



COMMONWEALTH of VIRGINIA

Office of the Governor

L. Preston Bryant
Secretary of Natural Resources

April 26, 2006

Dr. Lynton S. Land
P.O. Box 539
Ophelia, VA 22530

Dear Dr. Land:

Thank you for your letter of March 31, 2006, addressed to Governor Kaine, myself, and the members of the Joint Legislative Audit and Review Commission. As your letter addresses a number of factors that are not within my oversight, I have shared your letter with The Honorable Marilyn Tavenner, Secretary of Health and Human Resources, and am copying Secretary Tavenner on this letter as well. Additionally, Governor Kaine has asked that she and I respond to you on his behalf.

While the Department of Conservation and Recreation (DCR) does not agree with the absolute magnitude of the nutrient losses described in your letter, it is agreed that the nutrient losses from agricultural production systems are very significant. Uptake efficiency of nitrogen by annually established row crops such as corn ranges from 50 to 70% of applied nitrogen for inorganic fertilizers. We can realistically strive to achieve nitrogen utilization efficiencies near the top of that range through the optimum rate and timing of nutrient applications, either through incentive programs or mandatory requirements.

Not all of the nitrogen that is unused by the crop is lost to the environment. Because of the various environmental and biological factors influencing the conversion of organic nitrogen to inorganic forms required by plants, the total organic nitrogen content of manure and sewage sludge is not 100% accounted for in nutrient management plans. Some of the organic nitrogen forms are resistant to decomposition and likely remain in soils for very long times. However, manure and sewage sludge are both much more variable in nutrient content than other fertilizers and also variable in carbon content that controls the type and rate of various nitrogen transformations. Because of these issues, it is most likely that nitrogen losses to the environment are greater on a per acre basis with manure and sewage sludge as compared to use of commercial fertilizer nitrogen, if the fertilizer is used in efficient ways.

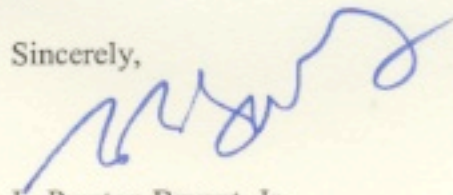
DCR agrees that more needs to be done to reduce the nutrient impacts associated with fertilizer, manure, and sewage sludge land application. DCR is developing cost-share incentive programs with Water Quality Improvement Act funding to encourage more farmers to implement nutrient management practices for all nutrient sources.

We would be appreciative of any specific suggestions you may have to offer that may minimize the impacts you describe.

While DCR has the primary responsibility for nutrient management plans designed to control runoff from the spreading of biosolids and poultry litter, DEQ regulates the land application of poultry litter from approximately 1,030 farms and the land application of liquid manure from approximately 150 dairy, beef and swine farms. Animal wastes generated at these facilities are applied in accordance with nutrient management plans approved by DCR staff. These facilities are inspected on at least an annual basis by DEQ staff; the inspections include visual examination of the waste storage facilities and fields where the animal waste has been applied, as well as an audit of the waste application records.

In addition, biosolids generated at approximately 80 wastewater treatment facilities permitted by DEQ under the Virginia Pollutant Discharge Elimination System (VPDES) Program are land applied. This land application is largely undertaken by contractors permitted through the Department of Health's Biosolids Use Regulation. The wastewater treatment facilities submit annual reports to DEQ, which include the volume of biosolids generated and land applied, concentrations of trace metals and nutrients, and the pathogen reduction/vector attraction methods employed. These reports are reviewed by DEQ staff to determine compliance with the facility's wastewater discharge permit.

Sincerely,



L. Preston Bryant, Jr.

LPBJr/cbd

cc: The Honorable Marilyn Tavenner,
Secretary of Health and Human Resources
Joseph H. Maroon, Director, DCR
David K. Paylor, Director, DEQ