

[Governor Cuomo Signs Landmark Legislation to Test Drinking Water in New York Schools for Lead Contamination September 6, 2016](#)

This regulation impacts school districts and BOCES. It does not directly impact private schools or colleges and universities. It requires taking 250 ml first draw samples (after a period of non-use of at least 8 and not more than 18 hours) from all outlets used for drinking or cooking, and analysis by an ELAP lab. If the action level of 15 ppb is exceeded the school will prohibit the use of the outlet until a lead remediation plan has been implemented and the test results indicate lead levels at or below the action level. All covered schools will have initial sampling completed by September 30, 2016 (pre-K – grade 5) or October 31 (grades 6-12), and will then repeat every five years. The rules also have notification requirements.

The DOH Regulation now in effect can be accessed from the press release or [here](#).

NYSED provided initial guidance to the covered schools on 9/16/16 [here](#).

From the Governor's Press Release:

This new legislation requires all school districts in New York State to test potable water for lead contamination, and to develop and implement a lead remediation plan where necessary.

Pursuant to the accompanying regulations, samples collected must be 250 ml and taken from a cold water outlet where the water has been motionless in the pipes for a minimum of 8 hours but not more than 18 hours.

By September 30, 2016, all school buildings serving children in pre-kindergarten through grade five must collect a sample from each identified sampling location for testing. Any schools serving children in grades six through twelve that are not also serving children in younger grades must complete collection of samples by October 31, 2016. For new schools which begin operations after the effective date of this regulation, initial samples must be performed prior to occupancy.

Under the regulations, schools are required to report all lead test results to the state Department of Health via a designated statewide electronic reporting system. If lead levels are detected above 15 parts per billion at any potable water outlet, the school must discontinue use of that outlet, implement a lead remediation plan to mitigate the lead level, and provide building occupants with an adequate alternate supply of water for cooking and drinking.

Schools must report the exceedance to the local health department within one business day. Test results must also be provided in writing to all staff and parents no more than 10 business days after receiving the report. Schools must post the results of all lead testing and any remediation plans on its website as soon as possible but no more than six weeks after the school received the laboratory reports. Once test results indicate that lead levels are below the action level, schools may resume use of the water outlet.

Schools will be required to collect samples every five years, at a minimum, after the initial testing or at a time determined by the Commissioner of Health. All samples will be analyzed by a lab approved by the Department's Environmental Laboratory Approval Program.

Although laws now limit the amount of lead in new plumbing equipment, materials installed before 1986 may contain significant amounts of lead. Federal laws in 1986 required that only “lead-free” materials be used in new plumbing and plumbing fixtures but still allowed certain fixtures with up to 8 percent lead to be labeled “lead free.” Amendments to the Safe Drinking Water Act in 2011 appropriately redefined the meaning of “lead free.” Even so, it’s possible that older plumbing may leach lead into the drinking water.

There is no current mandate for colleges and universities in NYS to test their drinking water for lead or copper, unless they are also a public water system supplier. Given the national news and recent New York State regulations for some schools, many campuses are considering testing their drinking water for lead. The following may provide some assistance in considering a sampling program.

1. Letter from NYS Commissioner of Education June 2, 2016 (K-12)

The Commissioner of Education forwarded a letter from the EPA Regional Administrator to school administrators in June on reducing lead in drinking water and resources for schools (http://www.p12.nysed.gov/facplan/documents/Lead-DrinkingWater-EPAlettertoNYSSuperintendentswAtt_05-26-16.pdf). It strongly supports the 3T approach discussed below.

2. Legislative Approach in NYS for Schools (pre-K to 12)

See above

3. Lead and Copper Rule (public water suppliers)

<https://www.epa.gov/dwreginfo/lead-and-copper-rule>

This rule, also referred to as LCR or 40 CFR Part 141 Subpart I, applies to public water system providers. It addresses water quality supplied to customers. (A public water system provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year. A public water system may be publicly or privately owned. The definition does not include a campus or building who simply buys water for their use from a public water supplier.) It sets up a sampling protocol for public water suppliers and then requires action if the lead concentrations exceed an action level of **15 ppb**, or if copper exceeds an action level of 1.3 ppm, at more than 10% of the customer taps samples. Generally, the provider would need to take additional actions at the treatment facility to control corrosion, and may be required to notify the public. Sample size is one liter and it is taken as a morning first draw from a cold water tap used in a home for drinking and cooking.

4. **3T Approach (preK-12)**

https://www.epa.gov/sites/production/files/2015-09/documents/toolkit_leadschools_guide_3ts_leadschools.pdf

This is the traditional guidance provided to school and daycare centers. The three Ts stand for *Training, Testing, and Telling*. It addresses water quality at the individual outlets that may be used by or for children. The program is not a simple grab-and-analyze approach.

Under this program, the “action level” is based on a result of more than **20 ppb** for a 250 ml first draw sample. The first draw should represent actual use conditions and be after a period of non-use of generally 8 to 18 hours. ***The EPA recommends that water fountains and/or other outlets used for consumption be taken out of service if the lead level exceeds 20 ppb.*** [Note: the September 2016 NYS regulation makes 15 ppb the action level, and requires outlets at facilities subject to the regulation to be removed from service at 15 ppb.]

