Maryland Nutrient Management Manual); MDA, Maryland Nutrient Management Manual I-D1-6 (July 2024) (describing minimal and vague limits on stockpiling that allow solids with

AFOs to circumvent ordinary solids storage requirements, the AFO regulations should increase setback distances to 300 feet and require that all solid stockpiles be underlain by a tarp or concrete pad and covered by a tarp.<sup>4</sup>

B. Require AFOs to regularly report land application rates to MDE.

Over-application of waste to agricultural fields is prevalent in Maryland and a major source of water pollution.<sup>5</sup> AFOs are not required to prove compliance with their nutrient management plans (NMPs) by reporting land application amounts and timing to MDE.<sup>6</sup> This deprives the public and MDE of the ability to easily enforce against noncompliant AFOs. The Governor should instruct MDE to require regular reporting to demonstrate land application activities comply with NMP parameters.

C. Require that large confinement facilities install ammonia scrubbers.

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up to 75 percent moisture content to remain on land for an indefinite period of time); MDE, 2020 General Permit at 15 (requiring compliance with “an appropriate NRCS Practice Standard”); USDA-NRCS, Conservation Practice Standard 317: Composting Facilities at 317-CPS-2 (providing internally inconsistent advice regarding siting and vague advice about liners and covers that requires CAFO operators to make judgment calls outside their expertise); USDA-NRCS, Conservation Practice Standard 318 Short Term Storage of Animal Waste and By-Products at 318-CPS-2 (requiring setbacks that exceed those in Maryland’s Nutrient Management Manual and endorsing liner requirements that are not equally protective); USDA-NRCS, Conservation Practice Standard 319 Animal Mortality Facilities at 316-CPS-2 (instructing CAFOs to consult Appendix 10D, which authorizes a variety of storage structures that are not equally protective). *See also* Kansas State University, *Leachate from Silage and Wet Feed Storage* (Sept. 2020), [https://bookstore.ksre.ksu.edu/pubs/leachate-from-silage-and-wet-feed-storage\\_MF3542.pdf](https://bookstore.ksre.ksu.edu/pubs/leachate-from-silage-and-wet-feed-storage_MF3542.pdf) (recommending best practices including impermeable liners, covers, and 300-foot separation from surface waters and wells).

<sup>4</sup> University of Georgia, *Best Management Practices for Storing and Applying Poultry Litter* (Dec. 2022), [https://secure.caes.uga.edu/extension/publications/files/pdf/B%201230\\_5.PDF](https://secure.caes.uga.edu/extension/publications/files/pdf/B%201230_5.PDF) (recommending covers and liners); Patrick T. Murphy et al., *Staging of Swine Carcasses to Mitigate Leachate Contamination in the Environment* (2025) (sealing mortalities in tarp prevented water pollution).

<sup>5</sup> Environmental Integrity Project, *84% of MD Poultry Operations Failed Water Pollution Control Inspections from 2017-2020* (Oct. 28, 2021), <https://environmentalintegrity.org/news/md-poultry-operations-fail-water-pollution-control-inspections/> (“[M]ore than half of the poultry farms for which records were available in 2019 reported to the state that they spread manure on their crops in amounts greater than allowed under their nutrient management plans.”).

<sup>6</sup> MDE, General Discharge Permit for AFOs at Section IV.A.5 (requiring only that CAFOs maintain these records on site).

Air deposition of ammonia is a serious problem for Maryland water quality, and AFOs are the primary contributor.<sup>7</sup> Ammonia scrubbers and biotrickling filters are available and can be installed in AFO ventilation systems to reduce not only ammonia, but also particulate matter and pathogens.<sup>8</sup> The Governor should instruct MDE to establish maximum ammonia emission concentrations for CAFOs based on levels attainable using outlet filters.

