Permitting Animal Feeding Operations in Maryland

Presented by

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Maryland Department of the Environment

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Topics

- MDE and MDA;
- Watershed Overview;
- Animal Feeding Operation Program;
- Contamination other than Nutrients;
- Compliance/Enforcement
MDE and MDA

• In Maryland, Agriculture is regulated through a partnership of the Maryland Department of Agriculture (MDA) and the Maryland Department of the Environment (MDE);

• This partnership assures that agriculture and regulatory experts are involved in the process.
• Develops technical standards for:
  
  — Nutrient application rates
    • How much nitrogen and phosphorus can be applied to land to grow different crops taking into account:
      — Nutrient content of soil;
      — Nutrient content of manure, sewage sludge or chemical fertilizer;
      — Crop (corn, soybeans, etc.) requirement.
    • These are contained in a “Nutrient Management Plan”.
  
  — Qualifications of “nutrient advisors”
    • Training;
    • Experience.
MDE Permits

• Water Appropriation Permit
  - Needed if withdrawal exceeds 10,000 gallons per day;
  - Issued by Water Management Administration

• General Discharge Permit for Stormwater Associated with Construction Activity
  - Needed if disturbing more than 1 acre;
  - Requires a Stormwater Management Plan and an Erosion and Sediment Control Plan
  - Issued by Water Management Administration
MDE Permits

• General Permit for Animal Feeding Operations
  - Needed if each flock is greater than 37,500 birds;
  - Needed prior to receiving birds;
  - Requires farmers to comply with nutrient management plans and other requirements to protect water quality;
  - Requires farmers to operate their farms in a manner to prevent pollution;
  - Imposes nutrient application setbacks from surface waters;
  - Requires record keeping to document the farm’s operation;
  - Issued by Land Management Administration
Watershed overview
US Watersheds
(Courtesy of San Francisco Public Utilities Commission)
Chesapeake Bay Watershed
Waters of the State

Definition

• Includes Surface and Ground Water

• Surface Waters* defined as ponds, lakes, rivers, streams, tidal and nontidal wetlands, public ditches, tax ditches, and public drainage systems within this State.

Exempt: Drainages designed and used to collect, convey, or dispose of sanitary sewage. Definition is based on COMAR 26.08.01.01B(103))

* Setbacks from field ditches are included for manure application purposes.
Point Sources and Priority Agricultural Watersheds
Chesapeake Bay Watershed within Maryland

Data Sources:
Chesapeake Bay Program Phase 5 W3M Land Use
USGS SPARRON v3.0
State 303d Data provided by State Contacts and EPA Region 3
Chesapeake Bay Program Point Source Data Base
For more information, visit www.chesapeakebay.net
Disclaimer: www.chesapeakebay.net/ferro/focus.htm

Created by JWE, 03/09/2009
## AFO Size Table (MD livestock)

<table>
<thead>
<tr>
<th>Animal Type</th>
<th>Number of Animals or House Capacity (ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>Cattle Includes heifers)</td>
<td>≥ 1000 animals</td>
</tr>
<tr>
<td>Dairy Cattle</td>
<td>≥ 700 animals</td>
</tr>
<tr>
<td>Chickens (other than laying hens) with dry manure handling</td>
<td>≥ 125,000 animals or ≥ 100,000 ft²</td>
</tr>
<tr>
<td>Laying hens with dry manure handling</td>
<td>≥ 82,000 animals</td>
</tr>
<tr>
<td>Chickens with liquid manure handling</td>
<td>≥ 30,000 animals</td>
</tr>
<tr>
<td>Swine ≥ 55 pounds</td>
<td>≥ 2500 animals</td>
</tr>
<tr>
<td>Swine &lt; 55 pounds</td>
<td>≥ 10,000 animals</td>
</tr>
</tbody>
</table>
Animal Feeding Operation (AFO) Program
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.
AFOS can be CAFOs or MAFOs

Concentrated Animal Feeding Operations (CAFO)

- Covered under Federal and State Legislation
- Large or Medium AFO that can discharge from the production area to surface water

CWA of 1977 authorizes EPA to require permits (Section 402: NPDES Regulation: 2008 CAFO Regs (40CFR Part 122))

Maryland Animal Feeding Operation (MAFO)

- Covered under State Legislation
- Large or Medium AFO that does not discharge from the production area to surface water but to ground water (MAFO)

Annotated Code of Maryland Title 9, section 224 of the COMAR Title 26, Subtitle 8, Section 03, Subsection 09

*The Production Area includes poultry houses, barns, manure storage area, raw material storage area, waste containment area.

