Lead in Drinking Water at Schools and Early Education and Care Facilities

Current Sources of Child's Lead Exposure

EPA estimates that drinking water can account for 20%+ of total exposure.

Infants on mixed formula can receive 40-60% of their exposure to lead from drinking water.

Established Lead in School/EECF Drinking Water Monitoring

Lead and Copper Rule

- Community PWS are required to collect from at least two schools/EECFs as part of routine monitoring

Lead Contamination Control Act

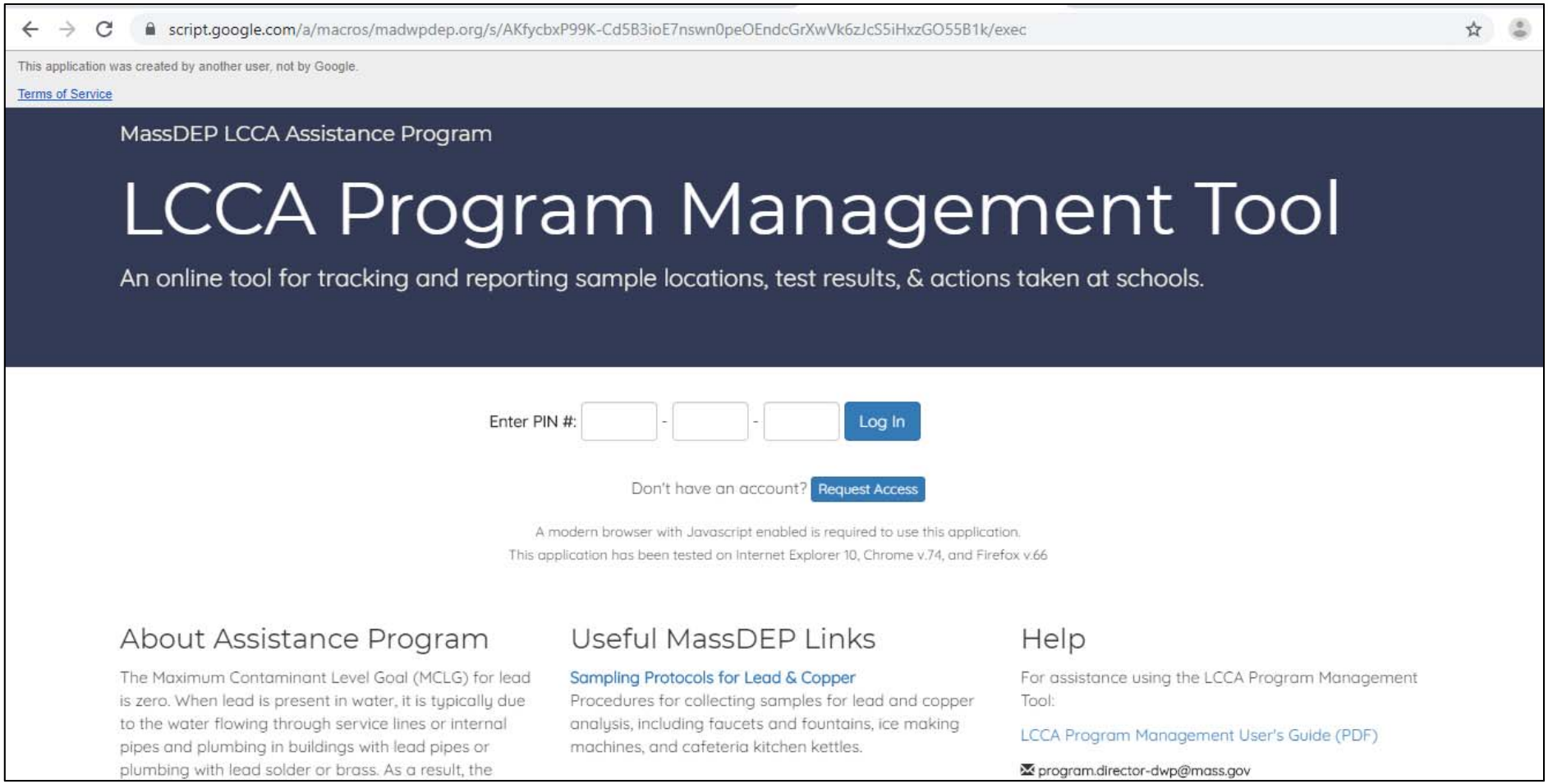
- Voluntary Program for monitoring and remediating lead and copper
- Schools/EECFs contacted every five years about monitoring
- Assist with building mapping, sample plan development, review of results, prioritization of remediation efforts

