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North East Biosolids & Residuals Association

Cooperatively promoting the environmentally sound recycling of biosolids and other residuals

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Re: Comments on Solid Waste Management Rules

Dear Dennis,

Many thanks for the opportunity to provide comments regarding the proposed final Sold Waste Management Rules.

NEBRA is a non-profit professional association with members generating and managing biosolids throughout Vermont. We collaborate with Green Mountain Water Environment Association (GMWEA) and other stakeholders to advance biosolids management in accordance with current science, regulations, and best practices.

Our comments below, focused on residuals, start with a high level reminder of the importance of biosolids recycling to soils as an option and a goal. Those working on biosolids management at the Department of Environmental Conservation (DEC) and Agency of Natural Resources (ANR) know these facts, but they bear repeating here. Our remarks end with several specific comments in support of the proposed regulations.

Recognizing the Importance of Biosolids Recycling for the Environment

Modern wastewater treatment – in centralized water resource recovery facilities (WRRFs) or septic systems – protects public health and the environment. Wastewater treatment is society's primary defense of water quality. Sanitation has been the greatest medical advance in the past 150 years,

according to a *BMJ* survey in 2007.[1] The solids from this treatment – sewage sludge and septage[2] – have to be managed. Incineration and landfill disposal generate greenhouse gas emissions and waste the nutrients and organic matter in these materials. Recycling to soils is usually the best *environmental* choice.

Biosolids provide:

- Improved soil quality, including increased microbial activity and water holding capacity
- Lower net greenhouse gas emissions than other solids management options
- Carbon sequestration in soil
- Increased yields and nutritional value of crops
- Reduced need for chemical fertilizers produced and transported from a distance
- Increased cost-efficiency for farmers and other users, as well as for WRRFs
- Local resources used locally, creating local jobs.

These benefits are well-documented – and risks have been evaluated and addressed – through 45+ years of research and experience. [3]

Currently, a large percentage of biosolids produced in Vermont are recycled to soils after being exported and treated at a facility in Chateaugay, NY. Other Vermont biosolids are land applied or composted in communities around the state. These programs are cost-effective and some have been around for decades. They are sustainable. In some cases, significant local investments have been made to create biosolids products, and farmers and other landowners rely on them for their benefits. This is a vital recycling process, keeping organic waste out of landfills where it creates methane, a powerful greenhouse gas.

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[1] During the coronavirus pandemic, the value of water quality is more prominent than ever! We all thank our local wastewater and water treatment operations for breaking the cycle of transmission and letting us wash our hands many times daily.

[2] These comments will focus on biosolids recycling in particular, but septage land application is also important as an option that relieves pressure on WRRF capacity, and it has the same benefits and risks that are managed through regulations, just like biosolids. Vermonters produce more than 41 million gallons of septage that have to be managed.

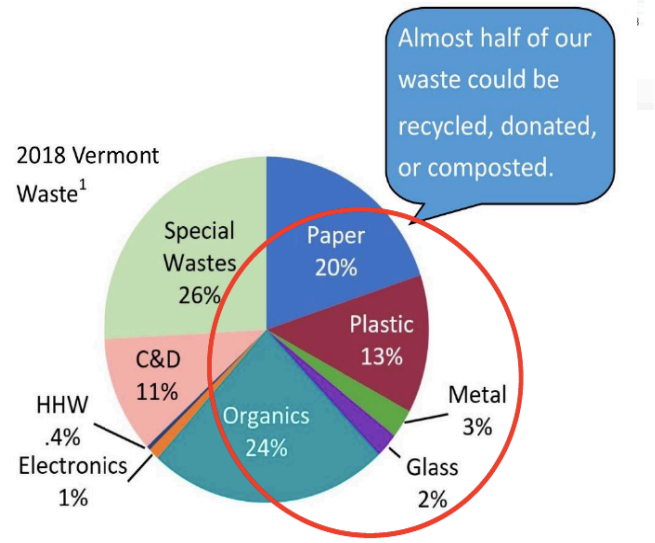
[3] Biosolids recycling to soils is accepted by agricultural advisors (e.g. university Extensions) around the nation, as well as U. S. EPA, the U.S. Dept. of Agriculture, U. S. Food & Drug Administration, and all state environmental regulatory agencies. Recent rulings in New York and by the Pennsylvania Supreme Court have found biosolids use on farms to be a "normal agricultural activity" under state Right-to-Farm laws. 60% of U. S. wastewater solids are recycled to soils, including from Washington, Boston, Chicago, Houston, Denver, San Francisco, Los Angeles, and Seattle. Two National Academy of Sciences reviews of the EPA Part 503 regulations have found biosolids management in accordance with regulations to be protective of public health and the environment. DEC stands on very firm footing supporting the option of biosolids recycling to soils.

