Maryland General Assembly
Department of Legislative Services

Proposed Regulations
Department of Agriculture
(DLS Control No. 15-018)

Overview and Legal and Fiscal Impact

These regulations incorporate the University of Maryland Phosphorus Management Tool (PMT) into the State's existing nutrient management planning process. The regulations also add recordkeeping and reporting requirements and establish the Phosphorus Management Tool Transition Advisory Committee within the Maryland Department of Agriculture.

The regulations present no legal issues of concern.

The regulations are not expected to significantly affect State finances in the near term, but they could contribute to increased State operating expenditures in the future if there is reduced availability of agricultural land application as a disposal method for sewage sludge generated at State wastewater treatment plants operated by the Maryland Environmental Service. Certain local governments may incur increased costs to dispose of sewage sludge to the extent the availability of agricultural land application for disposal of sewage sludge in the State is limited.

Regulations of COMAR Affected

Department of Agriculture:

Soil and Water Conservation: Nutrient Management Certification and Licensing: COMAR 15.20.04.11
Agricultural Operation Nutrient Management Plan Requirements: COMAR 15.20.07.02
Content and Criteria for a Nutrient Management Plan Developed for an Agricultural Operation: COMAR 15.20.08.01, .03, and .05-.12

Legal Analysis

Background

Since the passage of the Water Quality Improvement Act of 1998 (Chapters 324 and 325), agricultural operations with $2,500 or more in gross annual income and livestock operations with 8,000 pounds or more of live animal weight must have and comply with a nutrient management plan for nitrogen and phosphorus. A nutrient management plan is a plan developed by a certified nutrient management consultant to manage the amount, placement, timing, and application of animal waste, commercial fertilizer, sludge, or other plant nutrients to prevent pollution by transport of nutrients and to maintain productivity on agricultural land. Different implementation dates apply to operations using chemical fertilizers and operations using sewage sludge or animal manure. Operations using sewage sludge or animal manure have been required to comply with a nutrient management plan for nitrogen and phosphorus since July 1, 2005.

The Maryland Department of Agriculture certifies and licenses nutrient management consultants and businesses to prepare nutrient management plans for farm operations and also issues certificates to farm operators to develop their own plans. In consultation with the Nutrient Management Advisory Committee, the department is required, by regulation, to prescribe the criteria, form, and content for certified nutrient management plans applicable to licensees and certificate holders, as well as to establish specified continuing education, recordkeeping, and reporting requirements.

The regulations add Supplement No. 8, which contains the PMT, to the Maryland Nutrient Management Manual (manual) and make corresponding changes to existing regulations. The PMT builds on the existing Phosphorus Site Index (PSI). First implemented in the 1990's, the PSI is used as a tool in the nutrient management planning process to assess the risk of phosphorus loss from agricultural lands. It applies in situations where phosphorus levels in the soil exceed a threshold that is established in regulation. According to the department, historic applications of manure have resulted in accumulated levels of phosphorus in soils, and the PSI directs manure application to result in a lower risk of phosphorus loss. The PMT was more recently developed by scientists at the University of Maryland with collaborative support from regional and national scientists focused on phosphorus transport. The PMT allows for more site-specific risk assessment and includes better estimates of sub-surface nutrient loss than the PSI.

Adopting the PMT is an element of Maryland's Watershed Implementation Plan, the federally mandated document that outlines specific steps the State will take to protect and restore the Chesapeake Bay under the Chesapeake Bay Total Maximum Daily Load (TMDL). In its most recent evaluation of Maryland's progress in implementing the milestones associated with the Bay TMDL, the U.S. Environmental Protection Agency noted that the failure to adopt PMT regulations was a "shortfall" in the State's otherwise sufficient progress to date. Regulations to incorporate Supplement No. 8 into the manual were previously submitted to the AELR committee in December 2012, July 2013, September 2013, and November 2014.

Summary of Regulations

The regulations incorporate the PMT into the State's existing nutrient management planning process. Specifically, Regulation .02 under COMAR 15.20.07 incorporates by reference Supplement No. 8, which contains the PMT.

Recordkeeping and Reporting Requirements

Regulation .11 under COMAR 15.20.04 is amended to require a license holder or certified consultant to file an annual report that contains information relating to nutrient management plans developed for farm operations that have soils with a phosphorus fertility index value (FIV) of 150 or above and information the department determines necessary to evaluate the implementation of the PMT. The department must maintain the information in a manner that protects the identity and personal information of the person for whom the plan was prepared. In addition, by September 30, 2015, and every 6 years thereafter, a license holder or certified consultant must file (1) a report that includes field or management-unit information relating to the phosphorus levels in the soil determined by a certain soil analysis, but that does not include any information identifying the person or specific operation; and (2) a separate report that includes the names of the persons, and the farms if applicable, and addresses of the operations for which soil phosphorus data has been provided.

