



Lead Testing in Schools

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Is There any trouble with the bubblers?



Credit: Phoebe Beierle, BPS



Lead and Copper Sampling for Schools

- Different Regulation for Schools
 - Lead Contamination and Control Act
 - Not enforceable - recommended
- Lead monitoring for every school
- Replace fountains if levels above 20 ppb
 - Sample size on 250 ml
- MWRA communities sample schools on a periodic basis
- Most schools did not follow LCCA





New School Testing Program with DEP

- DEP introduced program to test all schools in state
- MWRA in partnership agreed to sample all schools from MWRA communities
- MWRA started in April 2016
- DEP Program started in August/September 2016
 - No cost to communities
 - Technical Assistance from MWRA and/or DEP



Ramping up Lab capacity

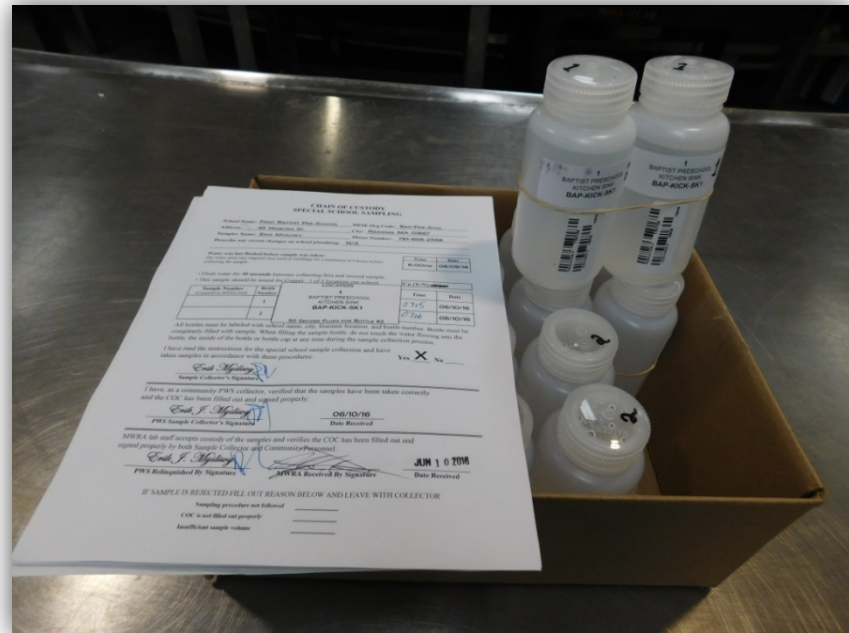
- Need Strong Organization
- Labeling is key
- Follow the paper trail
- Set system for accepting samples
- Staffing Issues





Assist Communities in Sampling Plans

- Sample Appropriate Locations
 - Only Locations Actually Used for Drinking Water
 - Showers and Lab Sinks?
- Need appropriate DESE or Building Code
- Sampling Taps Need a Name and a Number
- Map out each school building





Number of Samples!

As of May 31, 2017;

- 14,239 sample bottles
- 35 communities
- 305 schools
- 29,514 lead and copper tests





School Results

- # of Schools with a Result over the Action Level – 115
- Percentage of Samples over Action Level – 4.7%
- 781 Research Samples – Repeats and Investigatory
- 416 Non School Samples – Ball fields, hockey rinks, government buildings



- Sample results were a hot item
 - 24 hour news cycle
 - Results were in local e-news within hours
- Have a communication plan in place before taking samples
 - Some results will be above the Action Level

Water in local schools continues to test positive for lead – Boston Globe – 1/27/17



