



Department of the Environment

AFOs, CAFOs and MAFOs What does it all mean?

Presented by

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**Agriculture and Environmental Law Conference
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Topics

- History of the CAFO Rule
- Definitions
- How to Apply for the Permit
- Technical Aspects
- Compliance and Enforcement
- Questions

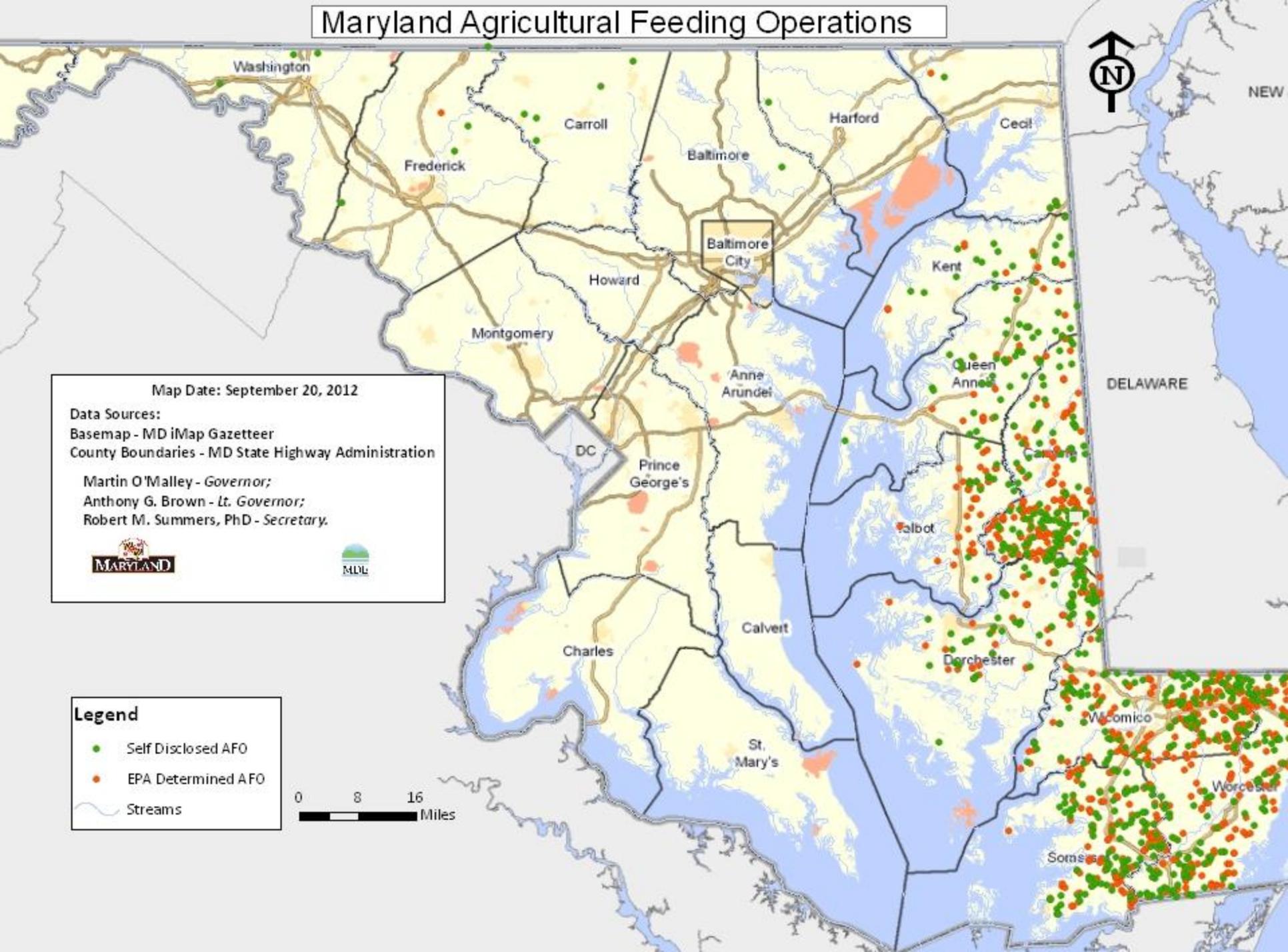
The Concern

- Discharge of pollutants into the waters of the US from “industries”
- Animal Feeding Operations (AFOs) **ARE** an industry in the eyes of EPA and MDE

Chesapeake Bay Watershed



Maryland Agricultural Feeding Operations



Map Date: September 20, 2012

Data Sources:

Basemap - MD iMap Gazetteer

County Boundaries - MD State Highway Administration

Martin O'Malley - Governor;

Anthony G. Brown - Lt. Governor;

Robert M. Summers, PhD - Secretary.



