



Community Forum on Lead in Drinking Water

June 29, 2017



Today's Agenda

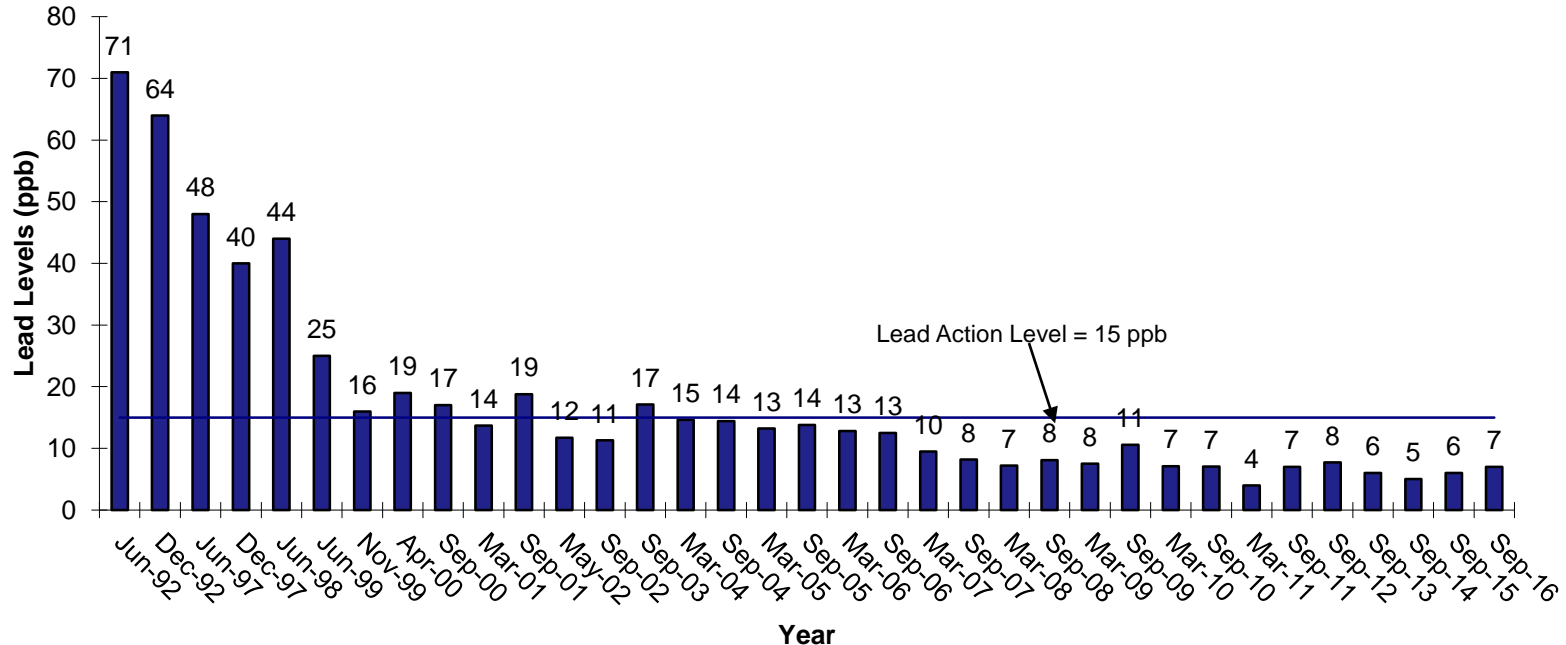
- Welcome and Introductions
- Overview S. Estes-Smargiassi
- Update on Flint – D Coppes
- Lead Service Line Replacement Programs:
 - D Raymondi, Quincy DPW
 - C Leone
 - L Taverna, T Jerdee, K Gracey
- Lead Service Line Inventories – S Estes-Smargiassi
- Update on School Lead Testing – J Das
- DEP Overview of Lead Program – D Fine, DEP
- Changes in LCR Implementation – M Privetera, DEP
- Public Health Context – M Celona, DPH
- Wrap-Up and Next Steps



MWRA Lead Results – Declining Over Time

- MWRA water system has now been below the lead Action Level of 15 parts per billion 21 straight rounds
- Some individual communities had more than one home above the Action Level

