

NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

CHAPTER Env-Dw 700 WATER QUALITY: STANDARDS, MONITORING, TREATMENT, COMPLIANCE,  
AND REPORTING

Statutory Authority: RSA 485:3

~~~~~ See separate document for Revision Notes ~~~~~

PART Env-Dw 707 GENERAL MONITORING REQUIREMENTS; LABORATORY ANALYTICAL  
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PART Env-Dw 707 GENERAL MONITORING REQUIREMENTS; LABORATORY ANALYTICAL  
METHODS

Env-Dw 707.01 Purpose. The purpose of this part is to establish generally-applicable requirements for monitoring by public water systems (PWS), including sampling and analysis, reporting, and compliance with water quality standards.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 707.02 Adjustments to Monitoring Requirements.

(a) The department shall require more frequent monitoring than that specified in Env-Dw 708 through Env-Dw 713 if the department determines that additional monitoring is necessary to confirm that a water source is capable of consistently producing an adequate supply of water that meets drinking water quality standards, because:

- (1) The data submitted for any given parameter is inconsistent with the preponderance of data elements submitted for that water source for the same parameter;
- (2) The data submitted for the water source exhibits constituents from known or unknown sources of contamination;
- (3) Potential or known sources of contamination are located in the source water protection area of the water source;
- (4) Treatment installed to treat water that exceeds an MCL has not consistently met design standards; or
- (5) The data submitted after treatment indicates inconsistent contaminant removal is occurring.

(b) If sample results indicate the presence of contaminants for which MCLs are not listed in Env-Dw 702 through Env-Dw 706 but which are included in the ambient groundwater quality standards (AGQS) specified in Env-Or 603.03, the PWS shall comply with the AGQS specified in Env-Or 603.03.

(c) The department shall review the monitoring requirements during each inspection or sanitary survey to determine whether the sampling point(s) and frequency meet all monitoring requirements. If the sampling point(s) and frequency do not meet all monitoring requirements, the department shall adjust the sampling point(s) and frequency to meet them.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 707.03 Monitoring of Consecutive Public Water Systems.

(a) Subject to (b), below, if a PWS supplies water to one or more other public water systems, the department shall eliminate the requirements imposed on the consecutive systems by Env-Dw 708 through Env-Dw 713.

(b) Each consecutive system shall monitor for bacterial contaminants as specified in Env-Dw 709 and for corrosion control parameters as specified in Env-Dw 714, in accordance with the schedule issued by the department pursuant to Env-Dw 708.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 707.04 Validity of Laboratory Results.

(a) The department shall not use sampling or laboratory results if the department determines that the data is:

- (1) From an obvious sampling or laboratory error from known errors in collection, processing, or transcription;
- (2) A technical impossibility;
- (3) Inconsistent with the preponderance of data elements for the same parameter from the same source or system; or
- (4) From a laboratory not accredited in accordance with Env-C 300 when such accreditation is required for the particular analysis.

(b) Unless otherwise noted, any result that is below the detection limit of a test method approved for use pursuant to Env-Dw 707.07 shall be calculated as zero for the purpose of determining compliance.

(c) All chemical concentration data submitted to the department for compliance purposes shall be reported in the same units used for the specified MCL, MCLG, SMCL, or MRDL, as applicable.

(d) If sample results are not acceptable based on the criteria in (a), above, the owner shall collect a replacement sample within 7 days of notification.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 707.05 Additional Sampling. The department shall require additional samples to be collected for:

(a) Any samples exceeding the applicable MCL, SMCL, or MRDL specified in Env-Dw 702 through Env-Dw 706; and

(b) Any samples for which the results are invalid as specified in Env-Dw 707.04(a).

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 707.06 Sample Analysis Methods; Sample Collection Protocol; Approval of Alternative Methods.

(a) Acceptable laboratory methods, detection limits, and sample collection protocols shall be those specified in 40 CFR 141, 142, or 143, as applicable.

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(b) The owner of a PWS having its own laboratory or the owner of a laboratory used by one or more PWS who wishes to use a method other than one specified in (a), above, shall obtain written permission from the department as specified in (c) through (e), below, prior to using any alternative method.

(c) The owner shall submit a request to use an alternative method in writing to the program manager of the NH environmental laboratory accreditation program (NH ELAP) at the address specified in Env-C 303.01(a).

(d) The request shall include all relevant information, including:

- (1) The name and PWS identifier of each PWS for which the alternative method would be used;
- (2) The reason(s) for requesting approval of the alternate method; and
- (3) Analytical data demonstrating the precision and accuracy of the alternative method as it relates to the determination of compliance with the applicable standard.

(e) An alternative technique shall be approved only if the NH ELAP program manager, with the concurrence of the administrator of the U.S. EPA, determines that the method is equivalent to or better than the prescribed test in both precision and accuracy as it relates to the determination of compliance with the applicable standard.

(f) The use of an alternative analytical technique shall not decrease the frequency of monitoring required by this chapter.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 707.07 Accredited Laboratory Required.

(a) Subject to (c) and (d), below, compliance determinations for the contaminant categories listed in (b), below, shall be based on data provided by a laboratory accredited pursuant to Env-C 300 for the test being conducted.

(b) The contaminant categories covered by (a), above, shall be as follows:

- (1) Microbiological, as specified in Env-Dw 702;
- (2) Radiological, as specified in Env-Dw 703;
- (3) Inorganics, as specified in Env-Dw 704;
- (4) Organics, as specified in Env-Dw 705;
- (5) Secondaries, as specified in Env-Dw 706;
- (6) Lead and copper, as specified in Env-Dw 714;
- (7) Disinfection residuals, byproducts, and byproduct precursors, as specified in Env-Dw 715;
- (8) Filtration, disinfection, waste recycling, as specified in Env-Dw 716; and
- (9) Groundwater monitoring, as specified in Env-Dw 717.

(c) Samples for turbidity, chlorine residual, temperature, and pH may be performed by any individual qualified to perform the test.

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(d) If a sample is analyzed by a method approved pursuant to Env-Dw 707.07, the laboratory performing the analysis need not be accredited by NH ELAP.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 707.08 Additional Sampling by Department. Nothing in this chapter shall be construed to preclude the department, or any duly designated representative of the department, from:

(a) Collecting samples; or

(b) Using the results from such samples to determine compliance by a PWS with the applicable requirements of this chapter.

Source. (See Revision Note #1) #9700, eff 5-1-10

**APPENDIX A - STATUTES/REGULATIONS IMPLEMENTED**

| <b>Rule Section(s)</b>             | <b>State Statute(s) Implemented</b> | <b>Federal Regulation(s) Implemented</b>           |
|------------------------------------|-------------------------------------|----------------------------------------------------|
| Env-Dw 707.01                      | RSA 485:3, I                        |                                                    |
| Env-Dw 707.02(a)                   | RSA 485:3, I (c)                    | 40 CFR 141 Subpart C                               |
| Env-Dw 707.02(b)                   | RSA 485:3, I (c); 485:35            | 40 CFR 141 101                                     |
| Env-Dw 707.02 (c)                  | RSA 485:3, I                        | 40 CFR 141 Subparts C & Y                          |
| Env-Dw 707.03                      | RSA 485:3, I                        | 40 CFR 141.29                                      |
| Env-Dw 707.04 - 707.05             | RSA 485:3, I                        |                                                    |
| Env-Dw 707.04(d)                   | RSA 485:3, I                        | Env-Dw 707.04(d)                                   |
| Env-Dw 707.06 - 707.08             | RSA 485:3, I                        |                                                    |
| Env-Dw 707.06 (a), (d) intro & (1) | RSA 485:3, I                        | 40 CFR 141, 142, & 143;<br>40 CFR 141.852(a) & (c) |
| Env-Dw 707.07(b)                   | RSA 485:3, I                        | 40 CFR 141.28; 40 CFR 141.852(b)                   |

**APPENDIX B - FEDERAL DEFINITIONS**

**40 CFR §141.2**

*Coagulation* means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.

*Compliance cycle* means the nine-year calendar year cycle during which public water systems must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar year cycle begins January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011 and ends December 31, 2019.

*Compliance period* means a three-year calendar period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998, the third from January 1, 1999 to December 31, 2001.

*Conventional filtration treatment* means a series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal.

*Corrosion inhibitor* means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

*Direct filtration* means a series of processes including coagulation and filtration but excluding sedimentation resulting in substantial particulate removal.

*Disinfection* means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.

*Domestic or other non-distribution system plumbing problem* means a coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which a coliform-positive sample was taken.

*Dose equivalent* means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified the International Commission on Radiological Units and Measurements (ICRU).

*Flocculation* means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.

*Ground-water under the direct influence of surface water (GWUDI)* means any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions.

*Haloacetic acids (five) (HAA5)* mean the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to 2 significant figures after addition.

*Initial compliance period* means the first full three-year compliance period which begins at least 18 months after promulgation, except for contaminants listed at §141.61(a)(19)-(21), (c) (19)-(33), and § 141.62(b)(11)-(15), initial compliance period means the first full three-year compliance period after promulgation for systems with 150 or more service connections (January 1993-December 1995), and first full three-year compliance period after the effective date of the regulation (January 1996-December 1998) for systems having fewer than 150 service connections.

*Large water system*, for the purpose of subpart I of this part only, means a water system that serves more than 50,000 persons.

*Lead service line* means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line.

*Legionella* means a genus of bacteria, some species of which have caused a type of pneumonia called legionnaires disease.

*Level 1 assessment* is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. It is conducted by the system operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g. whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

*Level 2 assessment* is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 2 assessment provides a more detailed examination of the system (including the system's monitoring and operational practices) than does a Level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. It is conducted by an individual approved by the State, which may include the system operator. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source

and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. The system must comply with any expedited actions or additional actions required by the State in the case of an E. coli MCL violation.

*Man-made beta particle and photon emitters* mean all radionuclides emitting beta particles and/or photons listed in Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, NBS Handbook 69, except the daughter products of thorium-232, uranium-235 and uranium-238.

*Maximum residual disinfectant level (MRDL)* means a level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.

*Medium-size water system*, for the purpose of subpart I of this part only, means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.

*Near the first service connection* means at one of the 20 percent of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.

*Point-of-entry treatment device" (POE)* means a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

*Point-of-use treatment device (POU)* means a treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.

*Repeat compliance period* means any subsequent compliance period after the initial compliance period.

*Residual disinfectant concentration ("C" in CT calculations)* means the concentration of disinfectant measured in mg/l in a representative sample of water.

*Sedimentation* means a process for removal of solids before filtration by gravity or separation.

*Small water system*, for the purpose of subpart I of this part only, means a water system that serves 3,300 persons or fewer.

*Surface water* means all water which is open to the atmosphere and subject to surface runoff.

*Too numerous to count* means that the total number of bacterial colonies exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.

*Virus* means a virus of fecal origin which is infectious to humans by waterborne transmission.

**40 CFR §141.91 Recordkeeping requirements:**

“Any system subject to the requirements of this subpart shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, State determinations, and any other information required by §§141.81 through 141.88. Each water system shall retain the records required by this section for no fewer than 12 years.”