Legend

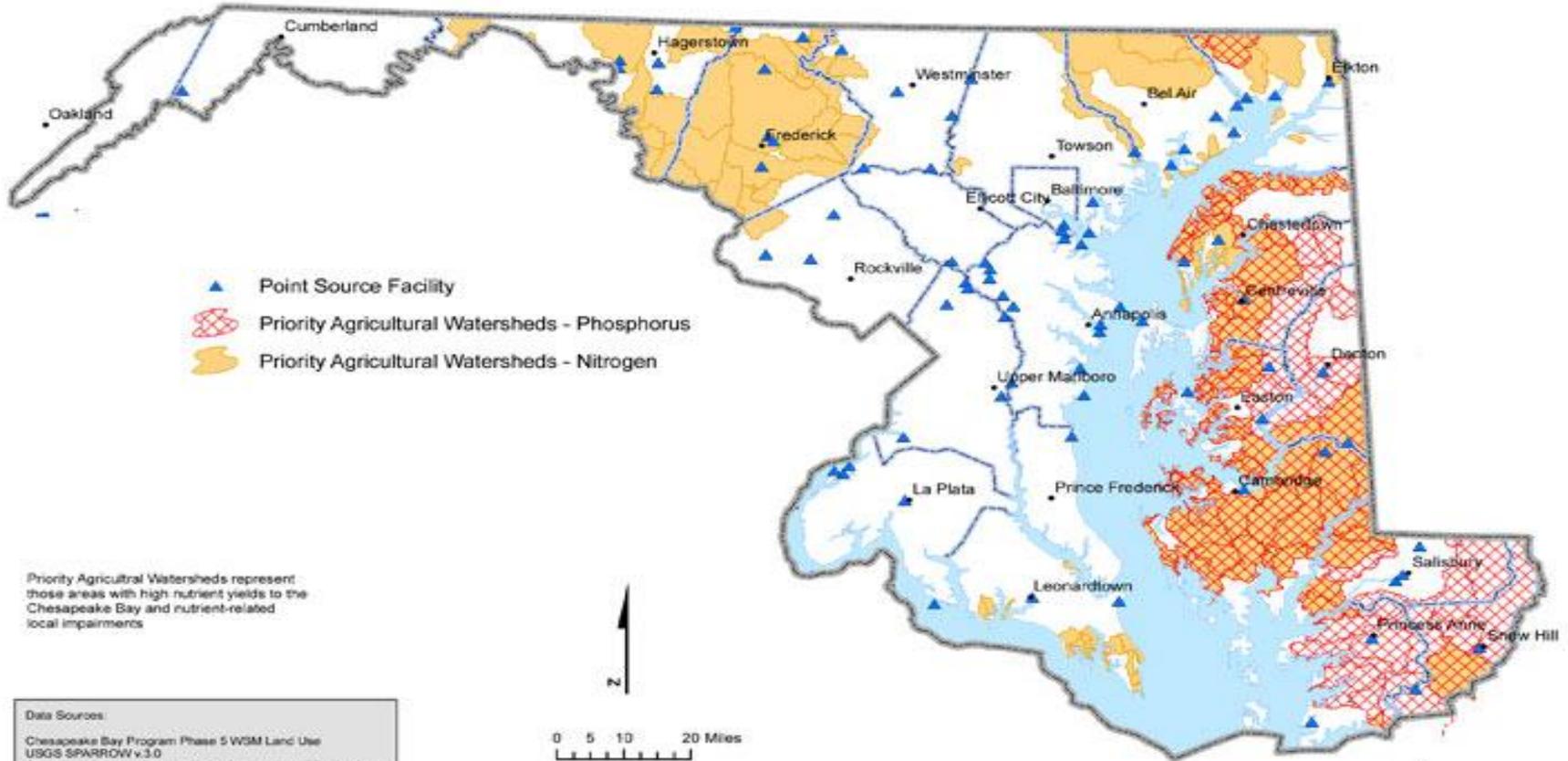
- Self Disclosed AFO
- EPA Determined AFO