The EPA provides guidance on identifying the source of the elevated lead level and correcting the situation.

This well considered approach has three major components:

- (1) Assessment and Strategy – development of a plumbing profile and sampling plan
- (2) Conducting Sampling – general sampling procedures and follow up sampling
- (3) Remedies – *routine control measures* (e.g., cleaning and maintenance schedules, use of only cold water for food and beverage prep, running drinking water before use, posting taps that should not be used for drinking); *interim or short term control measures* (e.g., flushing, providing bottled water, shutting off outlets); and *permanent remedies* (e.g., replacement of fixtures, adding filters, and plumbing changes).

The program also provides guidance on informing the public about lead.

20 ppb vs 15 ppb

There are different “action limits” for lead testing results (i.e., 20 ppb vs 15 ppb). **The September 2016 NYS regulations use 15 ppb as an action level for schools under its scope.**

The following adapted EPA documents may clear up some of the confusion in other programs:

It is important to note that the lead testing protocol used by public water systems (e.g., LCR) is aimed at identifying system-wide problems rather than problems at outlets in individual buildings. Moreover, the protocols for sample size and sampling procedures are different. Under the LCR for public water systems, a lead action level of 15 parts per billion (ppb) is established for 1 liter samples taken by public water systems at high-risk residences. If more than 10 percent of the samples at residences exceed 15 ppb, system-wide corrosion control treatment may be necessary. The 15 ppb action level for public water systems is therefore a trigger for treatment rather than an exposure level.

EPA recommends that schools collect 250 mL first-draw samples (i.e., samples of stagnant water before any flushing or use occurs) from water fountains and other outlets used for consumption, and that the water fountains and/or outlets be taken out of service if the lead level exceeded 20 ppb. The sample was designed to pinpoint specific fountains and outlets that require remediation (e.g. water cooler replacement). The school sampling protocol maximizes the likelihood that the highest concentrations of lead are found because the first 250 mL are analyzed for lead after overnight stagnation.

Pre-Stagnation Testing

Pre-Stagnation Flushing is the protocol where you flush the outlet before starting a non-use period prior to obtaining first draw sample.

In February 2016, the EPA published guidance for public water suppliers with respect to testing for LCR compliance. It directs suppliers NOT to conduct pre-stagnation flushing:

Pre-stagnation flushing may potentially lower the lead levels as compared to when it is not practiced. Flushing removes water that may have been in contact with the lead service line for extended periods, which is when lead typically leaches into drinking water. Therefore, EPA recommends that sampling instructions not contain a pre-stagnation flushing step.

In the guidance, the EPA also makes recommendations for the removal and cleaning of aerators (not generally appropriate before sampling), and the use of wide-mouth 1 liter bottles for sample collection. The guidance can be found **here** (https://www.epa.gov/sites/production/files/2016-02/documents/epa_lcr_sampling_memorandum_dated_february_29_2016_508.pdf)

While this guidance is not directly applicable to K-12 or college/university testing of drinking fountains or outlets, NYC schools were criticized for inclusion of pre-stagnation flushing as part of their water testing protocols. For example, here is a New York Times article on the topic: <http://www.nytimes.com/2016/09/01/nyregion/lead-tests-on-new-york-city-schools-water-may-have-masked-scope-of-risk.html?ribbon-ad-idx=5&rref=nyregion&module=Ribbon&version=origin®ion=Header&action=click&contentCollection=N.Y.%20%2F%20Region&pgtype=article>

It is of note that the September 2016 NYS regulations specify that the first draw sample is taken after a period of non-use of at least 8 but not more than 18 hours.

“Lead Free” from Section 1417 of the Safe Drinking Water Act: Prohibition on Use of Lead Pipes, Solder, and Flux

<https://www.epa.gov/dwstandardsregulations/section-1417-safe-drinking-water-act-prohibition-use-lead-pipes-solder-and>

Section 1417 of the Safe Drinking Water Act (SDWA) establishes the definition for “lead free” as a weighted average of 0.25% lead calculated across the wetted surfaces of a pipe, pipe fitting, plumbing fitting, and fixture and 0.2% lead for solder and flux. The Act also provides a methodology for calculating the weighted average of wetted surfaces.

The Act prohibits the “use of any pipe, any pipe or plumbing fitting or fixture, any solder, or any flux, after June 1986, in the installation or repair of (i) any public water system; or (ii) any plumbing in a residential or non-residential facility providing water for human consumption, that is not lead free.”

Additionally there is a prohibition on introducing a pipe, any pipe or plumbing fitting or fixture, any solder, or any flux that is not lead free into commerce; unless the use is for manufacturing or industrial purposes.

The SDWA includes several exemptions from the lead free requirements, specifically for plumbing devices that are used exclusively for nonpotable services, as well as a list of specific products: toilets, bidets, urinals, fill valves, flushometer valves, fire hydrants, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches in diameter or larger.