School/EECF Assistance Program

- Voluntary Funded Program Launched in 2016
  - Goal: assess lead and copper in drinking water at public schools
- Main Components **(free)**:
  - Lead and copper sample collection and analysis
  - Online facility management tool
  - Lead outreach, education, and technical assistance
  - Posting of data online
- Launched again in 2017 and added public early education and child care facilities
- Implemented in partnership with UMass-Amherst with funding from MA Clean Water Trust
- Other partners: Dept of Public Health, Dept of Early Education and Care, Dept of Elementary and Secondary Education, and MA Water Resources Authority

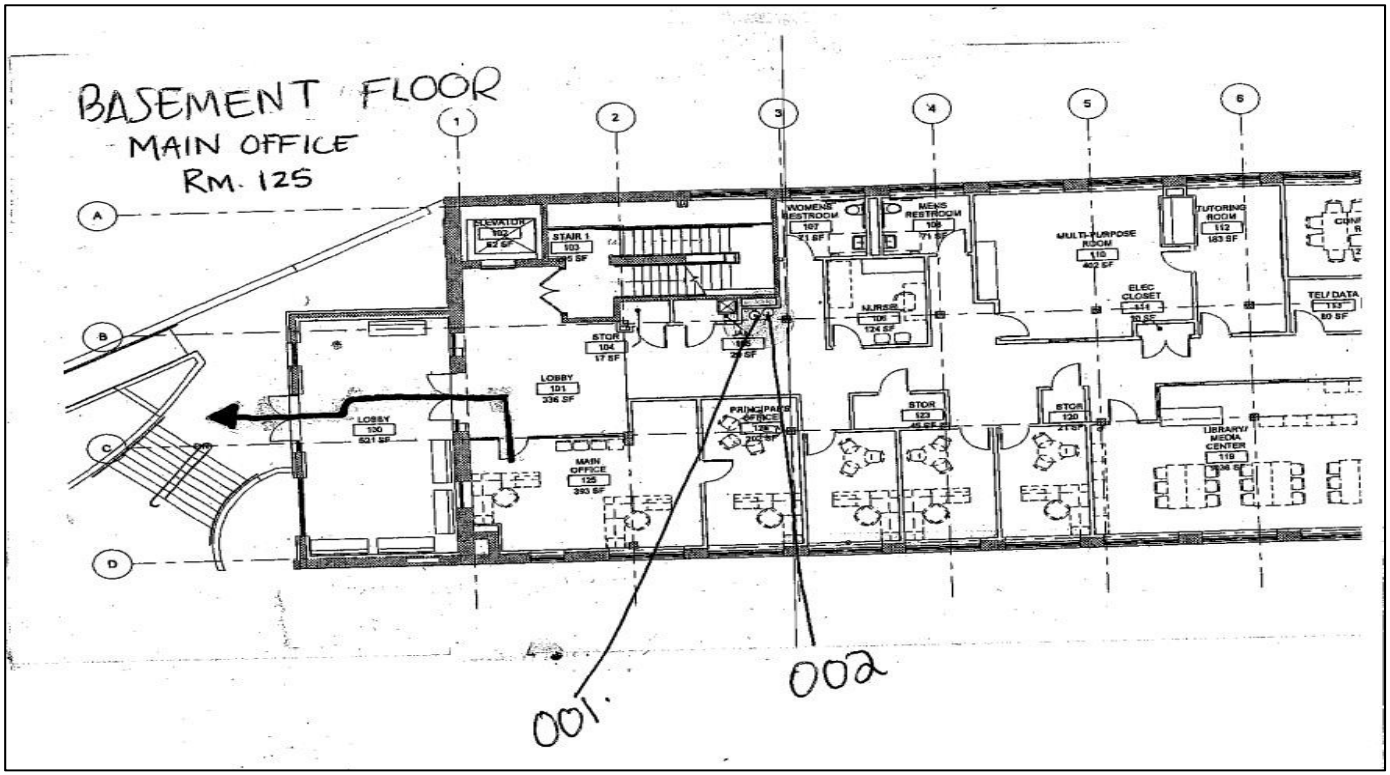
School/EECF Assistance Program

Online Facility Management Tool



School/EECF Assistance Program

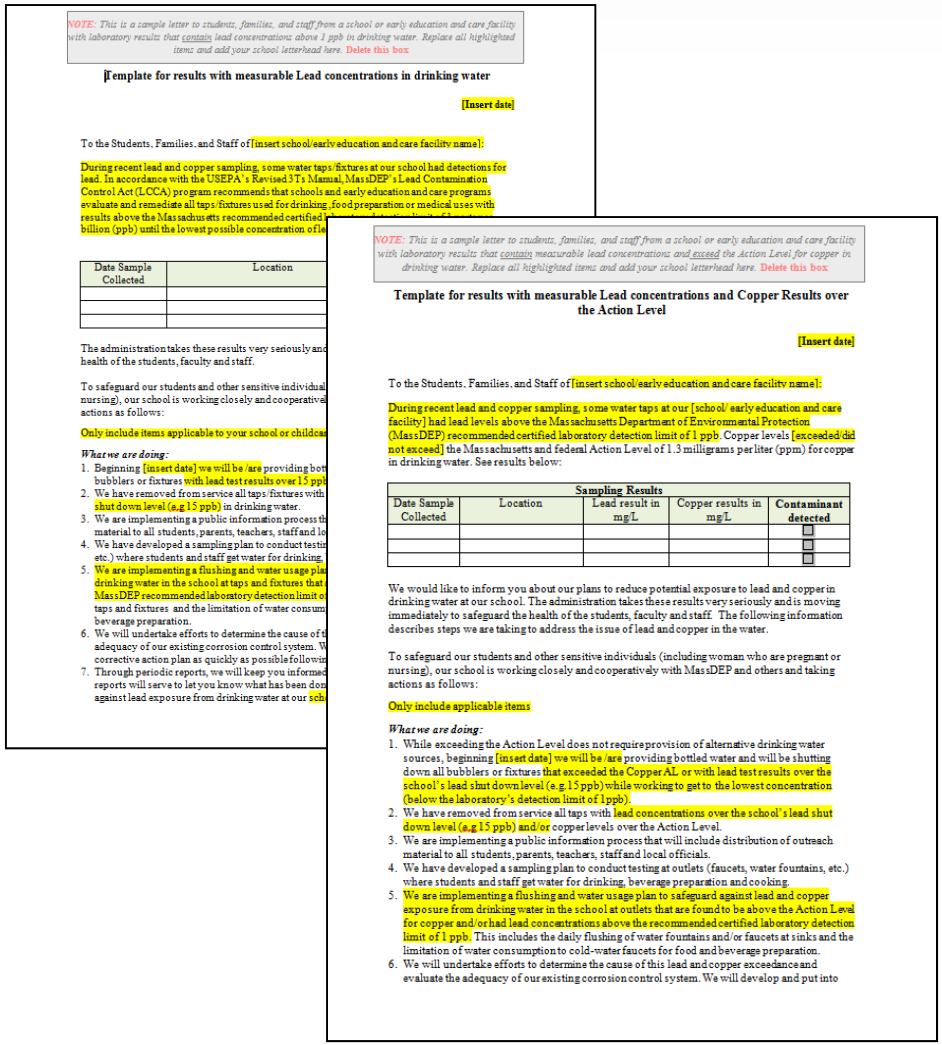
Building Sample Plan Development



School/EECF Assistance Program

Outreach and Education

Template Result Letters



NOTE: *This is a sample letter to students, families, and staff from a school or early education and care facility with laboratory results that contain lead concentrations above 1 ppb in drinking water. Replace all highlighted items and add your school letterhead here.* Delete this box

Template for results with measurable Lead concentrations in drinking water

[Insert date]

To the Students, Families, and Staff of [insert school/early education and care facility name]:

