
ENVIRONMENTAL Fact Sheet



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Sludge Land Application Sites in New Hampshire

What is sludge and what types can be land applied?

The New Hampshire Department of Environmental Services (NHDES) Sludge Management Administrative Rules Env-Wq 802.43 and RSA 485-A:2; XI-a., define sludge as: “the solid or semisolid material produced by a water and wastewater treatment processes, excluding domestic septage; provided, however, sludge which is disposed of at solid waste facilities permitted by the department shall be considered solid waste and regulated under RSA 149-M. This includes industrial sludge and sludge mixed with another sludge or another material.”

Biosolids are a type of sludge derived from a sewage wastewater treatment facility (WWTF) that meets the standards for **beneficial use** specified by NHDES. This material has received a *Sludge Quality Certification (SQC)*, per NHDES Env-Wq 809 for land application for agricultural purposes.

Beneficial use means “taking advantage of the nutrient content or soil conditioning properties, or both, of quality-certified sludge, by supplying agronomic or soil conditioning benefits, such as the nitrogen, phosphorus, micronutrients, or organic matter needs for crops, forested land, or reclamation by land applying the sludge in accordance with the(se) rules so as to not pose a significant risk to public health or the environment.”

Short paper fiber (SPF) is also used in land application as a soil conditioner. SPF is sludge derived from a pulp or paper mill wastewater treatment facility and must also obtain an SQC prior to being land applied. Hydrosolids are also used as a soil amendment for topsoil blending. Hydrosolids are residuals derived from the drinking water treatment process.

Sludge that is not certified shall not be land applied and must be disposed of at a landfill or other permitted method.

Why permit land application for sludge/biosolids?

Sites receiving Class B biosolids must obtain a Sludge Quality Certificate and a sludge land application site permit. Class B biosolids may have a small number of pathogens present within it compared to a class A biosolids that is further treated thus having less to no pathogens than the class B biosolids.

Land applying sludge/biosolids involves the recycling of nutrients and other beneficial organic matter, which increases sustainability of soil fertility in New Hampshire. Land application of sludge/biosolids must be performed at agronomic rates (not in excess of annual plant/crop nutrient requirements).

A *sludge land application site* is “a contiguous land areas owned by the same person(s), on which quality certified sludge is stockpiled for 8 months or less or land applied, even if the land area is divided by a highway, railroad bed, water body, or boundary of a political subdivision.”

A permitted sludge land application site allows the “...placement of quality-certified sludge on the ground surface for beneficial use, whether or not the material is incorporated or injected into the soil.”

These materials may also be used to improve and/or promote establishment of vegetation on soils that have been severely disturbed, or which are in a poor vegetative state (e.g. gravel pit reclamation), or that otherwise do not support vegetation sufficient to prevent erosion.

Sludge site permits help to ensure that the land application of residuals protects human health and the environment. These permits also allow the department to monitor the site, respond to emerging contaminants, and help protect surface water, groundwater and drinking water.

How do I obtain a permit?

The person or entities proposing to land apply sludge or class B biosolids at a site must be granted approval for a *Sludge Site Permit* and a *Sludge Quality Certificate (SQC)* through the NHDES Wastewater Engineering Bureau’s Residuals Management Section. The permit process requires the applicant to develop and submit a Site Plan and provide supporting data regarding the evaluation of the site for suitability, including existing soils characteristics; proximity to surface waters, threatened or endangered species, designated rivers, groundwater protection areas, and other sensitive receptors and surrounding land uses; etc.

The applicant must also develop and submit a Sludge Site Management Plan with the permit application. This plan needs to include: the proposed method of land application; prior treatment, stockpiling and storage provisions for the material; the “spreadable acreage”; the generator(s) and corresponding SQC numbers for sludge that will be received at the site; the estimated volume of sludge proposed to be land applied; an estimated maximum annual nutrient loading amount of nitrogen or phosphorus, if phosphorus is the limiting nutrient; an odor control plan; a site nutrient management plan per the recommendations of a certified advisor; and the agronomic rate calculations in accordance with 40 CFR Part 503; etc.

If a *Sludge Site Permit* is issued by NHDES, the permit holder must adhere to very specific federal and state regulations and standards, in addition to any applicable local regulations, best management practices, and permit conditions that protect human health and the environment. The permittee is also subject to annual testing and reporting requirements.

How do I obtain additional information?

Additional information related to septage and sludge can be found at the NHDES website on the [Sludge and Septage](#) or [Biosolids](#) pages. You may also contact us via email at SludgeandSeptage@des.nh.gov or call [\(603\) 271-7888](tel:6032717888).