

**From:** Tom Joslin  
**Sent:** Thursday, April 6, 2017 8:09 PM  
**To:** Tom Joslin <[tomjoslin@prospectenvironmentalvt.com](mailto:tomjoslin@prospectenvironmentalvt.com)>  
**Subject:** FW: Land Application of Municipal Biosolids and Septage: Concern About H.211

And in addition to all of the below, please consider that Vermont's recycling law is intended to divert all organics from landfills by 2020.

**From:** Tom Joslin [<mailto:tomjoslin@prospectenvironmentalvt.com>]  
**Sent:** Wednesday, March 29, 2017 11:36 PM  
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**Cc:** [rfischer@sburrl.com](mailto:rfischer@sburrl.com); Tom Joslin <[tomjoslin@prospectenvironmentalvt.com](mailto:tomjoslin@prospectenvironmentalvt.com)>  
**Subject:** Land Application of Municipal Biosolids and Septage: Concern About H.211

To the House Committee on Natural Resources, Fish and Wildlife:

Dear Legislators,

Hello, I am Tom Joslin of Jericho, an environmental engineer with 40 years of experience in the wastewater treatment industry, including 31 years at the Vermont Department of Environmental Conservation. In 2014, I retired from VT-DEC and founded Prospect Environmental Services PLLC.

I am writing to express concern about proposed language, in the current draft of bill H.211, that would require ANR to submit, by January 15, 2018, "a strategy for reducing or eliminating land application of sewage [sic] or septage in the State."

To prepare for this email, I read VT-DEC's revised (March 2017) report titled "Wastewater Treatment Sludge and Septage Management in Vermont," prepared by VT-DEC staffers Ernie Kelley and Eamon Twohig. That report is lengthy (110 pages), detailed, and in my opinion, is well written and presents strong evidence supporting continuation of the residuals land application program in Vermont.

At this time, there are basically only three technologically and economically viable residuals disposal methods available in Vermont, and in most places: land application, landfilling and incineration. In Vermont, only one far northern landfill (Coventry) currently accepts sewage sludge for disposal, and tighter federal air pollution control standards contributed to the early 2016 closure of most sludge incinerators located near Vermont. There are no sludge incinerators inside Vermont.

Pages 51-52 of the VT-DEC residuals management report describe an environmental problem with landfilling of sewage sludge. Leachate from lined landfills is transported and treated at wastewater treatment plants. Accepting more residuals at Coventry landfill would only increase leachate volumes,

leading to more sludge generation at treatment plants, and creating an endless closed loop in which contaminant concentrations increase over time, increasing the pollution risk to surface waters, at treatment plant discharges, and to groundwater, at landfills. Also, the VT-DEC report is largely silent about increased greenhouse gas emissions attributable to increased trucking of residuals and leachate, often over long distances. Of course, accepting more residuals at Coventry landfill would shorten the life of that facility.

Graphs in pages 107-109 of the VT-DEC report show that the concentrations of most monitored metals in Vermont biosolids have been generally decreasing since 2000. Sludge metals concentrations generally were also in decline during the period 1986-1991, when I was a “sludge cop” logging in laboratory reports in the VT-DEC Residuals Management Section. The reduced metals concentrations are attributable to metal (copper/lead) pipe corrosion control programs in drinking water systems, as well as increased monitoring and pretreatment of industrial wastewater discharges to municipal sewer systems.

In recent years, increased laboratory testing capabilities have revealed the presence of trace organic contaminants, such as pharmaceuticals and personal care product components, at extremely low concentrations, in municipal sludge and septage. Pharmaceutical diversion from sewage systems could lower concentrations of some of these trace organic contaminants, and the robust and diverse microbial populations of soils have been found to be more effective than water environments for breaking down many of these trace organic contaminants.

Thank you for considering these comments.

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