

# **Virginia Pollutant Discharge Elimination System (VPDES) Permits for CAFOs**

## **Duty to Apply and Permitted Discharges**

2018 National CAFO Roundtable  
Boise, Idaho  
September 27, 2018

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# Presentation Outline

- Virginia AFO/CAFO Permit History
- Farm Specific Discharge Characteristics
- Permit Language
- Stormwater and Water Quality Monitoring

# Acronyms

## Virginia

- AFO = Animal Feeding Operation
  - Definition same as federal
- CAFO = Concentrated Animal Feeding Operation
  - Definition same as federal
- VPA = Virginia Pollution Abatement
  - Virginia's non-point source permitting program
  - Virginia statute provides broad authority to require permits for pollutant management activities with the potential to discharge
- VPDES = Virginia Pollutant Discharge Elimination System

# History of Virginia AFO/CAFO Permits

- 1970's → “No Discharge” Certificates  
issues with shellfish waters and livestock
- 1980's → VPA Individual Permits for Livestock (liquid)
- 1990's → VPA General Permits for Livestock (liquid)
- 2000 → VPA General Permits for Poultry
- 2003 → Federal CAFO Rule revised – “potential to discharge”
- 2003 → Virginia Law – DEQ authority to require VPDES permits  
“to extent necessary” to comply with federal law
- 2004 → VPDES Regulations for CAFOs, General Permit

# History of Virginia AFO/CAFO Permits

- 2005 → US 2<sup>nd</sup> Circuit Court of Appeals decision in *Waterkeeper et al. vs. EPA* – “discharge or propose to discharge”
- 2008 → Federal CAFO Rule revised to reflect 2<sup>nd</sup> Circuit
- 2010 → Virginia revised VPDES regulation to reflect federal
- 2010 → VPA End-User Regulations for Poultry Waste Transfer
- 7/2010 → EPA inspections of 3 Accomack County poultry farms
- 9/2010 & 3/2011 → EPA Administrative Orders to subject farms
- 10/2010 & 4/2011 → Farm owners submit registration statements for coverage under VPDES CAFO General Permit

# History of Virginia AFO/CAFO Permits

- 3/2011 → US 5<sup>th</sup> Circuit Court of Appeals decision in *National Pork Producers vs. EPA* - “discharge” ~~or propose to discharge~~
- 2012 → Federal CAFO Rule revised to reflect 5<sup>th</sup> Circuit
- 2012 → EPA closes administrative orders for subject farms  
Obligations to apply for VPDES permit coverage were met
- 2013 → Virginia revised VPDES regulation to reflect federal
- 2013 → US District Court for the Northern District of West Virginia decision in *Alt vs. EPA* – exempt agricultural stormwater
- 2014 → VPA End-User Regulations for Livestock Waste Transfer

# History of Virginia AFO/CAFO Permits

- 2013-2015: DEQ continues coordination with EPA regarding VPDES CAFO permitting process and individual permit language
- 2015: DEQ issues the first VPDES CAFO permits to two swine facilities managing liquid waste – voluntary (+ 6 more in 2016)
  - Facilities managing stormwater using secondary containment systems
  - Facilities requested VPDES coverage
- **2015: Owners of subject poultry farms submit applications for VPDES individual permits**

# Farm Specific Background

## Discharge Characteristics - 2010 Administrative Orders

- Poultry Farm #1: Due to poultry manure on the ground and on the concrete pads of 2 houses, as well as dust from the fans on vegetation in a ditch, EPA found that the facility “is designed, constructed, operated, and maintained in a manner such that a discharge will occur to Bullbegger Creek via a series of ditches, and is therefore proposing to discharge.”
- Poultry Farm #2: Due to poultry manure, dust, and feathers on the ground, as well as dust from the fans near the ditch, EPA found that the facility “is designed, constructed, operated, and maintained in a manner that has proposed to discharge pollutants from man-made ditches to the unnamed tributary to Assawoman Creek during rain events generating runoff.”
- Poultry Farm #3: Due to poultry manure included in dust and feathers on the ground, EPA found that the facility “discharged pollutants through man-made ditches to the unnamed tributary to Pitts Creek during rain events generating runoff without having obtained a VPDES permit in violation of the [Clean Water] Act and its implementing regulations.”



