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# ENVIRONMENTAL Fact Sheet

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## Sludge Quality Certification (SQC) Program Requirements

### **What is a Sludge Quality Certification?**

RSA 485A:4 XVI-c established that the New Hampshire Department of Environmental Services (NHDES) shall set chemical quality standards to ensure that sludge applied for beneficial use in the state of New Hampshire does not pose a threat to human health or the environment. The SQC Program was developed for sludge generators to certify that their sludge distributed in bulk (>100 pounds), is acceptable for beneficial use as a soil fertilizer/conditioner for agricultural purposes. The SQC also allows NHDES to document and continually monitor the quality of all treated sludge materials that are being land applied throughout the state.

### **Who needs to apply for Sludge Quality Certification?**

Any public or private treatment facility that generates sludge is eligible to apply for an SQC. Eligible sludge includes: short paper fiber from paper mills, sludge from municipal wastewater treatment facilities, sludge removed from lagoons and residuals from drinking water treatment facilities. A facility may utilize an authorized agent to apply for an SQC on their behalf.

### **Are “Sludge” and “Biosolids” the same thing?**

No, “sludge” is the solid or semi-solid material produced by water and wastewater treatment processes (excluding domestic septage), while “biosolids” are defined by RSA 485-A:2, XXII as “any sludge derived from a sewage wastewater treatment plant that meets the standards for beneficial reuse specified by the department [of Environmental Services].” Biosolids are treated sludge derived from a sanitary source that has obtained an SQC from NHDES for beneficial land application.

### **Is there a fee required with the SQC application?**

If the facility is **not** a political subdivision permitted under RSA 485-A:13, then the applicant must enclose a \$1,000 initial application fee made payable to the “Treasurer-State of NH” with the SQC application.

### **What are the requirements in order for sludge to be Sludge Quality Certified?**

A facility must demonstrate that the sludge generated by the facility consistently meets all state and federal standards to receive an SQC. These standards ensure that the sludge is not hazardous and does not pose a threat to public health or the environment. The Sludge Management Rules, [Env-Wq 809](#), contain all the requirements of the SQC program.

The sludge must also show it can be a benefit for the farm field as a soil fertilizer/conditioner, by providing necessary additional nutrients to meet crop needs. If the sludge to be certified is generated outside of

New Hampshire, it must meet the chemical quality standards of the state of origin, or the New Hampshire standards, whichever is more stringent.

**What standards must sludge meet to obtain a Sludge Quality Certification?**

Sludge must meet both the state (Env-Wq 809) and federal (40 CFR part 503) requirements for beneficial use to obtain an SQC. Additionally, all sludge must meet the most recent NHDES chemical quality standards. These standards may also include screening for certain emerging contaminants. The table below indicates the analytical methods for the required chemical quality screening.

<b>Analytical Methods for obtaining an SQC according to Table 809-02.</b>	
<b>Compound</b>	<b>Analytical Method</b>
Section A – Volatile Organic Compounds (VOCs)	SW846 8000 series
Section B – Semi-Volatile Organic Compounds (SVOCs)	SW846 8000 series
Section C – Metals	SW846 6000/7000 series
Section D – Polychlorinated Biphenyls (PCBs)	SW846 8000 series
Section E – Additional Analyses:	
pH	SM-4500-H
Percent (%) Solids	SM-2540-G
Nitrate-Nitrite	SM-4500-NO <sub>3</sub> , SW846-9210, EPA 353 3000 series
Total Kjeldalh Nitrogen	SM-4500-Norg, EPA-351.3
Ammonia Nitrogen	SM-4500-NH <sub>3</sub> , EPA 350
Total Organic Nitrogen	calculation
Potassium	SM-3500-K, SW846 6000/7000 series
Phosphorus	SM-4500-P, EPA 365
Section F – Dioxins	EPA 1613

All sludge/biosolids sampling must be performed according to [“The Wastewater Treatment Plant Operators Guide to Biosolids Sampling Plans”](#) published by the New England Interstate Water Pollution Control Commission, dated September 2006.