The Department has the responsibility to balance risks and benefits. It should not focus solely on minimizing risks with layers upon layers of restrictions. Rather, policy and regulations should be grounded in the best available science and experience, with the overall "big picture" in mind. Greenhouse gas emissions matter; recycling matters; soil health matters. Act 148 properly aims to get organics out of landfills, for climate reasons and to support local economic activity and the circular economy. Biosolids are organic residuals that create the same issues in landfills as food waste and other organic residuals . And yet the regulations for biosolids are restrictive enough that they have functionally dissuaded biosolids recycling in the state for many years.[4] And now, while the additional requirements of the proposed final Solid Waste Management Rules are, by themselves, minimally more restrictive and continue to allow a pathway for recycling, they are not encouraging to the process.

DEC residuals management staff clearly recognize the benefits of biosolids recycling to soils. However, the appearance is that DEC leadership and the legislature have not prioritized this recycling program in the same way they have prioritized other organics recycling. Yet most Vermont biosolids are highly recyclable with minimal risk: they are already amassed, are relatively free of contaminants (for comparison, think of the challenges of plastics in food waste), are rich in nutrients, and are consistently available.

At right are graphics from the latest report on Act 148, showing the kind of support DEC provides regarding Act 148 compliance and success. We see

How do biosolids fit into Act 148? They don't. Yet their recycling advances the same goals and benefits as touted in the recent report on the Act 148 progress.



[4] That may not be the intention of the regulations, but it is the reality of the outcome. If land application in the state was promoted and even incentivized, then the cost and hassle of hauling to upstate New York would be greater than local recycling in at least some localities in northwest Vermont. Bennington is another example of a program (composting) that was successful for many years but found regulations and hassles too great and is now shipping its solids out of state. Essex Junction has been a model facility for decades, generating renewable energy, taking in challenging "wastes," and recycling biosolids. Why can't we encourage replication of that experience?

no similar visible efforts by DEC to advance biosolids recycling. We see no leadership commitment and publicity. Yet about 50,000 wet tons of biosolids are produced in Vermont each year. That's equal to ¼ of all the typical recyclables in Vermont in 2017 (200,000 tons of paper, plastic, metal, food and yard waste, etc.). And it's almost as much as the estimated total of landfilled food scraps (60,000 tons/year), according to DEC! What a resource!

And now, current pressures from a few legislators, a few vocal advocates, and questions about PFAS have added to the disincentives making their way into the layers of conservative assumptions in the biosolids regulations. PFAS testing is beginning, even though the science remains young and there are no approved EPA methods for PFAS in dirty waters and solids.

If more Vermont biosolids go to landfill, it negates the progress from Act 148 and the food scraps ban that becomes final July 1st. What a waste. The continued reduction in biosolids recycling harms the environment and increases costs for municipalities across the state, including leaving large stranded investments for biosolids treatment in communities like South Burlington and Brattleboro.

Yes, biosolids have contaminants. But so does food waste (e.g. PFAS are found in food waste composts too). Biosolids have been heavily researched, and the potential and real risks have been sorted out. Regulations and best practices have reduced risks to minimal levels. Vermont's regulations are some of the most stringent in the country already. So Vermont biosolids recycling is safe. Even recent testing for PFAS in soil and groundwater at some of the longest-used biosolids land application sites has shown minimal impacts. Yes, in few instances groundwater exceeds Vermont's very low groundwater standard, but mostly the tests show no significant impact. The few sites of concern can be addressed appropriately. Requirements can be tweaked to address PFAS (but don't bake them into regulations now, when our understanding is still limited), while continuing to build even more sustainable biosolids recycling.

We ask that ANR and DEC start treating biosolids recycling like other organics recycling. With highly conservative regulations in place, DEC can confidently *promote* recycling in accordance with those regulations, knowing that the regulations are highly protective of public health and the environment.

