



The Lead & Copper Drinking Water Protection Act: Testing for Lead in Schools & Daycare Centers Status Report



What Does the Law Require?



Conduct baseline testing at public water systems that provide drinking water to more than one municipality for compliance with state and federal laws, rules and regulations pertaining to lead and copper in drinking water.

What Does the Law Require?



Conduct testing of water at all public schools, pre-K through grade 12, and licensed daycare centers for compliance with state and federal lead and copper standards in drinking water.

What Does the Law Require?



- Report findings to Speaker and Senate President by April 30, 2017.
- Include plan for ensuring compliance going forward.

Baseline Testing of Public Water Systems (PWS)



- 169 public water systems required to comply with the Lead and Copper Rule in Rhode Island.
- Water systems have been regulated for over 20 years for Lead and Copper in Rhode Island.
- We have over 20,000 lead test results in our database.

Compliance Status of Public Water Systems (PWS)



- Monitoring and correction of the lead action levels occurs continually for the 169 PWS
- 7 PWS currently exceed the lead action level:
 - 3 schools/daycare center public water systems (detailed later in the presentation)
 - Abbey Lane Community Association
 - Crest Manufacturing Co.
 - Dean Warehouse Service
 - Providence Water

Compliance Status of Public Water Systems (PWS)



7 PWS are in violation of the Lead and Copper Rule for not meeting monitoring requirements of the Safe Drinking Water Act.

- Lakeview Early Learning Center
- Dean Warehouse Services
- Castle Rock Condominium
- Richmond Water
- Central Beach Fire District
- Paige Associates
- Maple Hill Mobile Home Park

Conduct Testing at Public Schools and Daycare Centers



- Identified available funding.
- Convened stakeholder group.
- Modified contract with URI to assist us with implementation.
- Have begun training school staff and sampling throughout the state.
- Webpage for dissemination of results is under development.



Sampling Protocol

- Designed to begin developing a baseline of school values
- Sampling at least 3 commonly used drinking water outlets
 - Prioritizing
 - Water outlets most often used by children
 - Kitchen faucets
 - Areas used by daycares or pre-schools
 - Additional samples in larger structures or schools with multiple wings or buildings or additions of various ages



Sampling Protocol

- Sampling of larger daycare centers where incidence of child lead poisoning (for any reason) is elevated is also planned.
- All licensed daycare centers must be lead safe. Initial licensure includes a comprehensive lead inspection, which includes a water sample for testing.

Sampling Protocol (continued)



Following the US EPA 3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance

- (Not flushed) samples collected after 8 – 18 hours of stagnation
- First thing (~ 6 - 7 am) Tuesday – Saturday morning (before students and staff start using water)
- Working with school staff to identify appropriate outlets and to collect samples