During recent lead and copper sampling, some water taps/fixtures at our school had detections for lead. In accordance with the USEPA's Revised 3Ts Manual, MassDEP's Lead Contamination Control Act (LCCA) program recommends that schools and early education and care programs evaluate and remediate all taps/fixtures used for drinking, food preparation or medical uses with results above the Massachusetts recommended certified l
billion (ppb) until the lowest possible concentration of le

Date Sample Collected	Location

The administration takes these results very seriously and
health of the students, faculty and staff.

To safeguard our students and other sensitive individual
nursing), our school is working closely and cooperative
actions as follows:

Only include items applicable to your school or childca

What we are doing:

1. Beginning [insert date] we will be /are providing bot
   bubblers or fixtures with lead test results over 15 ppb
2. We have removed from service all taps/fixtures with
   shut down level (e.g 15 ppb) in drinking water.
3. We are implementing a public information process th
   material to all students, parents, teachers, staff and lo
4. We have developed a sampling plan to conduct testi
   etc.) where students and staff get water for drinking,
5. We are implementing a flushing and water usage pla
   drinking water in the school at taps and fixtures that
   MassDEP recommended laboratory detection limit o
   taps and fixtures and the limitation of water consum
   beverage preparation.
6. We will undertake efforts to determine the cause of t
   adequacy of our existing corrosion control system. W
   corrective action plan as quickly as possible followin
7. Through periodic reports, we will keep you informed
   reports will serve to let you know what has been don
   against lead exposure from drinking water at our sch

