Delaware Nutrient Management Program

DELAWARE TECHNICAL STANDARD

FIELD APPLICATION SETBACKS

(Reported by Feet)

DEFINITION

Manure and processed wastewater application setbacks are defined as the distance between the land application area and any down-gradient surface waters or potential conduits to surface waters. Examples of conduits to surface waters include but are not limited to: open tile intake structures, sinkholes, and agricultural well heads.

PURPOSES

Limit the application of nutrients from manure, litter, and processed wastewater directly adjacent to surface waters such that runoff directly into surface waters is reduced and resultant degradation is minimized.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to covered Concentrated Animal Feeding Operations (CAFOs) in Delaware where manure, litter, or processed wastewater is land applied.

CRITERIA

Criteria Applicable to All Purposes

Delaware's CAFO regulations prohibit the direct application of manure or processed wastewater to Waters of the State. Further, to protect these waters, CAFO owners or operators must institute a 100-foot application setback or a 35-foot vegetated buffer adjacent to the water for protection.

Alternatively, CAFO owners or operators may implement one of the following alternative compliance practices.

Alternative Compliance Practices

a) Minimum 10 foot vegetated buffer and plant a winter cover crop following the crop receiving manure, litter or processed wastewater for fields with high phosphorus soils

b) Minimum10 foot application setback and plant a winter cover crop following crops receiving manure, litter, or processed wastewater for fields without high phosphorus soils

c) Any additional alternative compliance practices must be approved by the Secretary of Agriculture and the Delaware Nutrient Management Commission.

Setbacks and vegetated buffers will be measured from the top of the bank of the water of the state to be protected and from the edge of conduits to surface waters such as open tile intake structures, sinkholes, agricultural well heads or other conduits to surface waters.

Additional Criteria for Vegetated Buffers

Vegetated buffers must be a permanent strip of dense perennial vegetation naturally occurring or established parallel to the contours of and perpendicular to the dominant slope field for purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.

See NRCS Conservation Practice Standard 342 Critical Area Planting or 327 Conservation Cover for planting and seeding requirements.

Additional Criteria for Cover Crops

The cover crop must be grown on the entire field that received manure, litter, or processed wastewater and implemented in accordance with NRCS Conservation Practice Standard 340 Cover Crop.

Additional Criteria for Alternative Compliance Practices

Additional alternative compliance practices must be proven and avoid discharge of nutrients from manure, litter or process wastewater into surface waters or conduits to surface waters. Evidence of the alternative methodology, efficiency and costs must be submitted and approved by the Secretary of Agriculture and Nutrient Management Commission before the practice may be implemented to meet the requirements of the CAFO regulations and Delaware Nutrient Management Law.

PLANS AND SPECIFICATIONS

Plans and specifications for this practice shall be prepared in accordance with the previously listed criteria. Plans and specifications shall contain sufficient detail to ensure successful implementation of this practice.

SUPPORTING DATA AND DOCUMENTATION

Details regarding the application setback, vegetated buffer, or selected alternative compliance practice should be included in the CAFO owner or operators Nutrient Management Plan.

The following is a list of the minimum data and documentation to be included in the Nutrient Management Plan:

1. Identify the location of the setbacks and/or buffered areas for each field on the topographical or aerial map included in the Nutrient Management Plan.

2. Identify the type of setback (application or vegetation), width, and species planted, if applicable.

3. Identify the type of cover crop to be planted, including species planted, planting method, and anticipated planting date, if applicable.

REFERENCES

1. Hansen, D, J. Nelson, and J. Volk. 2009. Setback Standards and Alternative Compliance Practices to Satisfy CAFO Requirements: An Assessment for the DEF-AG Group. Presented to the Delaware Nutrient Management Commission.