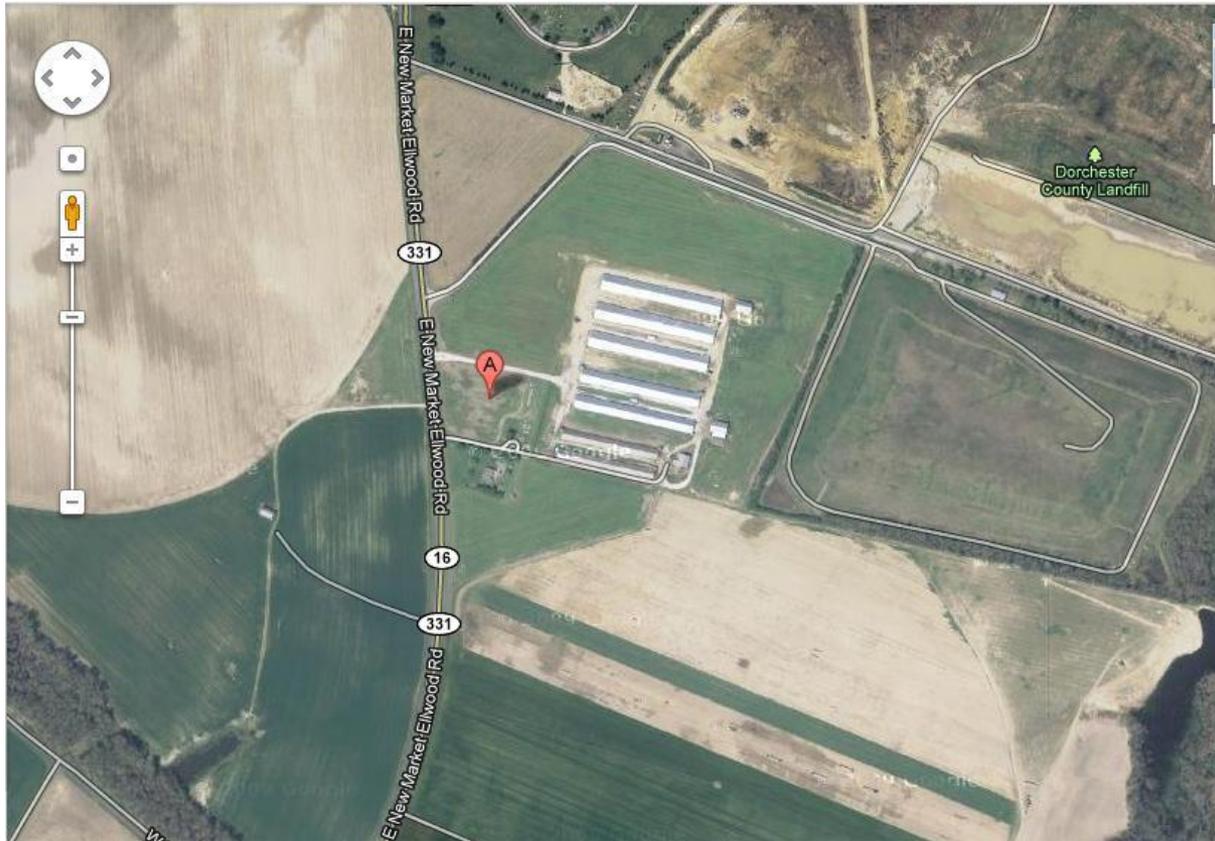
Streams

0 8 16
Miles

Point Sources and Priority Agricultural Watersheds

Chesapeake Bay Watershed within Maryland







History of MD CAFO Regulation



Maryland AFO Regulations and Permit

- 1996 General Permit
- 2008 CAFO/MAFO regulations
- December 1, 2009 effective date of 1st NPDES/State general discharge permit to regulate poultry AFOs. This permit expired November 30, 2014.
- AFO permit was renewed effective December 1, 2014 for a 5-year term.

The Law

- Title 9, Subtitle 3 of the Environment Article, Annotated Code of Maryland
- Clean Water Act 33 U.S.C. §1251 et seq.

The Regulations

- Code of Maryland Regulations (COMAR)
26.08.01 through 26.08.04
- 40 CFR Parts 122, 123, 124, 125 and
412

Definitions



What is an AFO?