NOTE: *This is a sample letter to students, families, and staff from a school or early education and care facility with laboratory results that contain measurable lead concentrations and exceed the Action Level for copper in drinking water. Replace all highlighted items and add your school letterhead here.* Delete this box

Template for results with measurable Lead concentrations and Copper Results over the Action Level

[Insert date]

To the Students, Families, and Staff of [insert school/early education and care facility name]:

During recent lead and copper sampling, some water taps at our [school/ early education and care facility] had lead levels above the Massachusetts Department of Environmental Protection (MassDEP) recommended certified laboratory detection limit of 1 ppb. Copper levels [exceeded/did not exceed] the Massachusetts and federal Action Level of 1.3 milligrams per liter (ppm) for copper in drinking water. See results below:

Sampling Results				
Date Sample Collected	Location	Lead result in mg/L	Copper results in mg/L	Contaminant detected
				☐
				☐
				☐

We would like to inform you about our plans to reduce potential exposure to lead and copper in drinking water at our school. The administration takes these results very seriously and is moving immediately to safeguard the health of the students, faculty and staff. The following information describes steps we are taking to address the issue of lead and copper in the water.

To safeguard our students and other sensitive individuals (including woman who are pregnant or nursing), our school is working closely and cooperatively with MassDEP and others and taking actions as follows:

Only include applicable items

What we are doing:

1. While exceeding the Action Level does not require provision of alternative drinking water sources, beginning [insert date] we will be /are providing bottled water and will be shutting down all bubblers or fixtures that exceeded the Copper AL or with lead test results over the school's lead shut down level (e.g.15 ppb) while working to get to the lowest concentration (below the laboratory's detection limit of 1 ppb).
2. We have removed from service all taps with lead concentrations over the school's lead shut down level (e.g 15 ppb) and/or copper levels over the Action Level.
3. We are implementing a public information process that will include distribution of outreach material to all students, parents, teachers, staff and local officials.
4. We have developed a sampling plan to conduct testing at outlets (faucets, water fountains, etc.) where students and staff get water for drinking, beverage preparation and cooking.
5. We are implementing a flushing and water usage plan to safeguard against lead and copper exposure from drinking water in the school at outlets that are found to be above the Action Level for copper and/or had lead concentrations above the recommended certified laboratory detection limit of 1 ppb. This includes the daily flushing of water fountains and/or faucets at sinks and the limitation of water consumption to cold-water faucets for food and beverage preparation.
6. We will undertake efforts to determine the cause of this lead and copper exceedance and evaluate the adequacy of our existing corrosion control system. We will develop and put into

Fact Sheets and FAQs

MassDEP

Fact Sheet – Flushing: A Short-Term Solution to Reduce Lead and Copper

When flushing is selected as an interim (short-term) control measure for reducing lead and copper in schools and early education and care facilities (EECF)

Note: MassDEP and the Massachusetts Department of Public Health (MDPH) support the EPA 3Ts goal of reducing lead in school and early education and care program drinking water to the lowest possible concentration. MassDEP's LCCA program recommends that schools and early education and care programs evaluate and remediate all taps/fixtures used for drinking, food preparation or medical uses with lead results above 1 ppb until the lead levels are consistently below 1 ppb. Water testing should be conducted by a Massachusetts certified laboratory capable of measuring concentrations of 1 ppb or lower. Remediation efforts should be prioritized based on the lead sample results and the vulnerability of the impacted populations. Under this approach, remediation of taps/fixtures with the highest lead sample results that serve the youngest populations should occur first.

The Massachusetts Action Level for copper is 1.3 milligrams per liter (1300 ppb). ***All taps with lead levels over your school's lead shut down level (e.g.15 ppb) and copper levels over the action level should be removed from service until an evaluation is done to determine the appropriate corrective action, including using flushing as a short term measure.*** *The evaluation and flushing protocol should be supported by a plumbing profile and sampling results.* ***Selecting flushing as a short term measure will require knowledge of the plumbing in the facility, sampling and resampling, daily record keeping, re-evaluation and adjustment to the plan, reporting and on-going communication about the implementation, and results of the plan.***

What is Flushing?