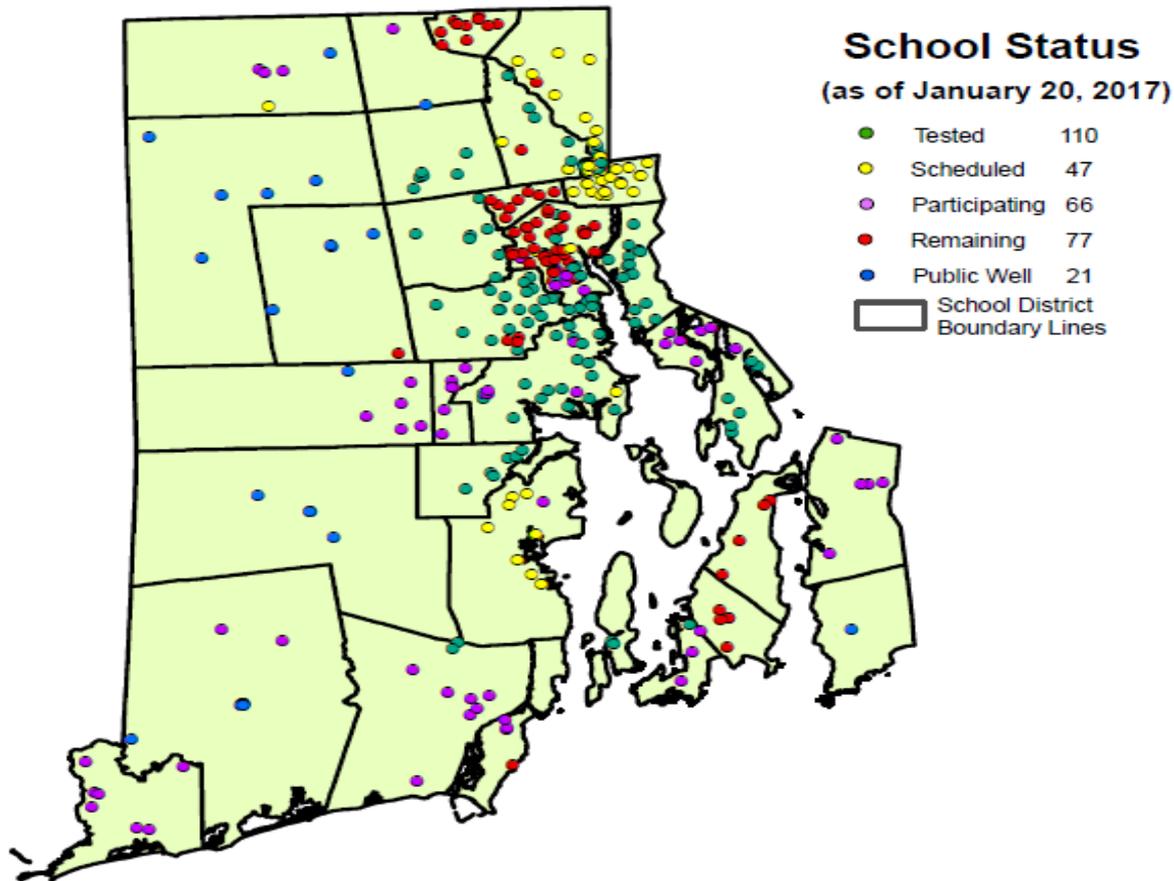
300 Public Schools on Municipal Water



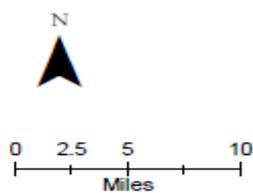
- Completed lead testing on their own (that we know about) - **82**
- Contractor hired to complete lead testing - **17**
- Samples at the lab (as of 1/20/17) – **5 schools**
- Data received from samples collected via this project (as of 1/20/17) – **31 schools**
- Received bottles to sample (as of 1/20/17) - **40**
- Bottles ready to go – **9 schools**
- Waiting to receive bottles - **44**
- Waiting for confirmation from - **9**
- Not responded regarding their participation yet - **54**
- Not planning to participate at this time – **9**

Schools Identified for Lead Testing in Rhode Island

(Includes primarily those schools on municipal water supplies)



This map is a representation of Rhode Island schools' participation in the voluntary lead testing program. As of January, 2017, there are 110 schools that have been tested; 47 have been scheduled for testing; 66 additional schools have agreed to participate and have not yet been scheduled. There remains 77 schools that have not yet committed to participating. An additional 21 identified schools use public wells that are already routinely test for lead.



Date: January 14, 2017
Source: RIGIS, RIDE, URI Extension Office

Public Water System School Compliance Status



- There are 47 schools and daycare centers that are standalone public water systems.
- 42 of these facilities do not exceed the lead action level.
- 5 have had exceedances of the lead action level within the last few years
 - See the corrective actions taken for each scenario

Public Water System School Compliance Status



- Captain Isaac Paine School (PWS ID# 1583823)
 - Just exceeded in September. Returned to standard monitoring, collecting WQP and source samples, public education, Corrective Action Plan due by March 31.
- Charlestown Elementary School (PWS ID# 1647525)
 - Last exceedance was in 2014. Sampled twice in 2015 showed all samples below action level. Returned to annual monitoring in 2016.