# Individual Permit Language

## Allowable Discharges

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the Permittee is authorized to discharge:

- a. manure, litter or process wastewater, from the facility's production area to surface waters of the state, in the case of an overflow caused by a storm event greater than a 25-year, 24-hour storm;
- b. storm water which may come into contact with manure, litter or process wastewater from areas of the CAFO that are not subject to the effluent standards referred to in Part I A.1.a, above. The discharge points shall be monitored as specified in Part I B.1.a.; and
- c. agricultural storm water, from the land application area(s).

In accordance with the assumptions and requirements of applicable TMDLs, the discharge of manure, litter or process wastewater from the facility is prohibited, except as provided above in Part I.A.1.a,b, and c. All authorized discharges must be in compliance with all other terms of this permit and the facility's nutrient management plan.

# Individual Permit Language

## Visual Monitoring

- Stormwater leaving the production area + BMP function
- Quarterly + 2 → 6 times per year
- Samples taken within first 30 minutes of runoff from measurable storm event (as practicable, but no later than 3 hours)
- No quantitative analyses
- Includes observation of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution.
- Any deficiencies in BMPs identified must be corrected

# Individual Permit Language

## Visual Monitoring - Rationale

- BMPs at each site limit exposure of poultry waste to stormwater.
- Permits allow stormwater to leave site that has flowed through production area with properly maintained BMPs.
- Visual monitoring based on tiered requirements in DEQ industrial stormwater regulations
- Federal CAFO rule does not require any stormwater monitoring; EPA rejected adding requirement to federal rule based on difficulty in designing a program capable of detecting, isolating, and quantifying pollutants from individual CAFO
- Intended to be a practical tool for operator to quickly identify sources of pollution and initiate corrective action

# Individual Permit Language

## Visual Monitoring – Rationale (cont'd)

- Although CAFOs are defined as a “point source”, stormwater patterns at each farm are more characteristic of non-point source pollutant sources
- Multiple sources of potential contaminants
- Some contributing runoff is exempt agricultural stormwater
- Areas where sources are more distinct provide poor sampling points (shallow depth, not channelized, etc.)
- VPDES Permit Regulation clearly contemplates requiring BMPs to control or abate the discharge of pollutants where numeric effluent limitations are infeasible or impractical

# DEQ Water Quality Monitoring

## Summer 2018 Special Study

- Water quality sample collection locations
  - 3 existing ambient stations downstream of the farms
- Parameters
  - Temperature, pH, dissolved oxygen, salinity, conductivity
  - Total phosphorus, total kjeldahl nitrogen
  - Nitrite, nitrate, ammonia, orthophosphate
  - Total suspended solids, turbidity, total volatile suspended solids, total fixed suspended solids
  - Fecal coliform, e. coli, enterococci

# DEQ Water Quality Monitoring

## Poultry Water Quality Study

- September 2018 - August 2019
- Water quality sample collection locations
  - Above and below the outfall location in the ditch system on the three VPDES poultry farms
  - Upstream and downstream location bracketing multiple poultry farms located on Rattrap Creek
- Analysis during dry periods (2) and after rainfall events (4)
  - Temperature, pH, dissolved oxygen
  - Total phosphorus, total kjeldahl nitrogen
  - Nitrite, nitrate, ammonia, orthophosphate
  - Total suspended solids, turbidity, total volatile suspended solids, total fixed suspended solids
  - e. coli

## Comments on Draft Permits – Type of Permit

### Comment: “All Large Facilities Should Receive VPDES Permit Rather Than VPA permit”

- DEQ received comments that the VPDES individual permit should be used for all the permitted poultry operations on the Eastern Shore rather than the VPA General Permit

### Agency Response:

- Litigation following EPA’s 2003 amendments to the CAFO rule clarified the authority under the Clean Water Act; owners of CAFOs that do not have a point-source discharge are not required to obtain a VPDES permit
- If the operators of poultry CAFOs manage poultry waste so as not to create a point-source discharge, DEQ cannot mandate that the facility owners obtain VPDES permits

## Comments on Draft Permits – Type of Permit

### Comment: “Virginia Pollution Abatement General Permit for Poultry Waste Management is Adequate Permit Coverage”

- The VPA General Permit for Poultry Waste Management contains adequate provisions to protect water quality; and
- Coverage under the VPDES CAFO permits is not necessary

### Agency Response:

- VPA General Permit protects water quality near poultry farms
- Physical requirements for VPA poultry waste management are identical to the draft VPDES individual CAFO permits
- VPA does not meet the federal requirements for permit coverage in the event of any point-source discharge
- Owners requested VPDES permit coverage per EPA orders



# Questions?

## Contact Information

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