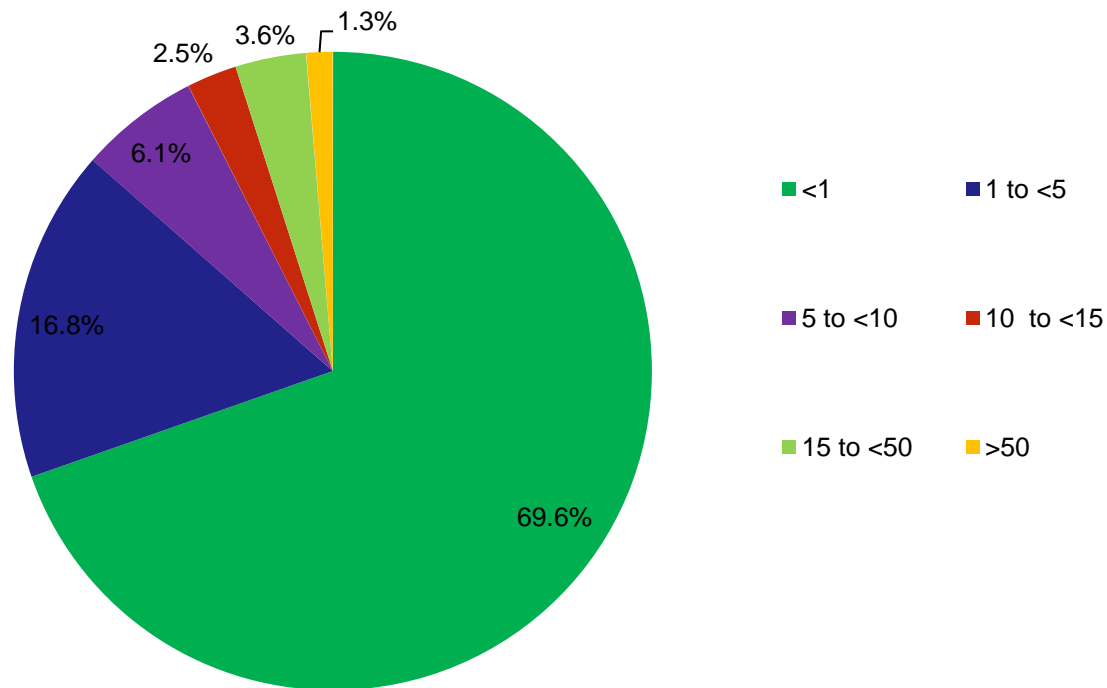
- Confirm the results
 - Provided high results to community
 - Made it to media
 - QA check determined that results were not accurate
 - Implemented a confirmation test for each high result
 - Had to apologize and have story retracted
 - At least with good news!

MWRA ‘mistakenly reported’ high lead levels at Brookline schools

Boston Globe – 6/2/16



2016 Schools Testing

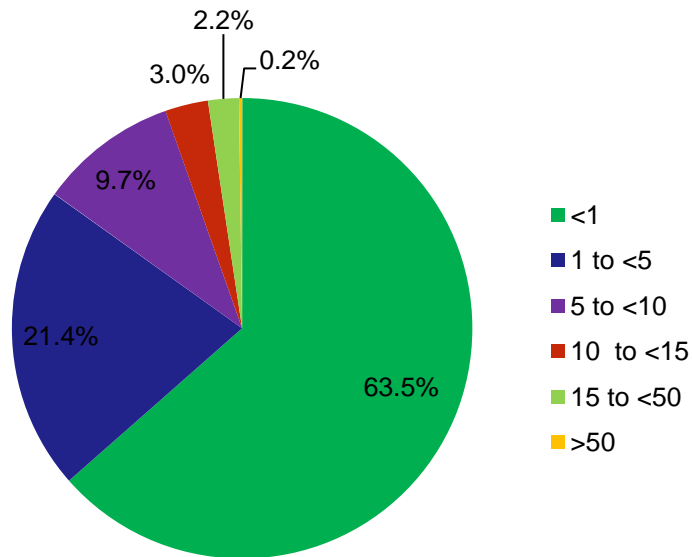


- Almost 70% of samples were below 1 ppb

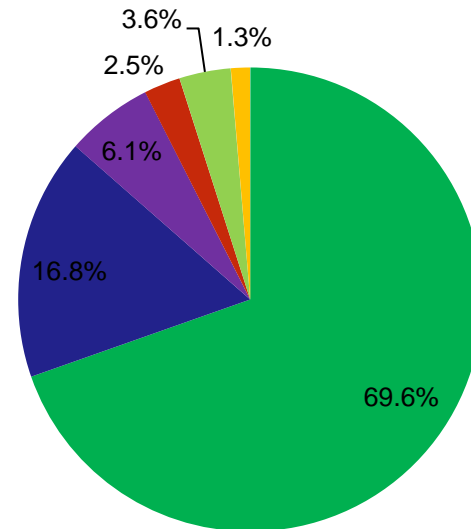


Comparison with LCR Testing Results

2016 LCR Testing Results



2016 Schools Testing



- Results between residential and schools were similar
 - Schools had more samples below 1 ppb
 - Schools more samples above 15 ppb and 50 ppb