- AFO
 - Animals stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period.
 - Crops, forage or post-harvested residues are not sustained in the normal growing season over any portion of the lot or facility.

AFO Size Table (MD livestock)

Animal Type	Number of Animals or House Capacity (ft ²)		
	Large	Medium	Small
Cattle (Includes heifers)	≥ 1000 animals	300 – 999 animals	< 300 animals
Dairy Cattle	≥ 700 animals	200 – 699 animals	< 200 animals
Chickens (other than laying hens) with dry manure handling	≥ 125,000 animals or ≥ 100,000 ft ²	37,500 – 124,999 animals and < 100,000 ft ²	<37,500 animals
Laying hens with dry manure handling	≥ 82,000 animals	25,000 – 81,999 animals	< 25,000 animals
Chickens with liquid manure handling	≥ 30,000 animals	9,000 – 29,999 animals	< 9,000 animals
Swine ≥ 55 pounds	≥ 2500 animals	750 – 2499 animals	< 750 animals
Swine < 55 pounds	≥ 10,000 animals	3,000 – 9,999 animals	< 3,000 animals

Which AFOs are regulated?

- Concentrated Animal Feeding Operations (CAFOs);
- Maryland Animal Feeding Operations (MAFOs);
- Certification of Conformance (COCs)

What is a CAFO?

- A medium or large AFO that discharges or could discharge **contaminated wastewater (manure, litter, or process wastewater)** to a surface stream.
- For Chickens that means at least 37,500 animals for a medium or 125,000 animals for a large.
- Large CAFOs are included in EPA's point-source definition and do not need a man-made conveyance to have a discharge.
- Medium CAFOs must discharge through a man-made ditch, flushing system or other similar man-made device to be required to apply for the permit.

What is a MAFO?

- A large AFO that does NOT discharge **contaminated water to surface waters of the State**. For chickens that means at least 125,000 animals.
- OR a “chicken (other than laying hens) AFO with dry manure handling and between 75,000 and 99,999 square feet total house capacity **that has not submitted an acceptable “Certification of Conformance”**”.

Certification of Conformance

- Certification of Conformance (COC) operations do NOT have to submit NOIs, NMPs, CNMPs or CPs but MUST have them on site and allow MDE inspections of their operations.
- Is an option only for medium size chicken growers with dry manure handling with a total house capacity of 75,000 to 99,999 square feet.
- Operations that are eligible for a COC or increase in size to the COC thresholds must apply within three months of enlarging their operation.

CAFOs versus MAFOs

- CAFO

- Large AFO that discharges to surface water; OR
- Medium AFO that discharges through a man-made conveyance to surface water
- EPA or MDE designated

- MAFO

- Large AFO that does not discharge to surface water
- MDE designated

Regulated Discharges from the CAFO to Surface Waters

- Includes
 - Manure, litter, and process wastewater
 - Pollutants defined by Clean Water Act
 - Discharges from **Production and Land Application Areas not exempt as agricultural storm water.**
- Excludes precipitation-related discharges that qualify as agricultural storm water.

Production Area

- Animal Confinement Area;
- Manure Storage Area;
- Raw Materials Storage Area; and
- Mortality Treatment Area.

Land Application Area

- Land under the **control** of an AFO owner or operator, regardless of whether it is owned, rented, or leased, to which manure, litter or process wastewater from the production area is or may be applied.
- **All land application areas under the control of an operator must be included in that operation's Nutrient Management Plan.**

No-Land/Land Operations

- No-land operations export ALL manure to another farm or a manure broker and do not receive manure from another farm.
- This must be documented in the required plan (s) and re-confirmed each year in the Annual Implementation Report (AIR).
- Land operations use chicken litter/manure (whether the litter/manure originates from their operation or another operation) to grow crops on fields under their control.

Agricultural Storm Water

- Land application areas under the control of a CAFO can have both point and non-point source discharges.
 - Agriculture storm water discharges are non-point source discharges, and, for **LARGE CAFOs ONLY**, are exempt from NPDES permit requirements

Agricultural Storm Water 2

- For a precipitation-related discharge from land application to qualify for the agriculture storm water exemption, **LARGECAFOs must land apply in accordance with a nutrient management plan (site specific practices that ensure appropriate utilization of the nutrients in the manure, litter or process wastewater as specified in 40 CFR 122.42(e)(1)(vi)-(ix)).**

If the AFO is a MAFO

- MAFO facilities (**production and storage areas**) must be designed, constructed, operated and maintained to not discharge.
- If a MAFO is found to discharge or that it could discharge pollutants to the surface waters of the State, it can be designated a CAFO.

