

November 19, 2011

Dear Secretaries Hance, Griffin, Summers, and Hall and Dr. Boesch (Bay Cabinet),

On October 27, 2011, the Maryland Department of Agriculture proposed changes to the State's nutrient management regulations (NMR). MDA's stated in releasing the newly revised regulations that "*The purpose of the changes is to achieve consistency in how all sources of nutrients are managed. This will provide consistency in the application of fertilizers, animal waste, biosolids and all other nutrient sources.*

*That consistency is important if the State of Maryland is to meet its Total Daily Maximum Load requirements, as set forth in EPA's Watershed Implementation Plan for restoring the Chesapeake Bay.*"

We fully agree that this objective should be a critical element of the proposed changes. Unfortunately, the proposed changes to the nutrient management regulations fail by a wide margin to accomplish this.

To meet MDA's stated goal to achieve consistency in how all nutrient sources are managed and applied to agricultural land, we urge that the NMR treat all nutrient sources the same as treated human wastewater sludge under COMAR 26.04.06.09. These regulations have been extant since the mid-1980s and were adopted by MDE at the urging of the State's agricultural community. This was occasioned by increasing advanced wastewater treatment sewage sludge application on agricultural lands.

Why should the land application of untreated animal waste be treated differently than the treated sewage sludge from advanced wastewater treatment plants that destroy pathogens and remove all or a high percentage of contaminants? Agronomists have clearly documented that waste generated by farm animals contain many of the same contaminants as treated human biosolids, and in data from the University of Maryland, much of the animal waste exceeds heavy metals and other contaminants in human sludge.

The requirements for land application of treated human sludge under COMAR 26.04.06.09 include these important measures that should be adopted in MDA's Nutrient Management Regulations to assure the conformity that MDA seeks for animal waste, biosolids, and other nutrient applications so as to assure meeting the State's TMDL requirements and its Watershed Implementation Plan:

1. The sludge applied shall be incorporated into the soil by the end of each working day except under certain limited circumstances;
2. Soil tests must be required and certification made that the soils are not phosphorus saturated and can absorb the added phosphorus and nitrogen before any sludge is applied;
3. Buffers of up to 200' are required where sludge may not be applied;
4. For agricultural lands located within the boundaries of the critical area, sludge application may not occur within 100 feet of the following: (i) The mean high water line of tidal waters; and (ii) The landward side of tidal wetlands;
5. With certain exceptions, sewage sludge may not be land applied when the soil is saturated, when the ground is covered with snow, when the ground is frozen so as to prevent proper injection, or when weather conditions prevent adherence to the requirement to incorporate the sludge into the soil;
6. With certain exceptions, sewage sludge may not be applied on slopes greater than 15 percent. Liquid sludge which is surface applied may not be applied on slopes greater than 6 percent;

7. Sludge application is prohibited on certain soil types and there shall be a 2-foot buffer between all sludge application areas and the following: Bedrock; and Ground water;

8. All sewage sludge shall be applied at agronomic rates so that nutrients that are available in the soil plus nutrients from manure are matched with the expected nutrient requirements of the next or growing crop. Application of manure at agronomic rates minimizes the potential for nutrients to move out of the crop's root zone and maximizes the manure's nutrient value to the landowner. Manure application rates may need to be adjusted downward or prohibited where the soil is already saturated with nutrients to prevent water pollution of ground and surface waters;

9. When sludge is applied to soil in late summer or fall, sludge application shall cease and a crop shall be planted by October 31. The crop planted shall be capable of germination and significant plant growth before onset of winter so the plant is able to use available nitrogen released by the sewage sludge. Sewage sludge may not be applied to agricultural land from November 1 through February 28 unless all of the following conditions are met;

10. For soils with a background pH of less than 6.5, sufficient lime or liming material shall be added before or at the time of sludge application so that the calculated pH of the soil is raised to 6.5 and soil pH is maintained at a minimum of 6.2 over the life of the permit;

10. Sludge shall be spread evenly over the site using conventional agronomic equipment such as manure spreaders, spray equipment, or other applicators, or by commercial equipment specifically designed for sludge application on agricultural land; and

11. Detailed requirements for sludge storage are included in COMAR 26.04.06.09.

We would add an important addition: That there be adequate monitoring and enforcement of the Nutrient Management Regulations.

We realize that some of the requirements in COMAR 26.04.06.09 may be impractical for land application of farm animal waste, but most provisions can be met and should be required, including the eleven above. MDA should carefully review the existing human sludge regulations and amend the State's Nutrient Management Regulations to parallel these regulations.