Flushing involves opening taps every morning before the facility is open and letting the water run to remove water that has been standing in the interior pipes and/or the outlets. Taps may need to be flushed at midday as well if the plumbing profile and sampling results indicate the need. The flushing time varies by the type of outlet being cleared and the source of the contaminant in the plumbing. Knowledge of the volume of water associated with plumbing components (e.g., lengths and diameters of piping) and the rate of water flow from a tap is very useful in determining appropriate flushing times. The degree to which flushing helps reduce lead or copper levels can also vary depending upon the age and condition of the plumbing and the corrosiveness of the water.

Although flushing often works as a short term measure to reduce lead and copper in drinking water, it requires staff time, diligence, and commitment to ensure effectiveness and may not be the most cost effective long term corrective action.

Two Primary Types of Flushing Programs

- **Individual Tap Flushing**
  An **individual tap flushing program** may be implemented if lead and/or copper concentrations are found to be high at **certain taps**.

Rev. 2-2019

School/EECF Assistance Program

Intervention Strategies

Out of Service

Photo credit: Gene Marchand/Enterprise News

Water Bottle Filling Station

Photo credit: WBZ-TV

School/EECF Assistance Program

Intervention Strategies

New Fountains

Photo credit: Jonathan Dame/ WickedLocal News

Universal Signage

Do not use for drinking

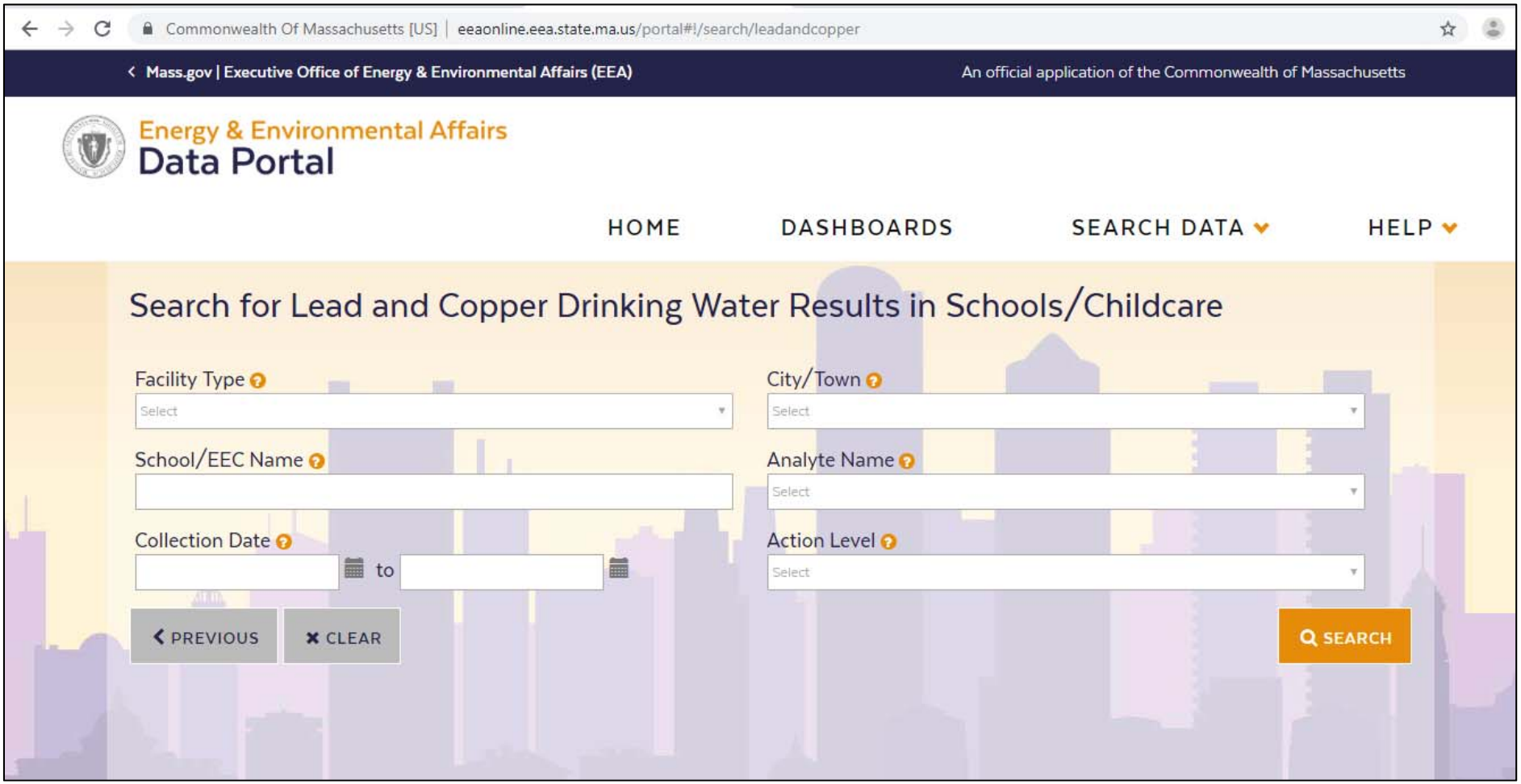
Hand washing only

Agua no apta para beber

Not for drinking use

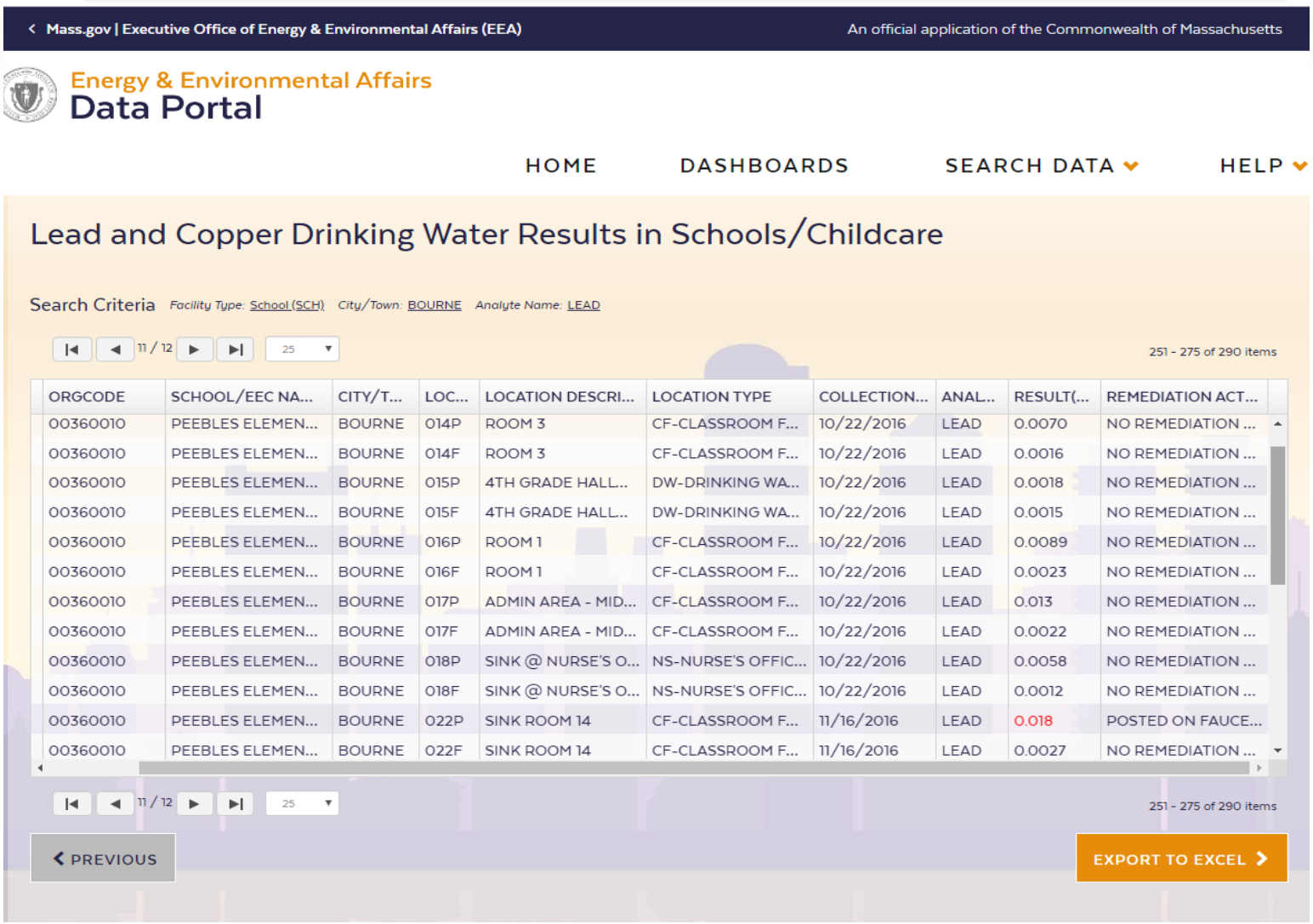
School/EECF Assistance Program

Online Searchable Database



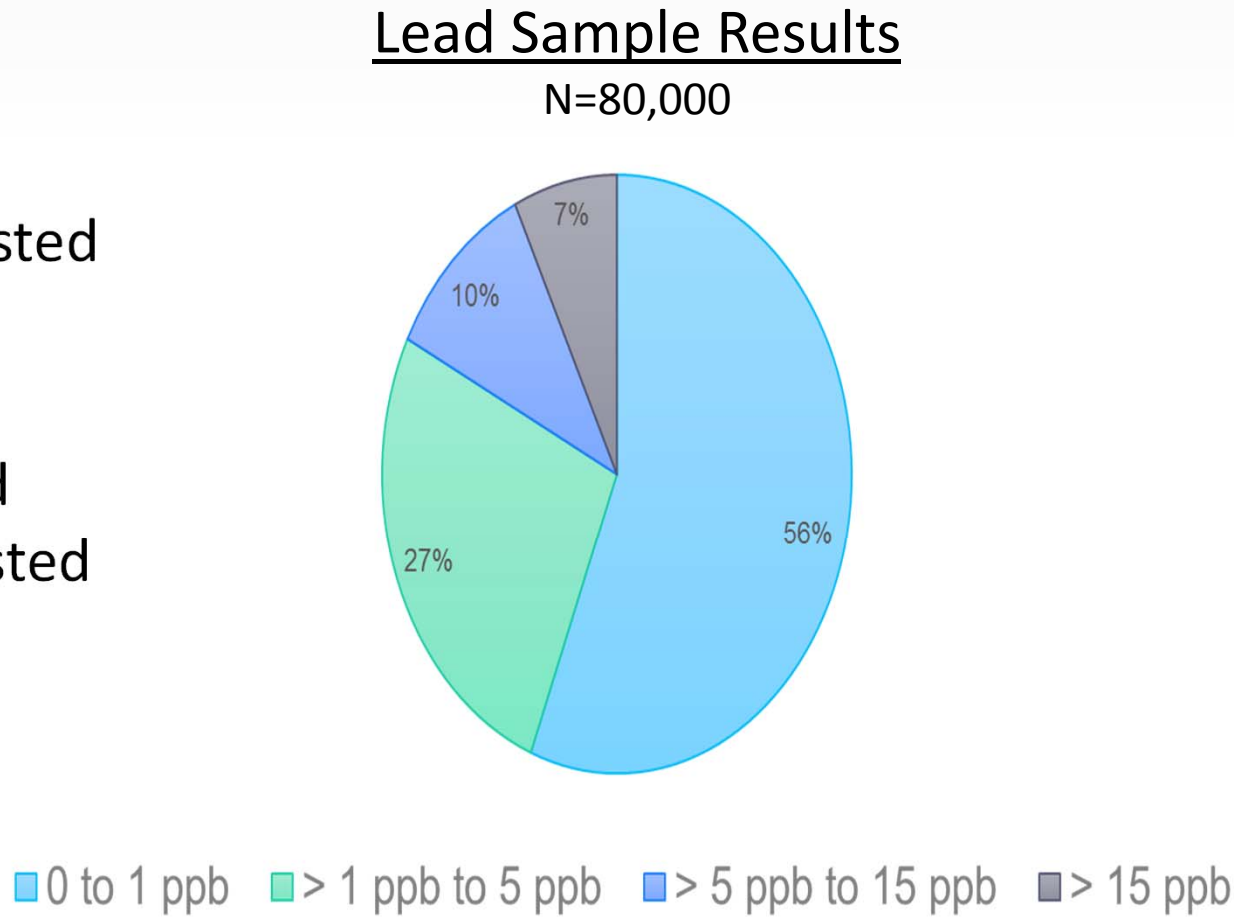
School/EECF Assistance Program

Example: Peebles Elementary School in Bourne



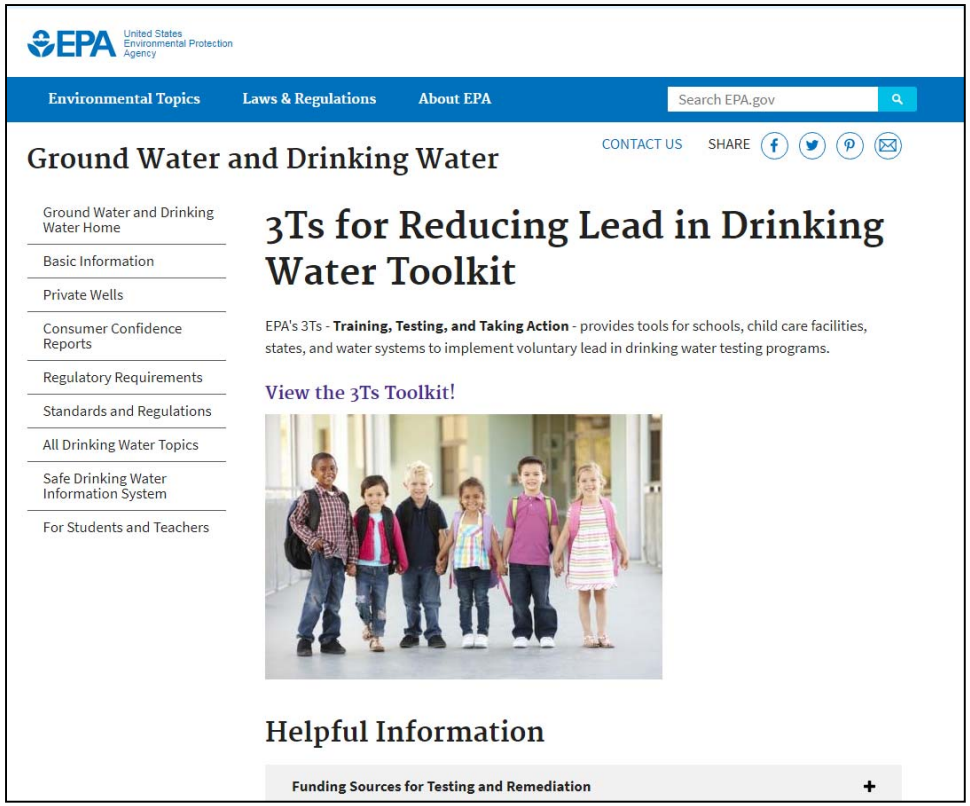
School/EECF Assistance Program

- Phase 1
  - 2016-2017
  - 800 schools tested
- Phase 2
  - 2017-2018
  - 200 schools and public EECFs tested



USEPA's New Guidance on Lead in Schools/EECFs

- 3Ts for Reducing Lead in DW at Schools and EECFs
  - Training
  - Testing
  - Taking Action
- Released October 2018
- No longer specifies an AL for lead in schools/EECFs
  - "No known safe level of lead for children"
  - Reduce lead level to lowest possible concentration



MassDEP's Updated Guidance on Lead in Schools/EECFs

