



# Animal Feeding Operations

Permitting to minimize  
environmental impacts

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# CAFOs

- ◆ Concentrated animal feeding operations (CAFOs) have been permitted since the 1970s
- ◆ CWA is designed to protect surface water
- ◆ Maryland CAFO permits regulate discharges to ground water and surface water



# Agricultural Elements

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- ◆ In 1996, MDE incorporated Nutrient Management Plans and Waste Management System Plans into permit
- ◆ Waste Management System Plans address available manure storage, and
- ◆ Identify excess manure, which must be used off-site
- ◆ Required consideration of nitrogen and phosphorus



# Water Quality Improvement Act

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# Nutrient Management Planning

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- ◆ Originally voluntary, to help farmers evaluate nutrient needs
- ◆ Requires analyses of soil and manure to determine existing nutrients
- ◆ Matches nutrient needs of crops with nutrient content of manure, theoretical result is no discharge of nutrients to ground water



# Different Goals

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- ◆ Goal is maintenance of nutrients
- ◆ Manure is not required to be treated, but is held in lagoons until it is needed as fertilizer



# CAFO Permits Require

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For medium or large animal feeding operations that discharge to surface water, via

- ◆ Liquid manure overflows or failures
- ◆ Stormwater that contacts animal waste in production or manure storage area
- ◆ Animals coming into contact with surface water
- ◆ Runoff from land application unless manure is applied following with a nutrient management plan



# Medium or Large AFOs

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Animal feeding operations house or maintain animals for 45 days or more, in an area where crops are not grown

Pastured animals are typically not animal feeding operations

Medium or large – animal numbers

≥ 200 Dairy Cattle

≥ 300 Beef Cattle

≥ 750 Swine





# Maryland CAFOs

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- ◆ Ten permitted facilities, several pending
- ◆ Ten dairy, one hog, and two beef operations
- ◆ Population density and land costs discourage new and larger CAFOs



# New Federal Requirements

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- ◆ Prohibits discharges to surface water except in 25 yr 24 hr storm or greater
- ◆ Setbacks of 100' or vegetated buffers of 35'
- ◆ Dry manure may not be stored outside for more than 14 days
- ◆ Mortality management



# New Federal Requirements

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- ◆ Facilities are permitted until closed (no longer having or producing any manure)
- ◆ Reporting of animals onsite, manure generated, manure transferred offsite, freeboard in impoundments



# Proposed Maryland Permit

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- ◆ Requires the development and implementation of a Comprehensive Nutrient Management Plan
- ◆ CNMPs require proper storage, land application plans and records, mortality disposal
- ◆ CNMPs are developed by NRCS, and a limited number of certified technical service providers



# And the rest

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- ◆ Maryland has hundreds of small animal farms
- ◆ Most raise poultry, which produces dry manure (65% solids)
- ◆ Sometimes less likely to pollute surface waters
- ◆ Discharge to ground water via land application of manure



# MAFO Permit

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## Maryland Animal Feeding Operations

- ◆ AFO that spray irrigates
- ◆ Medium facility that does not discharge or plan to discharge
- ◆ Must develop and implement nutrient management plan, and
- ◆ Must develop and implement soil and water conservation plan



# MAFO Permit

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Soil and water conservation plans address

- ◆ Manure storage
- ◆ Heavy use areas
- ◆ Diversion of storm water
- ◆ Mortality management
- ◆ Vegetation around production area



# Certificate of Conformance

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# Continuing Concerns

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- Plant nutrients may come with undesired constituents
- Manure content can vary with feed
- Feed may include toxics, antibiotics
- Mortality must be disposed of properly to avoid transmitting disease



# Questions?

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