**Figure 1 - 90% Lead Levels in MWRA Fully Served Communities
1992 - 2016**





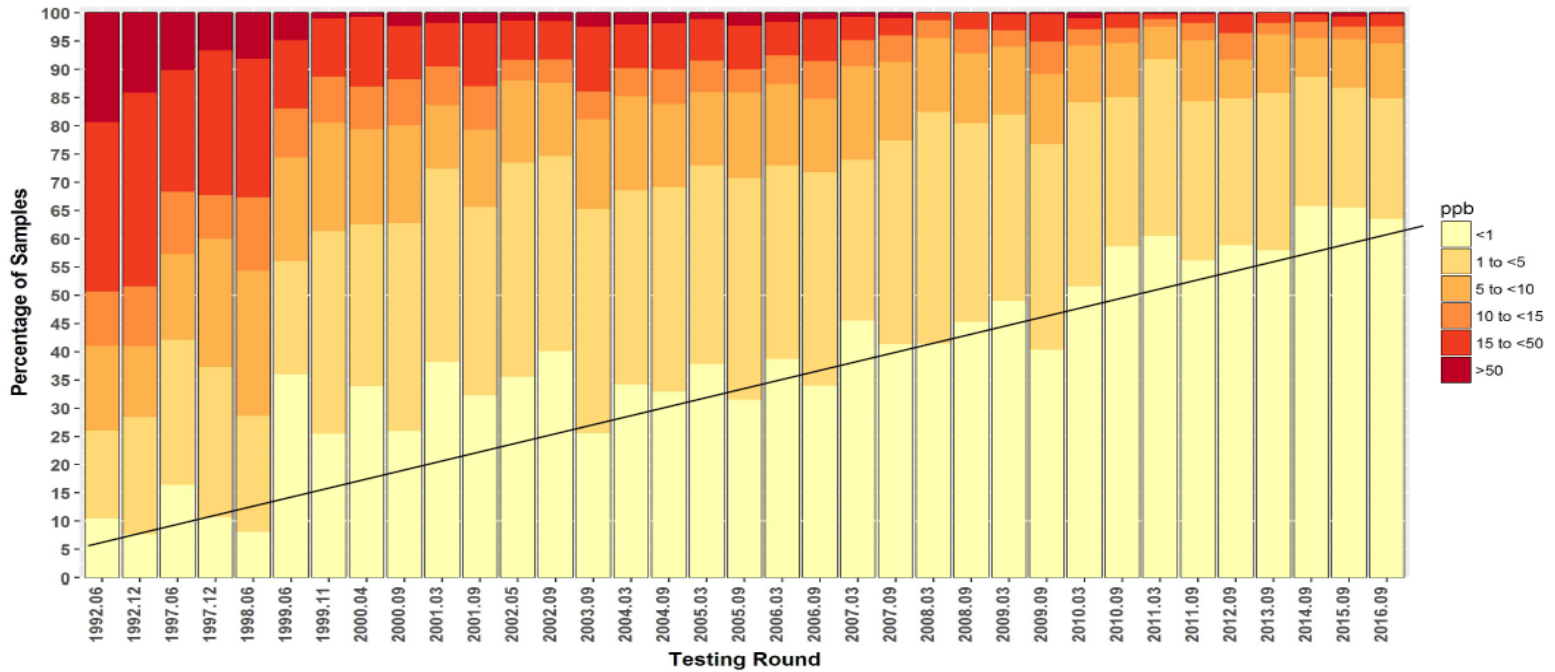
Lead Service Lines and School Testing





Declining Lead Levels Over Time

Percentage of Samples with <1 Increasing Over Time





Update on Flint

Dave Coppes, Director of Waterworks
Massachusetts Water Resources Authority

June 29, 2017



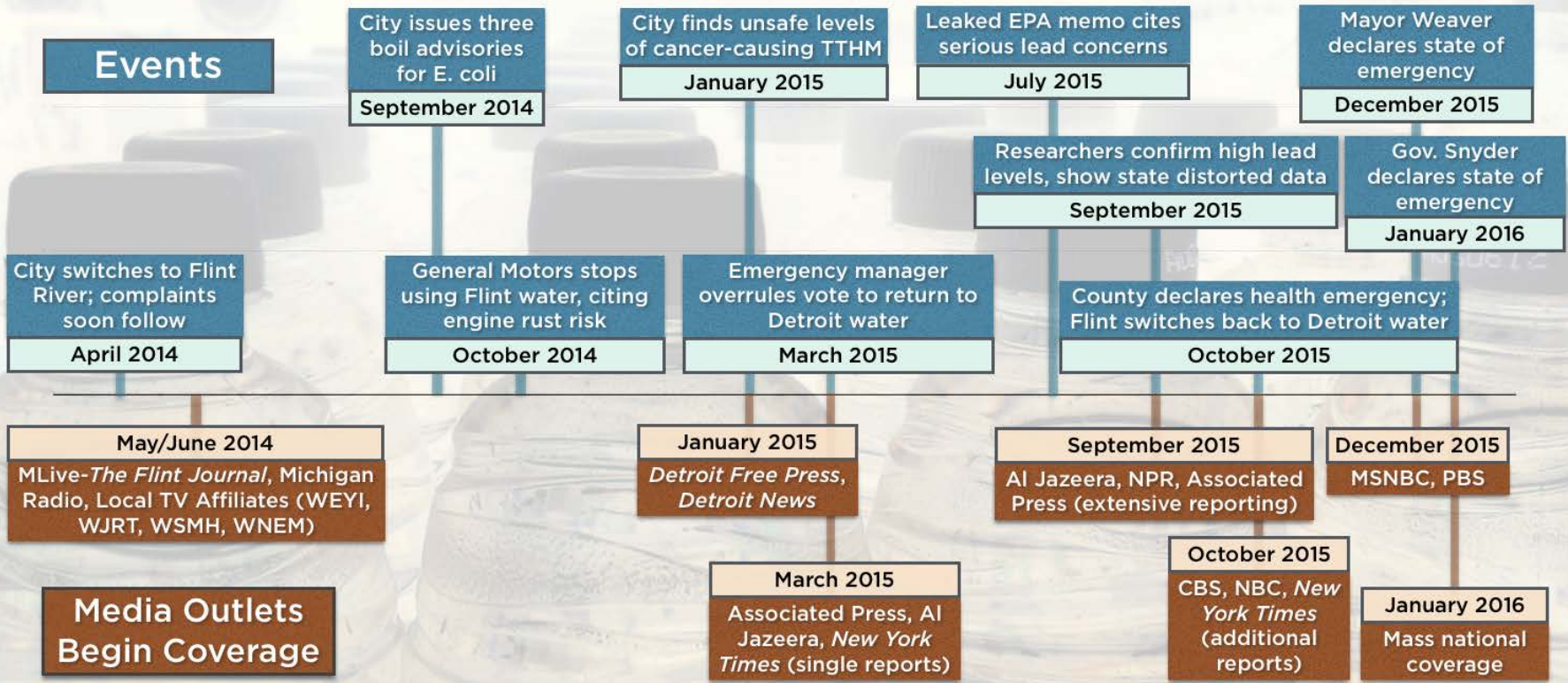


Would You Drink This?





TIMELINE: Key Events And Media Coverage Of The Flint Water Crisis



This timeline only includes events that were public knowledge at the time.



Blood Lead Level Analysis

- Large sample size
 - N= 1746 for Flint children (pre n=906, post n=840)
 - N= 1670 for non-Flint children (pre n=943, post n=727)

Flint results for children 5 years and under:

- PRE-SWITCH % EBL: **2.1%** (consistent with MDHHS data 2.2)
- POST-SWITCH % EBL: **4.0%**
- **$p < 0.05$; STATISTICALLY SIGNIFICANT CHANGE**





Flint Water – Legionnaires Outbreak



Health » Flint water crisis likely the cause of deadly Legionnaires outbreak

Live TV • U.S.

Flint water crisis likely the cause of deadly Legionnaires outbreak



By Sara Ganim, CNN

Updated 9:43 AM ET, Thu March 30, 2017



Source: CNN

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Flint water crisis likely the cause of deadly Legionnaires outbreak 03:07

Advertisement



Flint – Involuntary Manslaughter Charges

5 Charged With Involuntary Manslaughter in Flint Water Crisis

By SCOTT ATKINSON and MONICA DAVEY JUNE 14, 2017



Jeff Seipenko, center, a special agent for the Michigan attorney general, listened as a judge authorized charges on Wednesday against Nick Lyon, the director of the state's Department of Health and Human Services, in the