## II. Require that AFOs conduct representative monitoring to ensure permit compliance.

Maryland law requires that MDE conduct its NPDES permit program in compliance with the Clean Water Act, which in turn requires representative monitoring to ensure compliance with permit conditions.<sup>9</sup> MDE's regulations currently fall short of these statutory mandates. MDE should look to EPA's revised permit in Idaho for guidance on how to draft legal monitoring requirements.<sup>10</sup> At minimum, MDE must ensure adequate monitoring for all discharge pathways. The Governor must instruct MDE to adopt requirements including, at minimum:

- Visual monitoring to ensure no non-precipitation driven discharges from land application areas or production areas.
- Lysimeters to ensure no non-precipitation driven subsurface discharges from land application areas
- Liners with leak detection to ensure against subsurface discharges from unlined waste storage structures, compost areas, or mortality storage areas

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<sup>7</sup> Jordan Baker et al., *Modeling and Measurements of Ammonia from Poultry Operations: Their Emissions, Transport, and Deposition in the Chesapeake Bay*, <https://www.sciencedirect.com/science/article/abs/pii/S0048969719352829?via%3Dihub> (2020); see also Peter Tschofen et al., *Fine Particulate Matter Damages and Value Added in the US Economy*, 119 PNAS 19857, 19862 (Oct. 1, 2019) (costs of air pollution from poultry facilities likely exceeds economic contribution of industry).

<sup>8</sup> See generally Li Guo et al., *Mitigation Strategies of Air Pollutants for Mechanical Ventilated Livestock and Poultry Housing—A Review* (2022), <https://www.mdpi.com/2073-4433/13/3/452>.

<sup>9</sup> COMAR 26.08.04.01 ("The Department shall issue State discharge permits or NPDES permits in accordance with provisions and conditions of [COMAR 26.08.01--26.08.04](#) and [26.08.08](#), to satisfy the regulatory requirements of the National Pollutant Discharge Elimination System (NPDES), established under the Federal Act."); see also 33 U.S.C. § 1318(a)(2)(A)(iii); 40 C.F.R. §§ 122.44(i)(1), 122.41(j)(1), 122.48(b); see also *FWW v. EPA*, 20 F.4th 506 (2021); *Washington State Dairy Federation v. Washington Department of Ecology*, 18 Wn. App. 2d 259 (Wash. Ct. App. 2021); see also *Nat. Res. Def. Council v. EPA*, 808 F.3d 556 (2d Cir. 2015); *NRDC v. Cnty. of Los Angeles*, 725 F.3d 1194 (9th Cir. 2013).

<sup>10</sup> See generally *Modification of the NPDES General Permit for Concentrated Animal Feeding Operations (CAFOs) Located in Idaho Excluding Tribal Lands* (IDG010000), 89 Fed. Reg. 100485 (Dec. 12, 2024).

Crucially, all monitoring data must be reported and made publicly available to facilitate citizen enforcement and informed participation in future permitting actions. Further, given concerns about PFAS in biosolids and feed inputs,<sup>11</sup> the Governor should order MDE to require testing of AFO wastes and effluents for PFAS.

### III. Require individual NPDES permits for AFOs with anaerobic digesters and other biorefinery technologies.

Anaerobic digesters and other industrial biorefining technologies like fast pyrolysis create health and safety risks that are distinct from risks associated with traditional AFOs.<sup>12</sup> These risks are not effectively managed by the same protocols and precautions MDE uses to regulate AFOs. Specific oversight of AFOs with digesters is needed to protect communities from excessive herd growth and expanded liquid manure management, both of which elevate risks to water quality.<sup>13</sup> MDE currently allows ADs to be permitted under the AFO permit. This regulatory approach will not protect community members from environmental harms. The Governor should order MDE to require individual NPDES permits for AFOs with digesters and other advanced biorefining technologies, particularly if those AFOs are land-applying digestate or manifesting digestate for land application.

### IV. Reduce Risks from Manure Manifestation/Transfers

<sup>11</sup> MDE, PFAS in Biosolids Regulatory Update (Aug. 20, 2024), <https://mde.maryland.gov/PublicHealth/Pages/PFAS-in-Biosolids-Regulatory-Update.aspx>; Scott Broom, 'It's my home' | 350+ wells now contaminated near Perdue plant in Salisbury, Maryland (April 29, 2025), <https://www.wusa9.com/article/tech/science/environment/more-350-wells-contaminated-near-perdue-plant-salisbury-maryland>.

