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# ENVIRONMENTAL Fact Sheet

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## Overview of the Lead and Copper Rule

Lead and copper enter drinking water primarily through plumbing materials. Exposure to lead and copper may cause health problems ranging from stomach distress to brain damage. On June 7, 1991, EPA published a regulation to control lead and copper in drinking water, also known as the Lead and Copper Rule (LCR).

The LCR requires systems to monitor drinking water at customers' taps. If lead concentrations exceed an action level of 0.015 milligrams per liter (mg/L) or copper concentrations exceed an action level of 1.3 mg/L in more than 10 percent of customer taps sampled, the system must undertake additional actions to control corrosion in the pipes of the distribution system. If the action level for lead is exceeded, the system must also inform the public about steps they should take to protect their health and may have to replace lead service lines under their control.

New Hampshire adopted the federal rule including its revisions in 2000 and 2007 (40 CFR 141 Subpart I) by reference in February 2011. New Hampshire's rule is titled "Env-Dw 714 Control of Lead and Copper."

### Lead and Copper Monitoring Requirements

Water systems must complete a materials evaluation of their distribution system and/or review other information to target homes that are at high risk of lead and/or copper contamination. Water systems are expected to use all available information on lead, copper, and galvanized steel when conducting a distribution system materials evaluation. The selection of monitoring sites is based on the level of risk presented by the materials within the system as follows:

Level of Risk (called "Tier")	Piping and Fixtures
Tier 1	<i>Single-family structures</i> containing copper pipes with lead solder installed after 1982 but before 1988, or containing lead pipes or are served by lead service lines.
Tier 2	<i>Buildings including multiple-family structures</i> containing copper pipes with lead solder installed after 1982 but before 1988, or are served by lead service lines.
Tier 3	<i>Single-family structures</i> containing copper pipes with lead solder installed before 1983.

*Number of Samples:* Monitoring is to be conducted at the tap in these locations, with the number of tap-sampling sites based on the population served as shown in the table below. One sample is required at each site.

<b>Number of Monitoring Sites Required Based on Population Served</b>	
<b>System Size (Population Served)</b>	<b>Number of Sampling Taps for Lead and Copper</b>
>100,000	100
10,001 – 100,000	60
3,301 – 10,000	40
501 – 3,300	20
101 – 500	10
< 100	5

*Frequency of Monitoring:* The required monitoring frequency for any system begins initially with samples collected for two consecutive six-month periods. Reduced monitoring frequency is allowed as follows:

- Any water system that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by DES may reduce the frequency of monitoring to once per year.
- Small or medium-size water systems that meet the lead and copper action levels during three consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three years.
- Any water system that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by DES during three consecutive years of monitoring may reduce the frequency of monitoring from annually to once every three years if it receives written approval from the department.
- *Nine-Year Frequency Full Waiver:* Small systems may apply for a waiver to reduce monitoring to once every nine years if they can meet the following criteria:
  - Demonstrate that the distribution system and service lines and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing materials and/or copper-containing materials.
  - Provide certification and supporting documentation to DES that the system is free of all lead-containing materials, as follows:
    - Distribution system contains no plastic pipes which contain lead plasticizers or plastic service lines which contain lead plasticizers; and
    - Distribution system is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fittings and fixtures unless such fixtures meet the specifications of any standard established pursuant to 42 U.S. C. 300g-6(e).
  - Provide certification and supporting documentation to DES that the system is free of all copper pipe or copper service lines.
  - Demonstrate that the 90<sup>th</sup> percentile lead level does not exceed 0.005 mg/L and the 90<sup>th</sup> percentile copper level does not exceed 0.65 mg/L.

## **2007 LCR Amendment – Customer Notification Requirements**

On September 26, 2007, the Environmental Protection Agency announced a final rule that requires public water systems to provide the tap water monitoring results for lead to owners/occupants of homes, schools or childcare facilities, workplaces, or other non-transient, non-community water system consumers that are part of the water system's monitoring program. All water systems are required to provide:

1. *Customer Notification*: Systems must provide results of lead sampling to each customer (location) where compliance sampling is performed within 30 days of receipt of lab results.
2. *State Certification*: Systems must certify that customer notification was completed within three months from the end of the monitoring period.

Both forms are available at:

<http://des.nh.gov/organization/divisions/water/dwgb/categories/hot.htm>

## **Systems Exceeding Lead and Copper Action Levels**

Any water system exceeding the lead or copper action level will be required to undertake (1) public education for lead in drinking water, and (2) corrosion control treatment steps.

1. **Public Education for Lead in Drinking Water**: Public water systems exceeding the lead action level are required to provide public education materials to inform customers about the health effects of lead and explain what they can do at home, at work, or at school to reduce their exposure. Public education templates can be downloaded at our website <http://des.nh.gov/organization/divisions/water/dwgb/lead.htm>.
2. **Corrosion Control Treatment Steps**: The corrosion control treatment steps are outlined in the table below. The definitions of terms used in the table below are as follows:
  - a. *Initial Water Quality Monitoring*: the monitoring required when a water system exceeds the action level for lead or copper, or both, for the first time, and has not installed corrosion control treatment. (Large systems serving >50,000 must collect this data each time lead and copper samples are collected.)
  - b. *ALE*: Action Level Exceedance.
  - c. *OCCTR*: Optimal Corrosion Control Treatment Report. This report is required to be submitted to the Department to describe the design and specifications of the intended corrosion control treatment for the water system.
  - d. *Routine Water Quality*: the monitoring required after an approved corrosion control treatment is installed.

CORROSION CONTROL TREATMENT STEPS			
	ACTIVITY	WHERE	FREQUENCY OR DURATION
Step 1	Initial water quality monitoring	Taps and entry point to distribution	Two times within 90-day period after ALE
Step 2	Submit OCCTR to DES	-----	Once within six-month period after ALE
Step 3	Select and install treatment; immediately begin routine water quality sampling	Entry point to distribution	Every two weeks until optimized conditions are confirmed
		At least two sample taps in system	Two times within each six-month period after treatment is installed, until optimized conditions are confirmed
Step 4	Collect required rounds of lead/copper samples	Designated sample sites	Two consecutive six-month periods after treatment is optimized
Step 5	<b>All systems:</b> Continue monitoring according to schedule required by DES and maintaining a log of water quality (pH, alkalinity, orthophosphate/silica if used).		

3. Lead Service Line Replacement: Lead service lines that contribute more than 0.015 mg/L to tap water lead levels must be replaced. A system must replace seven percent of its lead lines each year, and must replace all lines within 15 years.

**For Additional Information**

Please contact the Drinking Water and Groundwater Bureau at (603) 271-2513 or [dwgbinfo@des.nh.gov](mailto:dwgbinfo@des.nh.gov) or visit [www.des.nh.gov](http://www.des.nh.gov), click on A-Z List and choose Drinking Water and Groundwater Bureau. All of the bureau's fact sheets are online at <http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/index.htm>.

Note: This fact sheet is accurate as of March 2011. Statutory or regulatory changes or the availability of additional information after this date may render this information inaccurate or incomplete.