

# NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

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### REVISION NOTE #4:

Document #9859, effective 2-8-11, adopted rules in a new Part Env-Dw 714, which was intended to replace the former rules in Part Env-Ws 381 entitled “Corrosion Control Treatment, Lead and Copper Action Levels.” The former rules Env-Ws 381 expired 1-31-11.

Part Env-Dw 714 in Document #9859 replaced all prior filings for the former rules. The prior filings for the former rules Env-Ws 381, beginning with Document #5422, eff 6-22-92, include the following documents:

#5422, eff 6-22-92

#5873, eff 7-26-94

#6521, eff 6-4-97

#7734, eff 8-2-02

#8351, eff 5-14-05

#9598, eff 11-21-09

#9757, INTERIM, eff 8-2-10, EXPIRED 1-31-11

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PART Env-Dw 714 CONTROL OF LEAD AND COPPER

Statutory Authority: RSA 485:2, V

Env-Dw 714.01 Purpose and Applicability.

(a) The purpose of the rules in this part is to implement 40 CFR 141 Subpart I, Control of Lead and Copper, by establishing a treatment technique that includes requirements for corrosion control treatment, source water treatment, lead service line replacement, and public education, as specified in 40 CFR 141 §§80-91, also called Subpart I, which, pursuant to 40 CFR §141.1, constitute the national primary drinking water requirements for lead and copper. The requirements in this part are triggered, in some cases, by the level of lead or copper, or both, exceeding the lead action level or copper action level, or both, as applicable, when measured in samples collected at consumers' water taps.

(b) The requirements of this part shall apply to every public water system (PWS) that is a community water system (CWS) or a non-transient non-community water system (NTNC), collectively referred to in this part as a water system.

Source. #9859, eff 2-8-11 (See Revision Note (RN) #4 on pg. i); ss by #12181, eff 5-23-17

Env-Dw 714.02 Definitions.

(a) As used in this part, the following terms shall be defined as follows:

(1) "Date of action level exceedance" means the date the department sends notice to the water system O/O, which shows that the lead action level is exceeded, the copper action level is exceeded, or both action levels are exceeded;

(2) "Optimal corrosion control treatment" means "optimal corrosion control treatment" as defined in 40 CFR 141.2, 7-1-16, as reprinted in Appendix B;

(3) "Optimal water quality parameters" means the water quality parameters and ranges required to maintain corrosion control treatment;

(4) "Reduced water quality monitoring" means reduced monitoring as described in 40 CFR §141.87(e);

(5) "Routine water quality monitoring" means the monitoring required after an approved corrosion control treatment is installed;

(6) "Source water sample" means a sample collected at every entry point to the distribution system of groundwater or surface water, which is representative of the source(s) after treatment, if any.

(b) The following terms used in this part shall be as defined in 40 CFR §141.2, 7-1-16 edition, reprinted in Appendix B:

(1) "Large water system";

(2) "Medium-sized water system"; and

(3) "Small water system".

(c) Where 40 CFR 141 provisions are adopted by reference in this part, terms used in such provisions shall be as defined in 40 CFR §141.2, 7-1-16 edition, unless otherwise defined in this part.

(d) All other terms shall be as defined in RSA 485 or Env-Dw 100.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

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Env-Dw 714.03 Exceedance of Lead Action Level; Exceedance of Copper Action Level.

(a) As specified in 40 CFR §141.80(c)(1), 7-1-16 edition, the lead action level shall be deemed exceeded if the concentration of lead in more than 10% of tap water samples collected in accordance with Env-Dw 714.08 during any monitoring period is greater than 0.015 mg/L, that is, if the 90th percentile as computed pursuant to (c), below, is greater than 0.015 mg/L.

(b) As specified in 40 CFR §141.80(c)(2), 7-1-16 edition, the copper action level shall be deemed exceeded if the concentration of copper in more than 10% of tap water samples collected in accordance with Env-Dw 714.08 during any monitoring period is greater than 1.3 mg/L, that is, if the 90th percentile as computed pursuant to (c), below, is greater than 1.3 mg/L.