<sup>12</sup> See generally FOOD & WATER WATCH, THE BIG OIL AND BIG AG PONZI SCHEME: FACTORY FARM GAS (Jan. 2024); PETITION FOR RULEMAKING TO EXCLUDE ALL FUELS DERIVED FROM BIOMETHANE FROM DAIRY AND SWINE MANURE FROM THE LOW CARBON FUEL STANDARD PROGRAM 12-30 (Oct. 27, 2021), <https://food.publicjustice.net/wp-content/uploads/sites/3/2021/10/Factory-Farm-Gas-Petition-FINAL.pdf>; Waheed A. Rasqa et al., Opportunities and Challenges of High-Pressure Pyrolysis of Biomass: A Review, 14 *Energies* 1 (2021) (describing how fast pyrolysis uses extremely high temperatures to create potential pollutants not typical of AFOs, including oil, char, and pyrolytic gas).

<sup>13</sup> FOOD & WATER WATCH, THE BIG OIL AND BIG AG PONZI SCHEME: FACTORY FARM GAS (Jan. 2024); PETITION FOR RULEMAKING TO EXCLUDE ALL FUELS DERIVED FROM BIOMETHANE FROM DAIRY AND SWINE MANURE FROM THE LOW CARBON FUEL STANDARD PROGRAM 12-30 (Oct. 27, 2021), <https://food.publicjustice.net/wp-content/uploads/sites/3/2021/10/Factory-Farm-Gas-Petition-FINAL.pdf>.

Significant amounts of AFO waste are transferred or “manifested” to non-AFO farmers who then land-apply that waste. At least one study found that AFOs on the Eastern Shore ship nearly 85% of their manure off site.<sup>14</sup> At present, once the manure is transferred, it escapes MDE’s control under the AFO regulations. Maryland Department of Agriculture (MDA) encourages manure manifestation through its taxpayer-funded Manure Transport Program, which pays farmers and “manure brokers” to help cover costs of manure transport.<sup>15</sup> This program lacks critical transparency measures that would allow the public to assess whether transfers are actually functioning to protect communities and waterways. Currently, MDE’s AFO permit only requires permittees to keep records documenting recipients of manure and the amount received on site, depriving the public of access to even this basic information.<sup>16</sup> To assess the benefits of Maryland’s Manure Transport Program, the Governor should order MDA to present a report on the program’s efficacy at reducing pollution loading in each of Maryland’s watersheds designated as impaired for agricultural pollutants like nutrients. To better control AFO pollution, the Governor should instruct MDE to update its regulations/AFO permit to collect better information about manure transfers and ensure manure recipients are subject to the same land application restrictions as the transferring AFO. Minnesota’s recent permit update is instructive.<sup>17</sup>

We urge you to take action to protect Maryland communities and would be happy to meet to discuss these recommendations.

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<sup>14</sup> Environmental Integrity Project, *Manure Overload on Maryland’s Eastern Shore*, 1, December 8, 2014, <http://www.environmentalintegrity.org/wp-content/uploads/2016/11/Manure-Overload1.pdf>.

<sup>15</sup> MDA, Maryland’s Manure Transport Program, [https://mda.maryland.gov/resource\\_conservation/documents/mdatransportrepr305-2.pdf](https://mda.maryland.gov/resource_conservation/documents/mdatransportrepr305-2.pdf).

<sup>16</sup> MDE, General Discharge Permit for AFOs at Section IV.A.5.

<sup>17</sup> MPCA, AUTHORIZATION TO CONSTRUCT AND OPERATE A CONCENTRATED ANIMAL FEEDING OPERATION UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PROGRAM MNG440000 Sec. 9, <https://www.pca.state.mn.us/sites/default/files/wq-f3-62.pdf> (requiring transferring AFO to conduct due diligence to ensure recipients will abide by best management practices for land applying manure), Sec. 10 (requiring use of online Nutrient Management Tool which, among other things, conveys critical information about manure transfers to the Minnesota government).



Sincerely,

Food & Water Watch

Friends of The Earth

Chesapeake Climate Action Network

CCAN Action Fund

Clean Water Action

Indivisible Howard County Maryland

Potomac Riverkeeper Network

Sierra Club Maryland Chapter

Surfrider Foundation