

DCR Guidance for Voluntary Nutrient Management Plans Developed for Non-permitted Dairy Operations Having Insufficient Manure Storage

DCR Guidance NMP-4
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Description:

Voluntary nutrient management plans are sometimes requested by confined animal feeding operations that presently have either insufficient or no waste storage capacity. The Department of Conservation and Recreation recognizes that some waste treatment and storage capacity is likely necessary to avoid discharge to state waters and to accommodate periods when crops are not actively growing or field conditions are not suitable (frozen, saturated, etc.) for waste application.

Considerations:

For farms with minimal or no present waste storage capacity, a voluntary nutrient management plan may still be developed for non-permit purposes such as eligibility for the precision nutrient and pesticide application equipment tax credit. However, due to Virginia's no-discharge requirements and the need to recommend proper timing of nutrient applications, the plan should be developed with the recommendation that adequate waste treatment and storage capacity will be installed for future use.

Dairy farms should generally be encouraged to pursue 120-180 day waste storage capability, which should be sufficient to accommodate the needs for typical dairy farm cropping systems. However, in all cases the specific cropping system and acreage of planned crops should be examined with the manure spreading schedule to determine the maximum storage period to be accommodated during a typical cropping year. If crop acreage varies significantly from year to year, adjustments should be made to ensure adequate storage will exist in all years. The design of the specific storage system, including equating the number of days of storage to the specific volume of the system, should be consistent with NRCS guidelines.

Seasonal dairies which do not milk cows or confine livestock during certain periods of the year may be able to reduce the storage period from the general recommendation of 120 – 180 days by deducting the number of days of down-time from the recommendation, provided this capacity is sufficient to mesh with the cropping system for all times during the year.

Plan Procedure:

The following statement should be included in the plan narrative:

State water control law does not allow discharge of waste to state waters (ground or surface) except as specifically authorized by a permit issued by DEQ. To minimize the risk of waste discharge, and fully utilize this nutrient management plan, it is recommended that 120 – 180 days of waste storage capacity be installed in most situations.

The nutrient management plan should also contain the attached manure spreading schedule.

MANURE SPREADING SCHEDULE*

CROP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Alfalfa												
Bermudagrass												
Corn												
Cotton												
Hay**												
Pasture**												
Peanuts												
Sorghum/Millet												
Small Grain												

*Do not spread liquid manure, dry or semi solid manure, or parlor effluent on soils that are saturated.


*Do not spread liquid manure/effluent (above 85.5% moisture content) to frozen, ice or snow covered ground.

*Dry or semi solid manure (85.5% moisture content or less) should not be applied to frozen, ice or snow covered ground, however, it may be applied to frozen ground to manage storage system emergencies on sites with less than 6% slope and having at least 60% uniform ground cover such as small grain or fescue with exposed plant height of at least three (3) inches over the entire site. Do not exceed 30 pounds of plant available nitrogen per acre.

** Cool season grasses only, Fescue and or Orchard grass

 Do not spread liquid manure, dry or semi solid manure, and parlor effluent during these shaded months.

 Spread liquid manure, dry or semi solid manure, and parlor effluent at the rates and times specified in the nutrient management plan.

 Manure applications are not recommended during this period (late fall-winter), but may occur to manage storage system emergencies if applied as follows: Uniformly apply a maximum of 3,000 gallons per acre per application. If using an irrigation system apply a maximum of a ¼ inch per acre per hour. Do not exceed 30 pounds of plant available nitrogen per acre during this entire period. Allow sufficient drying time between applications. Fields must have greater than 60% uniform live cover with plant height greater than three (3) inches. Operator must account for manure nutrients towards crop nutrient needs balancing all manure and/or nutrient requirements for that crop so as not to exceed crop nitrogen needs. The operator must account for nitrogen residual toward subsequent crops balancing all manure and/or nutrient requirements for that crop so as not to exceed crop nitrogen needs.