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Vermont House Committee on Environment

Re: H.303

May 7, 2025

H. 303 – A ban on Biosolids, Septage & Sludge spreading in Vermont. What are the concerns?

- PFAS = Per and Polyfluoroalkyl substances
- While the 14,000 PFAS variants in in current production and use, only 5 are being tested for. A finding of "low" concentrations of PFAS in biosolids only analyzed for 5 types misleads one to believe that the biosolids tested are "safe" for use on cropland and gardens;
- EPA has set a maximum contaminant level in drinking water standard for PFOS and PFOA at 4 ppt, while stating that the safe level is zero;
- The State of Vermont has adopted a Maximum Contaminant Level (MCL) for drinking water and a Groundwater Enforcement Standard (GWES) of 20 parts per trillion (ppt) for the sum of five PFAS: perfluorooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA), perfluoroheptanoic acid (PFHpA), perfluorononanoic acid (PFNA), Perfluorohexane sulfonate (PFHxS).

It’s important to understand the units PFAS contamination is being presented in

- VT ANR tested the soils of 65 land application sites in 2019;
- Regulated PFAS contaminant levels in the soils at these sites averaged 13.9 parts per billion (ppb)
- Converting to the same unit of measure for soils as used for drinking water, the average PFAS contaminant levels found were 13,900 PPT
- Remember, the SAFE level for these constituents in drinking water is ZERO PPT, while the new EPA MCL enforcement standard is 4 PPT.
- Does continuing to add septage and biosolids contaminated with PFAS levels above background levels to our food and feed croplands and pastures make sense when we have other reasonable options available?

Cumulative Impacts of Land Spreading Sludge on Farmland

- The VT DEC's Solid Waste Management Rules have long acknowledged the cumulative impacts of spreading sludge on farmland. Farmland that has seen land spreading of WWTF sludge over time will reach a cumulative maximum limit for heavy metals.

Vermont Solid Waste Management Rules **Effective Date 10/31/2020**

(p) The cumulative loading rate for each metal on a land application site shall not exceed the cumulative loading rate limits for the metals in the following table:

Metal	Kilograms per Hectare	Pounds per Acre
Arsenic (As)	15	(13.4)
Cadmium (Cd)	5	(4.5)
Chromium (Cr)	1200	(1071.6)
Copper (Cu)	1500	(1339.5)
Lead (Pb)	300	(267.9)
Mercury (Hg)	17	(15.2)
Molybdenum (Mo)	75	(66.0)
Nickel (Ni)	420	(375.1)
Selenium (Se)	100	(89.3)
Zinc (Zn)	2800	(2500.5)

Cumulative impacts continued:

- Once the limits have been reached for any one of the listed heavy metals, the fields can never again be certified to accept WWTF sludges or septage, as doing so poses an elevated risk.
- Other persistent environmental contaminants not measured for accumulate over time through sludge application, as well as atmospheric deposition and the application of some pesticides containing such contaminants.
- As Sylvia Knight as testified, a number of pesticides contain PFAS chemicals as either part of their chemical composition or as a result of contaminant leaching from their containers.
- With so many PFAS containing sources converging on our food and feed croplands, we should mitigate where possible PFAS contamination where possible and reasonably available.

H. 303 as amended – not a total ban, but redirecting what and where biosolids can be used

- Which brings me to H. 303 as originally proposed and modifications that can be made to the bill which acknowledge the realities we face:
- Reality: Vermont will continue to generate WWTF sludges that will need somewhere to go.
- Landfill space is limited and in high demand from other waste sources[
- Siting a new, dedicated, WWTF biosolids monofil would at best take 10 years to site and permit.
- Incineration is a bad option as combustion temperatures are too low to fully destroy PFAS chemicals (combustion temps required range between 1850 – 2200 degrees F) and only act to inject PFAS into the atmosphere, only to later precipitate back onto the land.

Reasonably available solution:

- A reasonable and readily available approach, generally consistent with the VT ANR “Interim Strategy for Mitigating PFAS Risks Associated with Residuals Management” issued April 1, 2024 would be to:
- 1. Ban NEW permitting (certification) of direct land application of septage and WWTF sludges on NEW agricultural fields in Vermont
- 2. Allow the regulated commercial/industrial use of Class A biosolids on land where residential (lawns, golf courses, public parks, etc.) and agricultural activities will not occur.
- 3. Allow for the continued spreading septage and biosolids meeting standards on agricultural fields that are currently certified and in active use until a date certain.

Net Effect:

- VT ANR would establish in procedure and Rule the regulation of Class A biosolids which would allow for their use in highway projects, landfill soil capping, industrial park and commercial development projects, etc., generally on lands with no potential for future residential or agricultural use.
- The towns of Middlebury, Windsor and Essex Jct. would under this approach be allowed to continue to land apply on their already certified fields that are currently under active management.
- I set a suggested sunset date of 2035 in the amendment language I am providing with my testimony on H. 303, but this could be changed as legislature may desire.

H. 303 amendments walk through. Thank you.