Lastly, we'll reiterate comments we have made for the past twenty years: Vermont's formal policy on solid waste states a recycling goal for biosolids of 75%. That was achieved some years, but that policy is rarely mentioned. We urge ANR/DEC to further support Solid Waste Management Districts with integrated organics management plans that include biosolids. We urge the same kind of tracking and incentives for biosolids recycling as has been conducted for other organics covered by Act 148. Be proud of this recycling success!

Specific Comments on the Final proposed Solid Waste Management Rules

NEBRA accepts the large majority of changes proposed in the biosolids portions of the proposed Solid Waste Management Rules. Individually, they are reasonable. But, as we note above, some continue to increase the layers of conservativeness in the regulations, adding, bit by bit, to disincentivizing recycling.

- We commend DEC on the reorganization of the Rules, with the inclusion of a section dedicated to residuals management facilities. This adds clarity.

- We support the increased flexibility and use of performance standards and practicality in organics compost facility operations and other efforts to streamline organics (non-biosolids) diversion and treatment (via composting or anaerobic digestion, etc.).
- We wish biosolids management got some streamlining and support in a similar fashion.
- We oppose the doubling of the animal grazing prohibition from 6 months to 12 months. This does not reduce risk significantly and could be a disincentive. Manures present more pathogen risk than Class B biosolids, but there are virtually no similar regulatory restrictions for manure land application.
- We commend the removal of the TCLP analysis requirement.
- We strongly support the requirement that biosolids and residuals be included in farm nutrient management planning. That has been a best practice for many years and is necessary to avoid nutrient impacts from not just biosolids, but manures and fertilizers as well.
- We strongly support the requirement that septage be screened before it is land applied.
- We have come to accept DEC's insistence on groundwater monitoring at land application sites; it certainly has provided useful information over the years, showing minimal to no impacts from ongoing land application, and we concur with DEC that "having such information in-hand provides a strong argument against positions that land application poisons groundwater" (as noted in DEC's response to comments). In the case of PFAS, groundwater monitoring shows that the large majority of long-term land application sites tested do not have impacts above the very conservative Vermont PFAS groundwater standard. (The handful of biosolids sites with groundwater impacts are complicated and are not impacting drinking water; they can be addressed case by case. They are not indicative of a widespread risk.)
- We understand from our members that the new proposed requirements for approval and reporting of imported EQ biosolids will not be overly burdensome. But we still question why these materials, which are treated and tested and meet high quality standards such that they are just part of soil amendment marketplaces, are singled out while manure products, other composts, mulches, etc. are not targeted in the same way, even though some can raise similar concerns.
- We also understand the arguments for removing some of the pathogen-reduction options available in the federal EPA Part 503 regulations. However, we see this action as one more layer of extra conservativeness in the regulations, further disincentivizing land application when, in practice, there were no experiences of which we are aware of pathogen transmission because of reliance on the options being removed.
- The definition of "biosolids" should not include the last 8 words:
  "Biosolids" means sewage sludge derived, in whole or in part, from domestic wastes which have been subjected to a treatment process for the reduction of pathogens and have been demonstrated to meet the applicable requirements of these Rules for contaminant concentrations, vector attraction reduction, and pathogen reduction, such that the material has been approved by the Secretary for application to the land ~~under a site specific solid waste facility certification.~~ These words are not a usual part of the definition of "biosolids," and mightn't it mean that biosolids coming into the state are not technically biosolids under this definition, because they would not be getting a facility certification?
- The definition of "organics" sets an impossible standard. There are no organic waste materials that are "free of non-organic materials and contamination." And where are biosolids in this definition? Human waste is mentioned, but biosolids are not human waste. And yet biosolids are organics, by most definitions and common understanding. At least, in

this definition of “organics,” which is unique, point to the definition for “residual waste.”

- The definition of “nuisance” is useful. Dealing with odors and other nuisances is particularly challenging in the management of organic residuals. It is important to allow for flexibility and local case-by-case management of odors and other nuisances. We accept how the proposed rules address nuisances. Implementation in the field will be key.
- On page 185 of the proposed rules, under “b) Applicability,” (3), it may be that the reference should read: “shall nonetheless meet the requirements of §6-1303(a)…” We did not review all such references, but happened to notice this one.

We hope these comments are helpful; that is our intent. We look forward to continued collaboration with the DEC and other all stakeholders around this important recycling program. If you have any questions, please don’t hesitate to contact us. And again, thank you for the opportunity to comment.

Sincerely,

Janine Burke-Well, Executive Director

Ned Beecher, Special Projects Manager