(c) The 90th percentile lead and copper levels shall be computed as specified in 40 CFR §141.80(c)(3)(i) through (v), 7-1-16 edition.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

Env-Dw 714.04 Requirements for Corrosion Control and Source Water Treatment and Monitoring. In addition to any other requirements in this part that apply:

(a) The O/O of each large water system that is subject to this part shall comply with the applicable source water monitoring and treatment, tap water monitoring, water quality parameter monitoring and treatment requirements, and corrosion control treatment requirements specified in 40 CFR §141.81 through §141.83 and 40 CFR §141.86 through §141.88, 7-1-16 edition.

(b) The O/O of each small or medium-sized water system that is subject to this part, at which the lead and/or copper action level is exceeded, shall comply with the applicable source water monitoring and treatment, tap water monitoring, water quality parameter monitoring and treatment requirements, and corrosion control treatment requirements specified in 40 CFR §141.81 through §141.83 and 40 CFR §141.86 through §141.88, 7-1-16 edition, subject to the following:

- (1) The water system O/O shall perform corrosion control studies within 12 months of the date of action level exceedance;
- (2) The water system O/O shall demonstrate that optimized corrosion control treatment has been achieved within 24 months of the date of action level exceedance; and
- (3) As specified in Env-Dw 714.08, the water system O/O shall conduct tap water monitoring in accordance with 40 CFR §141.86, whether or not a lead and/or copper action level has been exceeded, but only when the provisions of 40 CFR §141.86 so require.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

Env-Dw 714.05 Lead Service Line Replacement Requirements. The O/O of any water system that is subject to this part at which the lead action level is still exceeded after implementation of applicable corrosion control and source water treatment requirements shall comply with the lead service line replacement requirements specified in 40 CFR §141.84, 7-1-16 edition.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

Env-Dw 714.06 Customer Notification and Public Education Requirements.

(a) The O/O of a water system that is subject to this part shall:

- (1) Comply with the lead tap water monitoring results notification and other requirements of 40 CFR §141.85, 7-1-16 edition; and

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(2) Provide documentation to the department of consumer notification as specified in Env-Dw 714.07.

(b) The O/O of a water system that is subject to this part at which the lead action level is exceeded shall comply with the public education requirements as specified in 40 CFR §141.85, 7-1-16 edition, except that public education deadlines shall be calculated from the date of action level exceedance.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

Env-Dw 714.07 Reporting Requirements. The O/O of a water system that is subject to this part shall comply with the reporting requirements specified in 40 CFR §141.90, 7-1-16 edition.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

Env-Dw 714.08 Monitoring Requirements for Lead and Copper in Tap Water. The O/O of a water system that is subject to this part shall comply with the tap water monitoring requirements for lead and copper specified in 40 CFR §141.86, 7-1-16 edition, provided that the samples shall be taken at the sampling points specified in the sampling schedule established pursuant to Env-Dw 708.01 through Env-Dw 708.04.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

Env-Dw 714.09 Monitoring Requirements for Water Quality Parameters.

(a) The O/O of a water system that is subject to this part shall comply with the monitoring requirements for water quality parameters specified in 40 CFR §141.87, 7-1-16 edition, as modified by Table 714-1, below, subject to the notes in (b), below:

Table 714-1: Summary of Monitoring Requirements for Water Quality Parameters

Monitoring period; Location	Parameters	Frequency
Initial water quality monitoring:		
- Taps - Entry point(s) to distribution system	- pH - alkalinity - conductivity - water temperature - calcium <sup>A</sup> - orthophosphate <sup>B</sup> - silica <sup>C</sup>	As specified in 40 CFR §141.87, except that the frequency shall be twice in 90 days after the date of action level exceedance
Routine water quality monitoring:		
- Taps	- pH - alkalinity - calcium <sup>A</sup> - orthophosphate <sup>B</sup> - silica <sup>C</sup>	As specified in 40 CFR §141.87, except that the frequency shall be every 3 months for parameters to be reported twice during each monitoring period
- Entry point(s) to distribution system	- pH - alkalinity <sup>D</sup> - inhibitor <sup>E</sup>	No less frequently than every 2 weeks