**What are Emerging Contaminants?**

Emerging contaminants are manmade chemicals that may be present in the environment, where the risk to human health and the environment is not yet known. NHDES is always monitoring emerging contaminants and works to establish new screening standards within our SQC program to protect human health and the environment.

Currently we are investigating the impacts of chemicals such as per- and polyfluoroalkyl substances (PFASs) that may be present in treated sludge/biosolids, and their impact on soil, surface and groundwater when the material is/has been land applied on farm fields. In 2018, NHDES has screened the sludge/biosolids produced by all current NH SQC holders for PFAS, and has found that New Hampshire sludge tends to be at or below the national averages for these emerging contaminants. NHDES has also determined that NH SQC holders have PFOA and PFOS concentrations below the 500 parts per billion direct contact maximum concentration established by NHDES.

NHDES is also in the process of establishing a groundwater protection standard for PFAS compounds in sludge. Once these standards are established, any sludge that does not meet the standard will no longer be certified or allowed to be distributed for beneficial use until the SQC holder demonstrates they can consistently meet the new standard.

**Are all applications for an SQC approved?**

No, approval of SQC applications is not certain. Only sludge demonstrating a benefit for soil quality and that does not pose a risk to human health or the environment can be approved. NHDES encourages all applicants to have discussions with the NHDES Residuals Management Section before submitting an SQC application for Technical Assistance with the SQC process.

**When does certification expire?**

An SQC expires **five years** from the date it is issued by NHDES. Every five years the SQC holder may apply to renew their SQC for another five-year period.

**What needs to be included in a Sludge Quality Certification application?**

The applicant must include all of the information requested on the [Sludge Quality Certification Application](#). This would include attaching laboratory reports demonstrating the chemical quality of the sludge is acceptable for beneficial use.

**How is sludge tested to verify that the SQC chemical quality standards are consistently being met?**

Prior to making an application for an SQC, sludge generated at a facility must be sampled two (less than 1,600 annual dry tons) to four times (1,600 or more annual dry tons) a minimum of 30 days apart over the course of a year. These samples must be analyzed for the required list of chemicals and the test results submitted to NHDES with the initial SQC application.

Once a facility receives an SQC, its sludge must be periodically sampled and tested. The testing frequency is based on the amount of sludge generated by the facility per Env-Wq 809.07. The sampling frequency ranges from twice per year for smaller facilities, to once per month for larger facilities.

**Is there independent verification of SQC requirements?**

Yes. NHDES periodically takes sludge samples from certified wastewater treatment facilities and from biosolid stockpiles at land application sites. These samples are analyzed at an independent New Hampshire-certified laboratory to verify that all SQC requirements are being met. An annual report of these findings is prepared by NHDES and submitted to the New Hampshire Legislature in accordance with RSA 485A:4 XVI-c.

**What happens if tested sludge does not meet the requirements?**

If the test results submitted with an initial SQC application do not meet state and federal rules, the application is denied. Applicants are encouraged to hold off applying for an SQC until it can demonstrate its sludge can consistently meet the standards.

If test results from the periodic sampling of sludge at certified facilities demonstrate that requirements are not being met, distribution for land application of sludge from that facility is halted by NHDES. Land application may only restart after a series of new samples are collected, and the submitted results are reviewed and approved by NHDES.

**What needs to be regularly submitted to NHDES in order to maintain an SQC?**

Each SQC holder must prepare and submit an annual report to NHDES by the last business day of January for the prior year, containing information about the facility and certified sludge, including:

- The quantity of sludge generated.
- The results of all required testing for the prior year.
- The location and amount of biosolids recycled/beneficially used.

The annual report must also include a \$500 fee made payable to the “Treasurer-State of NH,” as mandated by RSA 485 A-4 XVI-c (b).

**For more information**

The NHDES Residuals Management Section can be reached by phone at (603) 271-2818.