



**Nutrient Management Plan Special Conditions for
Virginia Pollution Abatement (VPA) and Virginia Pollutant Discharge
Elimination System (VPDES) Permits
September 2011**

The following management practices will be utilized for poultry operations requiring a VPA or VPDES permit and located in Piedmont and western Virginia (west of I-95):

1. Soil samples for litter application fields will be analyzed at least once every three (3) years for pH, phosphorus, potassium, calcium, and magnesium in order to maximize the efficient utilization of nutrients. A representative soil sample of each field will be comprised of at least twenty (20) cores randomly sampled throughout the field. Soil sampling core depth will be from 0-4 inches for land which has not been tilled within the past three (3) years, or 0-6 inches for land that has been tilled within the past three (3) years. Soil pH will be maintained at appropriate agronomic levels to promote optimum crop growth and nutrient utilization.
2. Soil test analysis will be performed by one of the laboratories listed below. Soil phosphorus levels must be determined using the Mehlich I or Mehlich III procedure.
 - A list of all approved laboratories can be found at <https://www.dcr.virginia.gov/soil-and-water/document/nmlablist.pdf>.
3. Representative litter samples will be analyzed at a minimum of once every three (3) years for VPA permits and once per year for VPDES permits for the following: total nitrogen or total Kjeldahl nitrogen (TKN), ammonium nitrogen, total phosphorus, total potassium, calcium, magnesium, and percent (%) moisture. Separate samples shall be taken from all manure sources to be used for application (i.e. house, storage shed, etc.). All manure analyses shall be performed using laboratory methods consistent with *Recommended Methods of Manure Analysis*, publication A3769, University of Wisconsin, 2003 or other methods approved by the Virginia Department of Conservation and Recreation (DCR). Litter analysis results will be used to determine actual litter rates that do not exceed the nitrogen and phosphorus application rates specified in the nutrient management plan using either the most recent litter analysis results (not greater than 1 year old) or the facility's average results based on actual litter analysis.
4. All crops will be planted and harvested in a timely manner using commercially acceptable management practices.
5. Make litter applications at or near planting or to existing actively growing crops to ensure that nutrients are properly utilized. Utilize the spreading schedule contained in the nutrient management plan and the spreading schedule in #21 of this document to determine appropriate litter application times and rates. Additional commercial fertilizer applications (especially nitrogen) should be made as a split application separate from the litter applications, either as a sidedress or topdress application.
6. For permanent hay or pasture, an adequate stand of hay and/or pasture crop species will be established prior to land application of litter. Commercially acceptable stands of the listed species will be maintained and other weeds and grasses controlled. All hay crops will be harvested in a timely and regular manner, removed from fields, and utilized for a suitable purpose.

7. Litter will be applied to application sites in a uniform manner.
8. Do not spread litter within the following setback areas:
 - 100 feet from wells or springs
 - 35 feet from surface waters if the entire setback is a permanent perennial vegetated buffer

OR

 - 100 feet from surface waters if there is not a permanent perennial vegetated buffer of at least 35 feet in width
 - 50 feet from sinkholes*
 - 50 feet from limestone rock outcrops
 - 25 feet from other rock outcrops
 - 10 feet from agricultural drainage ditches (5 feet if injected)
 - 200 feet from occupied dwellings (unless waived in writing by the occupant)

*Waste shall not be applied in areas subject to concentrated flow generated by runoff from storm events such that it would discharge into sinkholes in the area.
9. Do not spread litter on soils that are saturated or ice or snow-covered in order to avoid manure runoff from application fields. Dry poultry waste may be applied to frozen ground within the times indicated by the spreading schedule only under the following conditions:
 - Slopes are not greater than 6%
 - A minimum of a 200 foot vegetative or adequate crop residue buffer is maintained between the application area and all surface water courses
 - Only those soils characterized by USDA as “well drained” with good infiltration are used, **AND**
 - At least 60% uniform cover by vegetation or crop residue is present.
10. For odor control and to reduce drift, avoid spreading on windy days.
11. If poultry litter is stackable and contains less than 40% moisture, storage may be utilized for up to 14 days on sites meeting the following criteria:
 - Slope is not greater than 7%
 - Site must be at least 100 feet from any surface water, intermittent drainage, wells, sinkholes, rock outcrops and springs
12. Storage sites used for greater than 14 days must be identified in this plan. These sites which are not covered by a roof must meet the following criteria:
 - The litter can not be stored for greater than 180 days, **and**
 - The waste is covered with a waterproof reinforced tarp (ultraviolet resistant is preferable) or impermeable sheeting of 6 mil thickness or greater that is anchored against wind on the perimeter and weighted on top, **and**
 - The waste stockpile is protected from stormwater running onto or under it.
13. Spreader calibration is extremely critical to ensure proper application rates. Calibration of equipment or verification of actual equipment application rates shall occur at a minimum of once per year.
14. New waste storage facilities shall be designed, constructed and operated in accordance with the USDA-NRCS *Field Office Technical Guide* and other appropriate NRCS design criteria.

