

Land Application of Sewage Sludge

Recommended changes to state subchapter 2T Residuals Management, section 15 A NCAC 02T.1101-15A NCAC 02T.1111

The Blue Ridge Environmental Defense League opposes the land application of sewage sludge. While sludge may be economical for farmers to use as a fertilizer in providing nutrients to crops, it is not a fertilizer with standardized or consistent rates of nitrogen, phosphorus and potassium. Also of great concern is the presence of unregulated, emerging contaminants in wastewater effluent that have been found to concentrate in sludge. Such contaminants have been proven to be harmful to fish and other wildlife species, and pose a potential risk to human health.

The League does not support landfilling or incineration of sewage sludge. We support the banning and/or reduction of certain chemicals at the source, additional testing for and removal of specific chemicals, and the development and implementation of prescription drug take-back programs to prevent harmful chemicals from contaminating our drinking water, food and environment via wastewater effluent discharges and land application of sewage sludge. Until a safer alternative for disposal of sewage sludge is found, we advocate for better enforcement of existing regulations and greater oversight by local governments.

We are recommending that North Carolina Department of Environment and Natural Resources Division of Water Quality (NCDENR/DWQ) make the following changes to the 2 T rules regarding the land application of sewage sludge:

- DENR/DWQ should require the permittee to abide by the new state-mandated "2T Rules" that require greater setbacks for Class A sludge and establish new agronomic growth rates for land application of Class B sewage sludge.
- DENR/DWQ should require the permittee to post visible signs limiting public access to fields receiving sewage sludge with contact information to report illnesses or complaints.
- DENR/DWQ should require the permittee to provide written notification to residents who live or own property within a one-mile radius to fields being spread with sewage sludge.
- DENR/DWQ should uphold and enforce citizens' "right-to-know" by requiring public notices, public comment period and opportunity to request a hearing regarding any new or modified permits to land apply sludge to be posted on the DENR/DWQ website, in local newspapers and at county libraries.

- DENR/DWQ should be required to post a public notice announcing public hearings in each county newspaper where facilities have permits to spread sludge.
- DENR/DWQ should require the permittee to provide indemnity coverage for farmers or end-users in the event of accident or illness associated with land application of sewage sludge.
- DENR/DWQ should create a partnership with counties to improve monitoring and testing of the state's land application residuals management program.
- DENR/DWQ should develop regulations to enhance end-user regulatory compliance concerning grazing of animals on sludge applied fields, and planting crops on sludge applied fields.
- DENR/DWQ should develop a system and protocol for residents with complaints of "prolonged nuisance conditions" which would prohibit the spreading of sewage sludge near their property.
- DENR/DWQ should require additional testing of sewage sludge for a select number of emerging organic wastewater contaminants sludge such as pharmaceuticals and fire retardants. The TCLP currently used to test for contaminants is out of date and inadequate to test for the array of emerging contaminants in sludge.
- DENR/DWQ should require additional testing for the potential presence of radioactive isotopes (alpha, beta, gamma, etc.) from hospitals, laboratories, and medical and research facilities.
- DENR/DWQ should require hospitals, laboratories, and medical and research facilities to test to test and pre-treat medical wastes destined for WWTPs.
- DENR/DWQ should require regulatory limits for phosphorus levels in sludge as a non-point source of pollution to surface waters.
- DENR/DWQ should require incorporation of sludge into the soil using a disc or tiller to minimize potential air pollutants and runoff into surface waters.
- DENR/DWQ should develop a comprehensive state protocol including a "help-line" to effectively handle complaints which may include reports of illnesses and potential violations from citizens concerning sludge applications.
- DENR/DWQ should log all complaints and reports of illnesses with the NC Department of Health and Human Services, Division of Public Health, Epidemiology Division.
- DENR/DWQ should require pathogen testing for Class A sludge compost every two weeks until distribution of material takes place.
- DENR/DWQ should require full disclosure that sewage sludge has been applied to land in the event of sale or leasing of land.
- DENR/DWQ should require disclosure of sludge applications on titles or deeds for land where sewage sludge has been applied.

- DENR/DWQ should produce a publicly accessible annual report which combines information on sewage sludge applications with total volumes of sludge applied in each county in NC.
- DENR/DWQ should request increased funding for more staff to monitor and enforce the state's land application residuals management program.

We are recommending that NCDENR/DWQ institute the following changes based on the recommendations in the Occupational and Environmental Epidemiology Branch (OEEB) 2005 study, "Human Health Risk Evaluation of the Land Application of Sewage Sludge/Biosolids:"

- Increased setbacks from sludge fields to residential areas, schools, churches, private wells, surface waters and adjoining properties.
- A health surveillance study of property owners with private wells next to fields where sewage sludge is being applied.
- Continuous monitoring of wells at all non-dedicated sites where sewage sludge is being applied.
- Steps to minimize or eliminate odors from land applied sewage sludge through the use of increased setbacks or buffers.
- Assessments to determine whether land application at a particular site is not in excess of its capacity to absorb sludge to protect against groundwater contamination.