* Stormwater Discharges related to Agricultural production such as irrigation are not regulated by the AFO program.
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.
Constituents of an AFO

• Production area;

• All land application areas under the control of an operator that receive manure, regardless of the origin of the manure.

• The business structure of the production area or land application area does not affect the areas comprising the AFO.
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.
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 and qualifying medium CAFOs, are exempt from NPDES permit requirements
For a precipitation-related discharge from land application to qualify for the agriculture storm water exemption, qualifying CAFOs 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)).
What we Look for to Protect Water Quality

Management Plans are developed and submitted to MDE that cover nine areas EPA considers essential

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
### Numbers (as of 5/1/2017)

<table>
<thead>
<tr>
<th></th>
<th>New Construction</th>
<th>Expansion</th>
<th>Others*</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # 14AF NOIs</td>
<td>74</td>
<td>40</td>
<td>513</td>
<td>627</td>
</tr>
<tr>
<td>Received</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Hearing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Scheduled</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total # Registered</td>
<td>49 (66 %)</td>
<td>33 (83 %)</td>
<td>232 (45 %)</td>
<td>314 (50 %)</td>
</tr>
<tr>
<td>AFOs</td>
<td></td>
<td></td>
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</tbody>
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### Poultry Statistics (as of 5/1/2017)

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<table>
<thead>
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<tbody>
<tr>
<td>Total Number of Poultry AFOs</td>
<td>599 out of 627 total AFOs (all animals)</td>
</tr>
<tr>
<td>Total Number of New Buildings in AFO Universe</td>
<td>456</td>
</tr>
<tr>
<td>Total Number of Existing Buildings in AFO Universe</td>
<td>1987</td>
</tr>
<tr>
<td>Total Number of Chickens (other than laying hens) with dry manure handling in AFO Universe</td>
<td>73,470,067 per flock/323,268,295 per year (based on 4.4 flocks per year)</td>
</tr>
<tr>
<td>Total Number of Layers in AFO Universe</td>
<td>3,338,131</td>
</tr>
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Permit Registration Process

- Once NOI and Required Plan(s) are received:
  - MDE performs technical review which may include a site visit
  - NOI and required plans are placed on the website for public review for 30 calendar days
  - IF no comments, CAFO/MAFO is registered and permit coverage starts
  - Entire process may take up to 160 days for new facility
Public Process

• Permit application review complete;

• 30 day opportunity for public comment on NOI and Required Plan on AFO webpage;

• A public hearing can be requested during the first 20 days of the 30 day period;

• If requested, a public hearing is held;

• AFO is registered if no relevant comments.

• If there is an objection to our determination, a contested case hearing can be requested.
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 (problem beyond the control of the AFO) or during modifications, if approved by MDE.
Main Objections from Public

• “We don’t like large poultry houses”;

• Public health effects of tunnel fan dust;

• Proximity to waters of the State and neighborhoods;

• Concentration of poultry houses in one area;

• Should be covered by an individual permit;

• Needs Toxic Air Permit due to ammonia emissions;

• Tunnel fan dust is actually a water discharge.
Tunnel Fans
Tunnel Fans
New Poultry Houses are Large
But they are Built Better and Have Environmental Safeguards such as Stormwater Management Plans
New Poultry Structures

• Must be at least 100 feet from waters of the State and domestic wells;

• No discharge of manure, litter, or process wastewater is allowed to surface waters of the State;

• Production areas must include (if feasible) NRCS Practice standards 342 (critical area planting), 393 (filter strip), 380 (windbreaks/shelterbelts), 587 (water control), and 560 (access road)
Additional New Source BMPs

• Storm water management;

• Wetlands for treating runoff;

• Controls to divert clean water;

• Containment of clean storm water runoff up to the 2-year, 24-hour storm; and

• Containment of contaminated storm water up to the 2-year, 24-hour storm.
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.
Remember

NOTICE: THIS PROPERTY IS A FARM

FARMS HAVE ANIMALS. ANIMALS MAKE:
FUNNY SOUNDS
SMELL BAD, AND
HAVE SEX OUTDOORS.
UNLESS
YOU CAN TOLERATE:
NOISE,
ODORS, AND
OUTDOOR SEX.

DON'T BUY PROPERTY NEXT TO A FARM!
Any Questions?
Maryland Department of the Environment

Land Management Administration
Resource Management Program

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