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Monitoring period; Location	Parameters	Frequency
Optimal water quality parameters:		
- Taps	- pH - alkalinity - calcium <sup>A</sup> - orthophosphate <sup>B</sup> - silica <sup>C</sup>	Every 6 months
- Entry point(s) to distribution system	- pH - alkalinity <sup>D</sup> - inhibitor <sup>E</sup>	No less frequently than every 2 weeks <sup>F</sup>
Reduced water quality monitoring:		
- Taps	- pH - alkalinity - calcium <sup>A</sup> - orthophosphate <sup>B</sup> - silica <sup>C</sup>	Every 6 months, annually or every 3 years; reduced number of sites
- Entry point(s) to distribution system	- pH - alkalinity <sup>D</sup> - inhibitor <sup>E</sup>	No reductions; continues no less frequently than every 2 weeks <sup>F</sup>

(b) The following notes shall apply to Table 714-1:

- (1) "A" means that calcium analysis is required only if calcium carbonate stabilization is used as part of corrosion control;
- (2) "B" means that orthophosphate analysis is required only if an inhibitor containing a phosphate compound is used;
- (3) "C" means that silica analysis is required only if an inhibitor containing a silicate compound is used;
- (4) "D" means that analysis of the dosage rate of the chemical used to adjust alkalinity and the alkalinity concentration is required only if alkalinity is adjusted as part of corrosion control;
- (5) "E" means that analysis of the dosage rate of the inhibitor used and the concentration of orthophosphate or silica, as applicable, is required only if a corrosion inhibitor is used as part of corrosion control; and
- (6) "F" means that the system O/O shall maintain a log which identifies, for each sample taken, the date the sample was taken, the sampling location, and the result.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

Env-Dw 714.10 Monitoring Requirements for Lead and Copper in Source Water. The O/O of a water system that is subject to this part shall:

(a) Comply with the monitoring requirements for lead and copper in source water at every entry point to the distribution system as specified in 40 CFR §141.88, 7-1-16 edition; and

(b) Collect and submit to the department a confirmation sample for any sampling location for which the monitoring result shows either lead at or above 0.015 mg/L or copper at or above 1.3 mg/L, or both.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

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Env-Dw 714.11 Analytical Requirements. All analyses required by this part shall be done in compliance with the analytical requirements specified in 40 CFR §141.89, 7-1-16 edition.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

Env-Dw 714.12 Recordkeeping Requirements. The O/O of a water system that is subject to this part shall:

(a) Comply with the recordkeeping requirements of 40 CFR §141.91, 7-1-16 edition, as reprinted in Appendix B; and

(b) Maintain monthly optimized water quality parameter logs for the life of the corrosion control treatment and make such logs available to the department for review.

Source. #9859, eff 2-8-11 (See RN #4 on pg. i); ss by #12181, eff 5-23-17

**APPENDIX A - STATUTES/REGULATIONS IMPLEMENTED**

<b>Rule Section(s)</b>	<b>State Statute(s) Implemented</b>	<b>Federal Regulation(s) Implemented</b>
PART Env-Dw 714	RSA 485:1; RSA 485:3, I & VII	40 CFR 141 Subpart I (§§80-91)
Env-Dw 714.01	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.1; 40 CFR §141.80(a)-(b)
Env-Dw 714.02	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.2
Env-Dw 714.03	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.80(c)
Env-Dw 714.04	RSA 485:1; RSA 485:3, I & VII	40 CFR §§141.81 - 141.83; §§141.86 - 141.88
Env-Dw 714.05	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.84
Env-Dw 714.06	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.85
Env-Dw 714.07	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.90
Env-Dw 714.08	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.86
Env-Dw 714.09	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.87
Env-Dw 714.10	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.88
Env-Dw 714.11	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.89
Env-Dw 714.12	RSA 485:1; RSA 485:3, I & VII	40 CFR §141.91

**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.

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*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

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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."