15. Composting of animal mortalities will be conducted in accordance with the latest guidance developed by Virginia Cooperative Extension.
16. Nutrient management plans that contain fields in which row crops will be grown will be revised at least once every three (3) years. Nutrient management plans that contain only hay or pasture fields will be revised at least once every five (5) years. Any such plan revisions will be submitted to DCR for review and approval.
17. This nutrient management plan must be amended or modified and submitted to DCR for review and approval if animal numbers increase above the level specified in the plan; animal types including intended market weights are changed; additional imported manure, biosolids, or industrial waste that was not identified in the existing plan is applied to fields under the control of the operator; available land area for the utilization of litter decreases below the level necessary to utilize litter in the plan; and/or litter application fields have Mehlich I soil phosphorus levels at or above 55ppm (110 lbs/acre) where either cropping systems, rotations, or fields are changed.
18. Minor plan amendments involving changes to the cropping system, crop rotations, specific application fields, litter analysis results or minor fluctuations in animal market weights or animal numbers (10% or less cumulative increases since this original plan was developed) may be made to this nutrient management plan without the prior approval of DCR by the specific certified nutrient management planner that developed this plan. Any such plan amendments must be made prior to subsequent nutrient application to fields impacted by the change. Certified nutrient management planners shall provide a copy of any such plan amendments to DCR within two (2) weeks of the plan modification.
19. All major plan modifications shall be submitted to DCR for review and approval prior to implementing any changes. Major modifications include, but are not limited to, proposed changes to the plan expiration date; increases in animal numbers of greater than 10%; changes in animal type including intended market weight; additional imported manure, biosolids, or industrial wastes not included in the original plan are to be applied; or available land area for the utilization of litter decreases below the level necessary to utilize litter in the plan due to sale of land, expired lease, etc.
20. These conditions do not override any more restrictive plan requirements if required by other specific legislative, regulatory or incentive programs which apply to a specific operations.

21. Manure spreading schedule EXAMPLE (application schedule may vary based on crop, environmental, or geographic factors):

POULTRY LITTER SPREADING SCHEDULE (West of I95)*

CROP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Alfalfa	[Solid Black]								[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Solid Black]
Bermudagrass	[Solid Black]						[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Solid Black]	[Solid Black]	[Solid Black]
Corn	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Vertical Lines]	[Vertical Lines]		[Diagonal Hatching]	[Diagonal Hatching]	[Solid Black]	[Solid Black]	[Solid Black]	[Solid Black]
Hay**	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]						[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]
Pasture**	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]								[Diagonal Hatching]	[Diagonal Hatching]
Sorghum/Millet	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Vertical Lines]	[Vertical Lines]		[Diagonal Hatching]	[Diagonal Hatching]	[Solid Black]	[Solid Black]	[Solid Black]	[Solid Black]
Small Grain	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]			[Solid Black]	[Solid Black]	[Solid Black]				

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) on frozen, ice or snow-covered ground.

* Application of dry or semi-solid manure (85.5% moisture content or less) should be avoided on frozen, ice or snow-covered ground. If necessary, applications may be made to fields that have: (i) slopes not greater than 6.0%, (ii) 60% uniform ground cover from crop residue or an existing actively growing crop such as a small grain or tall fescue with an exposed plant height of ≥ 3 inches, (iii) a minimum 200 foot vegetated or adequate crop residue buffer between the application area and all surface water courses, AND (iv) soils characterized by USDA as “well drained.”

** Cool season grasses only: Fescue and/or Orchardgrass.



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



Do not spread liquid manure, dry or semi-solid manure and parlor effluent during these shaded months, if crop is not actively growing.



Manure applications will not be made earlier than 30 days prior to planting on environmentally sensitive sites.

On fields not listed as environmentally sensitive:

- Liquid manure applications will not occur more than 60 days prior to spring planting.
- Applications of semi-solid beef manure (85.5% moisture content or less) or semi-solid dairy manure (85% moisture content or less) for operations using straw or sawdust (not sand) bedding will not occur more than 90 days prior to spring planting on fields having (i) slopes less than 7% throughout the application area or (ii) having at least 60% uniform ground cover from crop residue.



Consult with your NM Specialist for application timing.