Public Water System School Compliance Status



- Greenwich Village Nursery School (PWS ID# 2000135)
 - One anomalous sample in 2016 from a site that had always been low. Returned to standard monitoring, collecting WQP and source samples, public education, Corrective Action Plan by March 31.
- Metcalf Elementary School (PWS ID# 1583819)
 - Exceeded LAL in 2015; returned to standard monitoring. Two rounds of 6-month monitoring OK, but a copper exceedance in the last 6 months.
Corrective Action Plan due by June 30, 2017.

Public Water System School Compliance Status



- West Glocester Elementary School (PWS ID# 1900041)
 - Exceeded lead action level in 2013. OK in the first half of 2016, but exceeded again in the second half. Still on standard monitoring, collecting WQP distribution samples, public education; Corrective Action Plan due by June 30, 2017.

Results (to date – includes values from district tests)



242 samples

- 132 below the level of detection (1 – 5 ppb depending on the lab).
- 89 had lead concentrations of 1 – 14 ppb.
- 21 exceeded the action level of 15 ppb.
 - 7 bathroom faucets
 - 5 nurses' office faucets
 - 7 kitchen faucets
 - 1 cafeteria water fountain
 - 1 office faucet

Follow-Up Actions for Water Sample Lead Testing



- Schools have been notified of results and are following EPA's "3Ts for Reducing Lead in Drinking Waters in Schools" remediation guidance.
- Where sampling was done independent of this project, we are following up to assure appropriate sampling protocols were used.
- Template letters are being sent to schools to assist them in notifying parents
- Test results will be posted on the RIDOH website by March 1st, 2017.

Follow-Up Actions for Water Sample Lead Testing



Strongly Recommended Actions for Sample Results at 15 ppb or Higher:

- Immediately take any fixture out of service that was at or above 15.
- Inform staff and students by placing a sign and/or disconnecting the fixture entirely.
- Follow all the Suggested Actions (next slides) then conduct follow-up sampling at all outlets with high lead levels.
- If opting to provide bottled water be aware that this may not be lead-free as bottled water can have up to 5 ppb lead, so this should be considered a short-term solution.

Follow-Up Actions for Water Sample Lead Testing



Suggested Actions for Sample Results at 1-14 ppb:

EPA's publication "3Ts for Reducing Lead in Drinking Waters in Schools" has detailed information on assessing plumbing and implementing various control measures to reduce elevated lead levels. Using the full 3Ts assessment should be considered if schools had lead results between 1 and 14 ppb, or if all drinking water outlets have not been sampled.

http://web.uri.edu/nemo/files/toolkit_leadschools_guide_3ts_leadschools.pdf

Follow-Up Actions for Water Sample Lead Testing



Suggested Actions for Sample Results at 1-14 ppb:

- Flush the piping to the fixture by opening the tap before the school opens each morning to remove water that has been standing in the pipes overnight.
 - Drinking-water fountains without refrigeration should be run for 30 seconds to 1 minute or until the water gets noticeably colder.
 - Refrigerated water coolers should be run for 15 minutes.
 - Faucets: cold water should be run for 30 seconds to 1 minute or until the water gets noticeably colder.
- Remove and clean faucet aerators or replace them.
- Consider replacing fixture with a lead-free, NSF-approved one.

Follow-Up Actions for Water Sample Lead Testing



Routine Control Actions to Keep Water Lead Levels Low

Ways schools can keep lead levels low:

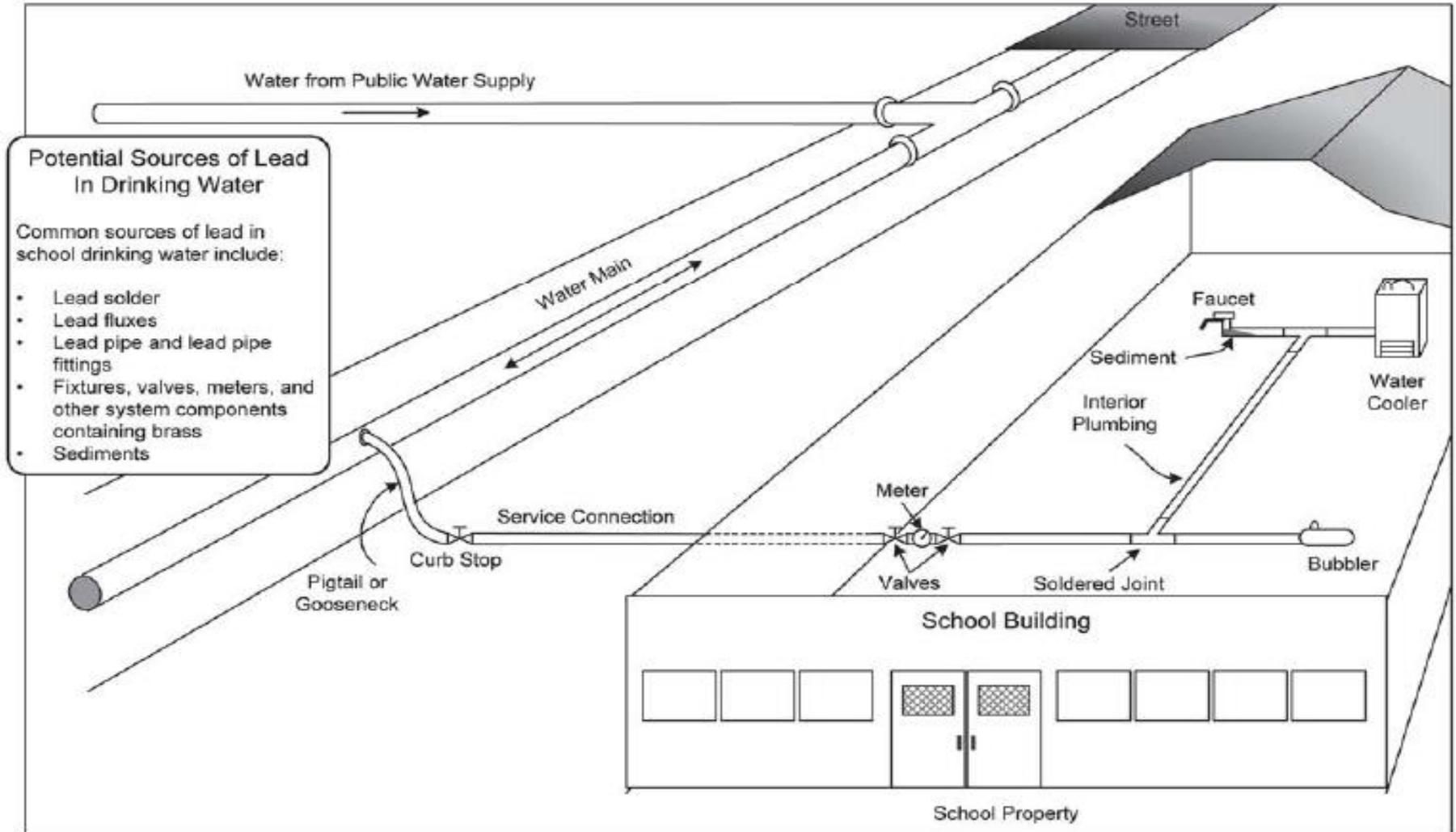
- Create aerator (screen) cleaning schedules for all faucets with accessible aerators to clean debris frequently.
- Use only cold water for food and beverage preparation. Hot water will dissolve lead more quickly than cold water.
- Have school staff flush fixtures regularly, especially after weekends or vacations, or anytime that water may not have been run for longer periods of time.
- Place signs in bathrooms noting that faucets should not be used for drinking water. Use pictures in bathrooms used by younger children.

Next Steps



- Complete testing and obtain testing results from districts that conducted independent testing.
- Evaluate results, provide ongoing guidance on corrective measures.
- Research applicable laws/regulations from other State agencies (i.e. DCYF, RIDE).
- Write report and present to the State House by April 2017.
- Include recommendations for improved compliance.

Exhibit 1.1: Potential Sources of Lead in Schools





June A. Swallow, P.E.
Chief, Center for Drinking Water Quality
401.222.7790
june.swallow@health.ri.gov
www.health.ri.gov