- Goal: Water from taps/fixtures used for drinking, food preparation and medical purposes should contain **no measurable level of lead**
- Testing of drinking water should be conducted by a MA certified laboratory capable of measuring concentrations of 1 ppb or lower
- Prioritize remediation efforts based on the lead sample results and the vulnerability of the impacted populations

WIINs Act

- Water Infrastructure Improvements for the Nation (WIINs) Act of 2016
- Included drinking water grant programs
  - Lead Testing in School and Child Care Program Drinking Water Grant
- EPA provides funds to states to implement program
- EPA disbursed funds in Fall 2019

EPA United States Environmental Protection Agency

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News Releases

News Releases from Region 01

EPA Awards $967,000 to Massachusetts to Test Drinking Water in Schools and Child Care Facilities

10/10/2019

Contact Information:
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(617) 918-1017

Next Phase- School/EECF Assistance Program

- Phase 3: Launching this year
- Same overall concept
  - Lead (only) sample collection and analysis
  - Online facility management tool
  - Outreach, education, and technical assistance
  - Data posted online
- UMass providing programmatic support
- More eligible facilities
  - 1,000 untested schools
  - 3,000 group public/private EECFs
  - 100 family EECFs in two communities

Next Phase- School/EECF Assistance Program

- Short online application process
- Applicants will be sorted by criteria
  - Income
  - Building age
  - Likelihood of continued building usage
  - Community blood lead levels in children
- Review and acceptance will be on a rolling basis depending on volume
- Emphasize self-collection
  - Written instructions
  - Online video
- Looking to identify partners who could assist with collection

Bottle Filling Station Grant Program

- Operated by MA Clean Water Trust, a separate state agency
- Open to communities that participate in Assistance program or otherwise test for lead
- Details TBD

Drinking Water Operators

- Renewal year for operators (12/31/19)
- All license renewals done online now
- All applications will be submitted online starting 1/1/2020
- DPL staff conducting outreach
  - BCWUA mtg on 12/6 in Barnstable
  - NEWWA mtg on 12/19 in Randolph
- Central email for operator licensing issues: drinkingwaterboard@mass.gov

THANK YOU!

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MassDEP
Bureau of Water Resources
Drinking Water Program

www.mass.gov/lead-in-drinking-water