Transition from PSI to PMT

Regulations .01, .03, and .05 through .14 under COMAR 15.20.08 incorporate the PMT into the content and criteria for a nutrient management plan developed for an agricultural operation. Generally, the regulations establish management phases, phased-in over a seven-year period, to transition from the PSI to the PMT as a means to identify potential risk of phosphorus loss from farms. Initially, nutrient management plans must be developed using both the PSI and the PMT, but the PSI must be used to actually determine phosphorus applications. The threshold for use of a phosphorus risk assessment method continues to be when a soil sample shows a phosphorus FIV of 150 or above. However, the application of phosphorus is prohibited upon the effective date of the regulation (and not subject to the phase-in) if a soil sample analysis indicates a phosphorus FIV of 500 or greater.

Farms that have excess soil phosphorus will be placed in one of three tiers, as determined by the operation's average phosphorus FIV. Tier C operations (farms with a phosphorus FIV greater than 450) will be the first operations required to begin implementing the PMT, in crop year 2018, but will be given a longer time-frame to fully implement it through transition management phases I and II. Tier A and Tier B operations (farms with less than 300 or 450 phosphorus FIV, respectively) will be required to begin implementing the PMT later, but will be given less time to complete the transition.

Full implementation of the PMT is scheduled for crop year 2022, but the schedule may be adjusted by two one-year extensions if required evaluations indicate that there is insufficient capacity to address the additional volume of excess animal manure expected under the next transition management phase. Before January 1, 2019, the department, in consultation with the Phosphorus Management Tool Transition Advisory Committee, must conduct the first evaluation of (1) the existing markets for animal manures; (2) participation in and additional capacity of the Manure Transport Program; (3) the capacity of existing infrastructure for manure transportation, handling and land application; (4) the availability of public and private sector resources; and (5) the status and capacity of alternative uses for animal manures. The regulations specify that the evaluation must be comprehensive in scope, with the objective of advancing implementation of the next transition phase of the PMT to the maximum extent practicable. The department must conduct additional evaluations before January 1, 2020, and before January 1, 2021 or, if the transition schedule has been adjusted based on an earlier evaluation, January 1, 2022.

After the PMT is fully implemented, the application of additional phosphorus is prohibited when use of the PMT determines that the potential risk for phosphorus loss from a site is high, except under specified circumstances. Separate restrictions apply for lower levels of risk and during different transition phases before the PMT is fully implemented.

Phosphorus Management Tool Transition Advisory Committee

Regulation .11 under COMAR 15.20.08 establishes the Phosphorus Management Tool Transition Advisory Committee, which will be comprised of members from governmental units and stakeholders and continue until the PMT is fully implemented. The committee must evaluate information relevant to the implementation of the PMT, including the quantity and location of excess animal manure within the State, the status and activity of manure transportation activities in geographic areas with excess animal manure, the viability of markets for animal manure, and the status and capacity of alternative use technologies. The committee must also recommend strategies to facilitate the effective implementation of the PMT, recommend potential changes to

the implementation schedule, and identify resources necessary for the effective transition to the PMT. By December 1, 2016, and annually thereafter, the committee must report to the Governor and the General Assembly, including a summary of data collected from farms regarding operational changes created by implementing the PMT, the status of programs related to the transition to the PMT, critical resource needs for the effective transition to the PMT, and policy recommendations.

Legal Issue

The regulations present no legal issues of concern.

Statutory Authority and Legislative Intent

The department cites § 8-801 through § 8-806 of the Agriculture Article as authority for the regulations. Specifically, § 8-801.1 requires each nutrient management plan to be developed considering, among other things, the "best reasonable scientific methods accepted by the department and the University of Maryland Cooperative Extension Service" or "scientifically validated data for the development of a nutrient management plan as defined by the department in regulation." Section 8-804(b) requires the department to adopt regulations, in consultation with the Nutrient Management Advisory Committee, to (1) prescribe the criteria, form, and content for certified nutrient management plans; (2) establish continuing education requirements for certified nutrient management consultants; and (3) adopt guidelines and requirements for licensees and consultants on recordkeeping and reporting.