How to Apply



Why should a CAFO or MAFO apply for a permit?

- It is a violation **to operate** a CAFO or MAFO without this permit.
- Pollutant discharges to surface or groundwater from CAFOs are **not allowed without this permit**.
- Certain discharges of pollutants are allowed if you have a permit:
 - If there is an upset in your system or you are performing maintenance, discharges of pollutants are temporarily allowed if you notify MDE that the upset occurred or you are performing maintenance.
 - Discharges from areas in-between the houses and shed are allowed in accordance with permit conditions.

CAFO/MAFO Permit Registration

- CAFOs and MAFOs must send in a NOI (notice of intent) for the new permit ASAP.
- A plan is also required to complete the application.
- Required plan(s) are either:
 - A CNMP (Comprehensive Nutrient Management Plan); or
 - A NMP combined with a Soil Conservation and Water Quality Plan (Conservation Plan).

Application Issues

- **Legal names** must be used (not integrator contract names);
- Names on NOI and required plans **must agree**;
- For corporations, signature must be of **authorized representative**;
- Required plans must reflect **current operation**;
- Corporations must be in good standing.

What we look for in the application: EPA's Nine Minimum Standards for Water Quality Protection

1. Adequate Storage Capacity
2. Mortality Management
3. Divert Clean Water
4. Prevent Direct Contact of Animals + Water
5. Chemical Handling
6. Conservation Practices (setbacks and buffers)
7. Manure + Soil Testing
8. Land Application Protocols
9. Record Keeping

Are there Fees for this Permit?

- Yes, for **CAFOs** only.
- They are waived until December 1, 2015.
- MDE will send out a notification at that time to all **CAFOs** that have submitted their NOI.
- Large: \$800; Medium \$300; Small \$60.

Permit Registration Process

- Once NOI and Required Plan(s) are received:
 - MDE performs technical review including a site visit;
 - NOI and required plans are placed in a local library for public notification for 30 calendar days;
 - IF no comments, CAFO/MAFO is registered and permit coverage starts;
 - Entire process may take up to 180 days, usually much less, once the permit writer starts the review;
 - New construction has highest priority.

Change of Status Issues

- Must sent in new NOI when status changes:
 - CAFO to MAFO, MAFO to CAFO;
 - No-land to Land, Land to No-land;
 - Sole proprietorship to LLC or corporation;
 - Medium to Large;
- These changes may be “**substantial modifications**” and warrant public notification.

Technical Aspects



When can a AFO Discharge?

- No AFO, new or existing, is allowed to discharge **contaminated wastewater** from their **production areas** (animal confinement areas and manure storage areas) via a **man-made ditch, flushing system or other similar man-made device to surface waters of the State** during a precipitation event under the 25 year, 24 hour storm (about 6 inches in 24 hours on the Eastern Shore, about 5.4 inches in 24 hours on the Western Shore); OR
- After MDE notification and approval, registered AFOs can discharge during an upset or during maintenance.

When Can't an AFO Discharge?

- No discharges of pollutants to surface waters from production areas or land application areas are allowed during **dry weather conditions unless:**
 - The AFO is registered
 - If registered can discharge if there is an upset or during modifications, if approved by MDE.

New Sources

- Only applies to Large CAFOs.
- New Sources can be:
 - A totally new facility; or
 - An addition to an existing facility if it is “substantially independent” of the existing facility. **Most expansions are built with their own stormwater structures and are therefore not connected to the existing facility, so are substantially independent.**



More on New Sources

New sources should comply with the New Source Design Criteria on MDE's website when designing and constructing their facility.