Most all of the signatories to this letter represent groups and individuals that have joined together as Senior Scientists and Policymakers for the Bay. This prestigious group of 58 scientists, policymakers, and conservationists unanimously adopted 25 specific measures to restore the Chesapeake Bay. The group includes two former Maryland Governors, a former U.S. Senator, a former Congressman, current and former Maryland State Senators and Delegates, former Secretaries of Natural Resources from Maryland and Virginia, a current County Council member, as well as top Bay scientists and conservation leaders from Maryland, Virginia, and Pennsylvania. Our scientists include top Maryland agricultural scientists with decades of experience in nutrient management and animal manure application.

The group unanimously concluded that after 27 years of effort, the formal Bay Program and the restoration efforts under the voluntary, collaborative approach currently in place have not worked and current efforts have been insufficient and are failing. Because of this failure, the group has urged Maryland and the other Bay states and the EPA to transition from the voluntary collaborative approach to a more comprehensive regulatory program that would especially address the failure to achieve the significant and necessary reductions in nonpoint source pollution loads and meet the TMDL caps set for nutrients and sediment. The group has urged Maryland and the other states to take the aggressive actions

detailed in the 25 measures that focus on reducing nutrient and sediment loadings from agriculture and development.

Specifically, as to applications of animal waste and human sludge, Senior Scientists and Policymakers for the Bay have recommended that:

\*Maryland should adopt requirements for all land disposal of animal waste/manure that parallel Maryland's regulations under the Maryland Department of Environment for the land disposal of human sludge from advanced wastewater treatment facilities. These requirements should include the provisions already extant for human sludge that require the incorporation of all animal waste/manure into soils within 24 hours of application on land, soil tests to assure the land is not phosphorus saturated, and that prohibit application on steep slopes, highly erodible soils, frozen ground, and in riparian buffers of up to 200 feet. See the Maryland human sludge disposal regulations at COMAR 26.04.06.09. <http://www.dsd.state.md.us/comar/comarhtml/26/26.04.06.09.htm>

\*Maryland should require that on any agricultural lands that receive human sludge and/or animal waste/manure, cover crops should be mandatory for a minimum of one year after application. Even with the use of cover crops, sludge and animal waste/manure should be required to be injected or incorporated into soils within 24 hours of application. Further, the practice of human sludge or animal waste/manure application to fields with excessive phosphorus levels must be stopped. Maryland should require reducing phosphorus levels to agronomic requirements and soil tests before all applications of human sludge and/or animal waste/manure. These latter measures must be required to assure that phosphorus is not applied where not needed.

\*Maryland should include a significant expansion of the CAFO designation to cover all but the smallest AFOs. All agricultural lands receiving manures from any AFO should be treated as a regulated entity/activity. It is equally important that assessment and accountability of all CAFOs and all other federal and state regulated agricultural activities be increased. Current state programs do not provide adequate assurance that the CAFO permits, particularly related to land application, and other state regulations of agricultural activities are being enforced. Enforcement must be assured.

The recommendations submitted above would implement some of the group's core recommendations for animal manure. Since the proposed changes have been withdrawn from the AELR Committee to reconsider shortcomings, we trust you will consider and adopt the measures we have suggested. These same measures were provided to you and discussed with you at the meeting we held with the Bay Cabinet at DNR on September 7, 2011.

We fully agree with MDA that consistency in how all nutrient sources are managed and applied to agricultural land throughout the state is important if the State of Maryland is to meet its Total Daily Maximum Load requirements and its Watershed Implementation Plan for restoring the Chesapeake Bay.

Unless MDA acts to incorporate the same requirements suggested herein in the MDE human sludge regulations, not only will there be no consistency but the TMDL caps for nitrogen and phosphorus will likely not be met.

We say this as agriculture contributes 38% of all nitrogen loading to the Bay in Maryland and 48.9% of the phosphorus. Maryland's WIP provides that 4.86 million pounds of the 10.77 million pound reduction in nitrogen required under its TMDL will come from agriculture; for phosphorus, it's 0.16 million pounds of the .49 million pound reduction required coming from agriculture. Much of this reduction must come

from animal manure and the proposed Nutrient Management Regulations fall well short of putting Maryland on the path of meeting its Bay commitments.

Why should a farm operator who land applies tons of untreated chicken manure on his farm not be subject to the same requirements as someone applying even small amounts of treated human sludge?

Respectfully Submitted,

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For the Steering Committee  
Senior Scientists and Policymakers for the Bay

Cc: Matt Gallagher  
Joe Bryce  
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