In addition, § 2-103(c) of the Agriculture Article should be added to the cited authority. Section 2-103(c) broadly authorizes the Secretary of Agriculture to create any advisory unit of any size deemed appropriate, as long as the unit includes at least one member of the Maryland Agricultural Commission.

With the addition of § 2-103(c), this authority is correct and complete. The regulations comply with the legislative intent of the law.

Technical Corrections and Special Notes

The Department of Legislative Services has advised the department that § 2-103(c) of the Agriculture Article should be added to the citation of authority because the regulations establish the Phosphorus Management Tool Transition Advisory Committee. The department has also been advised that at least one member of the Maryland Agricultural Commission should be included in the membership of the new advisory committee.

Fiscal Analysis

The regulations are not expected to significantly affect State finances in the near term, but they could contribute to increased State operating expenditures in the future if there is reduced availability of agricultural land application as a disposal method for sewage sludge generated at State wastewater treatment plants operated by the Maryland Environmental Service. Certain local governments may incur increased costs to dispose of sewage sludge to the extent the availability of agricultural land application for disposal of sewage sludge in the State is limited.

Agency Estimate of Projected Fiscal Impact

The department advises that the regulations have no impact on State or local governments. The Department of Legislative Services disagrees. State finances are not expected to be significantly affected in the near term. In future years, however, the potential limitation of agricultural land application as an option for utilization of sewage sludge may be a contributing factor to increased operating costs borne by the State to dispose of sewage sludge generated at State wastewater treatment plants operated by the Maryland Environmental Service.

The regulations' phosphorus application criteria may limit the availability of agricultural land application as a method of sewage sludge utilization in the State. Sewage sludge utilization sites are regulated by the Maryland Department of the Environment; there are currently 242 farms with agricultural land application permits. In 2013, 9.7% of sewage sludge generated in the State was land applied in the State, and a significant majority of the land application sites are farms. If other land application sites cannot be recruited, sewage sludge generators may incur higher costs for other utilization methods, such as transporting the sewage sludge to landfills or out of state.

The Maryland Environmental Service currently uses land application in Virginia as a disposal option for sewage sludge generated from three State wastewater treatment plants that it operates. If regulations regarding land application become more restrictive in Virginia, land application of sewage sludge in Maryland could become an alternative at some point in the future. To the extent these regulations limit that alternative, any resulting increase in operating costs for other utilization methods are allocated among the users of the plants, including the State. Based on the Maryland Environmental Service's current contract for land application in Virginia, if it needed to send all of the sewage sludge from those three plants to a landfill instead, operating costs would increase by approximately $300,000 annually, the majority of which would be borne by the State (and the remainder borne by other users of the plants).

Local governments are similarly affected to the extent the regulations' phosphorus application criteria limit the availability of agricultural land application as a method of sewage sludge utilization in the State. Local government-owned/-operated wastewater treatment plants that currently rely on land application in Maryland to dispose of sewage sludge may be required to find other means to dispose of the sewage sludge, at increased costs. Depending on the extent to which the availability of land application is limited, the increase in costs for local governments may be in the hundreds of thousands of dollars.

Impact on Budget

The regulations are not expected to significantly affect the State operating or capital budget in the near term; however, State operating expenditures may be affected in the future, as discussed above.

Agency Estimate of Projected Small Business Impact

The department advises that the regulations have a meaningful economic impact on small businesses in the State. According to the department, farms with high phosphorus levels in the soil incur additional costs as they are required to reduce or eliminate the application of additional phosphorus to their fields, necessitating the replacement of the use of organic sources of nutrients, such as animal manures, with the use of inorganic commercial fertilizer and the transportation of

the animal manure to other farms with lower phosphorus levels. Those other farms may realize lower operating costs through the use of relocated animal manure. Businesses engaged in the sale and land application of commercial fertilizers and the loading, hauling, and land application of animal manure are also affected (positively in some cases and potentially negatively in others) by shifts in the use of animal manure and commercial fertilizer as a result of the regulations.

The Department of Legislative Services concurs with the department's assessment but notes that, additionally:

- small businesses preparing nutrient management plans for agricultural operations may meaningfully benefit during the transition period of the regulations when nutrient management plans may be updated more often than they otherwise would be; and

- small business sewage sludge generators may incur increased costs due to any limitation on the availability of agricultural land application as a disposal option (*e.g.*, a small business that transports sewage sludge to a larger plant for treatment, such as one of the State's wastewater treatment plants operated by the Maryland Environmental Service, may have the increased costs of the plant's sewage sludge utilization passed on to it).

Contact Information

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