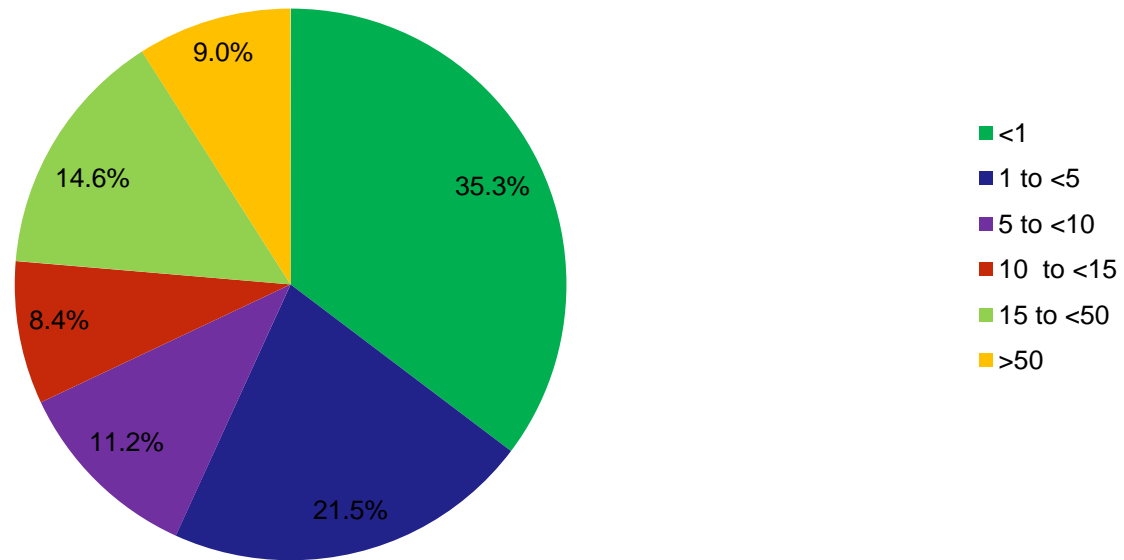
Repeat Samples

- High results led to investigations
 - Retests after remediation
 - Some were even higher than initial samples
- Make sure that you find the source of lead
 - Meter
 - Fixture
 - Pipe
 - Other



Repeat Samples

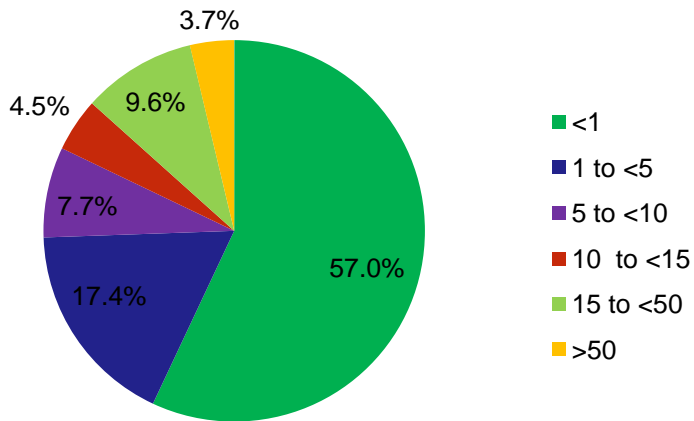
- Repeat or Investigatory Samples had more samples above Action Level including more above 50 ppb
- Many samples were not drinking water samples: showers, janitor sinks – you would not drink this water!



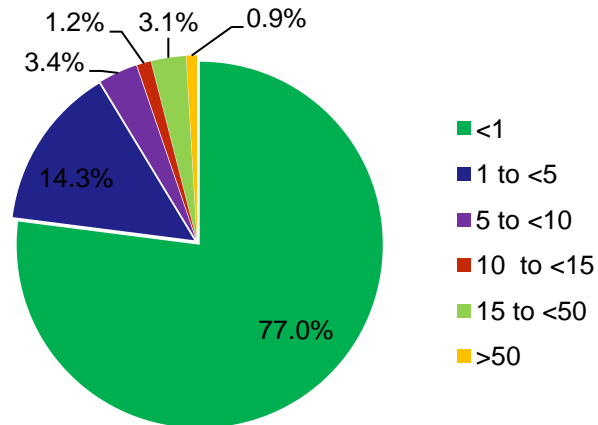


First Draw vs 30 Second Flush Sample

First Draw



30 Second Flush



- 20% more samples below ppb in 30 Second Flush Samples
- First Draw Had 3X samples over Action Level
13.3% vs 4.0%



Remediate!

- Flushing!
 - Make sure appropriate flushing is initiated after remediation
 - High speed for extended period of time
- Fixtures!
 - Take out fixtures that had high results
 - Use new lead-free fountains and bottle fillers
- Plumbing!
 - Check the meters and plumbing in building
- Update DEP Website – Show Remediation Actions
 - E-mail andrew.durham@state.ma.us



Plans Moving Forward

- MWRA will continue to provide laboratory services
- Continue to samples schools on an every 3 year basis
 - Emphasize older, problem schools
 - Other Locations: Daycares, Ball fields, Parks
- Help communities communicate with parents about concerns
- Promote good water drinking behaviors with students
- Educate public about how to get the lead out



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