MDE New Source Performance Design Criteria for Poultry Operations

Site Considerations:

- A. All new sites will adhere to the Conservation Planning for Production Areas – Waste Storage and Handling section.**

Conservation Planning for Production Areas – Waste Storage & Handling

BMPs for Resource Concern(s)	Technical Standard	Applicability for Production Area
Waste Storage and Handling		
1. Manure storage to prevent nutrient runoff from entering surface and groundwater.	NRCS Waste Storage Facility (Code 313)	Adequate storage is defined as at least four months but ideally six months or more. For certain operations that have hay or pasture fields during the winter months, three months may be acceptable for adequate storage.
2. Proper disposal of dead animals in a way that protects surface and ground water.	NRCS Animal Mortality Facility (Code 316)	Provide an on-farm facility with the composting or other treatment of animal carcasses resulting from normal mortality.
3. Heavy use protection for manure handling in high traffic areas. These areas are vulnerable to runoff and should be designed for low maintenance and less runoff.	NRCS Heavy Use Area Protection (Code 561)	Provide a stabilized surface of crushed stone, oyster shells, concrete, or other suitable material that will protect the soil surface from erosion. Use concrete pads in areas where litter is handled to prevent soil contamination and nutrient movement, with the provision that the pads are kept clean.
4. Heavy use pads shall be installed on all new poultry farm sites on both the poultry houses and manure storage sheds.		Heavy use pads prevent soil contamination and provide a means for ease of clean up.
5. Good housekeeping of the heavy use pads shall take place following each clean out in order to achieve debris free pads.		Debris free pads are imperative to prevent nutrient transport during a rain event.
6. Zero manure storage or staging shall occur in the animal production area unless under covered manure structure.		Manure storage and staging of manure for other than immediate movement to either covered storage or an area outside the animal production area is inappropriate.



What's Different for New Source/New Discharge CAFOs?

- New operations must apply for registration under the General Permit **BEFORE they receive animals and start operations.** The facility can be constructed, however. **YOU MUST BE REGISTERED PRIOR TO RECEIVING BIRDS.**
- New Source Poultry CAFOs cannot discharge any **contaminated wastewater from their production areas (animal confinement areas and manure storage areas)** via a man-made conveyance (medium) or via overland flow or man-made conveyance (large) to surface waters of the State **regardless of the intensity of the storm.**

New Construction/Expansion



New Construction/Expansion Basics

- Prior to construction
 - Site must be large enough to accommodate the number of planned structures, while still being in compliance with federal, State and local regulations:
 - Stormwater management (COMAR 26.17.02);
 - AFO (COMAR 26.08.03.09, 40 CFR Part 122, 412);
 - Zoning (subject to local ordinance)

AFO Design Criteria for Poultry

- New construction/expansion must comply with the New Source Design Criteria that was approved by EPA in November, 2009, including:
 - “All poultry houses, storage sheds and composters shall be situated a minimum of 100 feet from waters of the State.”

New Construction/Expansion

- Apply for and receive coverage under the **General Discharge Permit for Stormwater Associated with Construction Activity** from MDE **before beginning** any construction.
 - Requires local Soil Conservation District-approved Erosion and Sediment Control Plan; and
 - Stormwater Management Plan.
- Apply for **General Discharge Permit for AFOs**
 - Must be registered to operate (allow adequate lead time)

New Construction/Expansion

- During construction
 - Follow approved site plans and stormwater management strategies;

New Construction/Expansion

- Post construction
 - Must be covered under AFO Permit prior to operating (receiving birds, in the case of poultry)

Compliance/Enforcement



Compliance

- Who do we inspect?
 - Complaints
 - Registrants
 - MAFOs
 - Withdrawn
 - Suspected CAFOs
- What do we inspect?
 - Production area
 - Land application area
 - Records

Inspection Findings

- **Inadequate record keeping (not in accordance with permit);**
- **Improper composting of mortalities, including composting in chicken houses and manure sheds;**
- **Heavy use pads that have not been swept properly;**
- **Not using composter for mortalities but for equipment storage;**
- **Poor maintenance of roads, swales, ditches allowing pollutants to collect that can be washed into waters of the State;**
- **Lack of familiarity with the conditions/requirements in the general AFO permit;**
- **Lack of familiarity with the commitments in the CNMP.**
- **Out of date CNMPs/NMPs;**
- **Not implementing compliance schedule items;**
- **Tunnel fan dust; and**
- **Did not notify MDE of changes in the permitted operation.**

Communication

- Finally, communication between the operator and MDE is VERY important.
- It can mean the difference between painlessly resolving an issue and being subject to enforcement action.



Any Questions?

Thank You!



Maryland Department of the Environment Land Management Administration

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