RELATED COVERAGE



2 Former Flint Emergency Managers Charged Over Tainted Water DEC. 20, 2016

For Flint, an 1882 Play About Bad Water Is 'Exactly What We're Living' JUNE 11, 2017



On This Block, Worries Run Deeper Than Flint's Tainted Water APRIL 25, 2017



Michigan Allots \$87 Million to Replace Flint's Tainted Water Pipes MARCH 27, 2017



Flint, and Michigan, Brace for More Charges in Water Inquiry OCT. 28, 2016



Flint – Involuntary Manslaughter Charges

AROUND THE NATION

Michigan Health Chief Charged With Involuntary Manslaughter In Flint Water Crisis

June 14, 2017 - 10:03 AM ET

RICK PLUTA



AMITA KELLY



Jessica Owens holds up a baby bottle of water from her home in Flint, Mich., while attending a hearing on Capitol Hill about Flint's water crisis.



Flint Returns to Detroit Water Long Term

AMERICA



3 Years After Ill-Fated Switch, Flint Mayor Recommends Using Detroit Water

April 18, 2017 · 5:52 PM ET

LAUREL WAMSLEY



After three years of confusion and chaos, Flint, Mich., residents may go back to the water source they used before lead contamination showed up in their drinking water.

In a press conference today, Mayor Karen Weaver recommended the city get its water from Detroit's system long-term. Flint was using Detroit water [before switching in April 2014](#) to water from the Flint River as a cost-saving measure.

Using Flint River water was characterized as a temporary switch until the city's pipeline connecting to the Karegnondi Water Authority was complete. City officials didn't immediately treat the river water to ensure it didn't corrode pipes. Tests in 2015 showed elevated lead levels

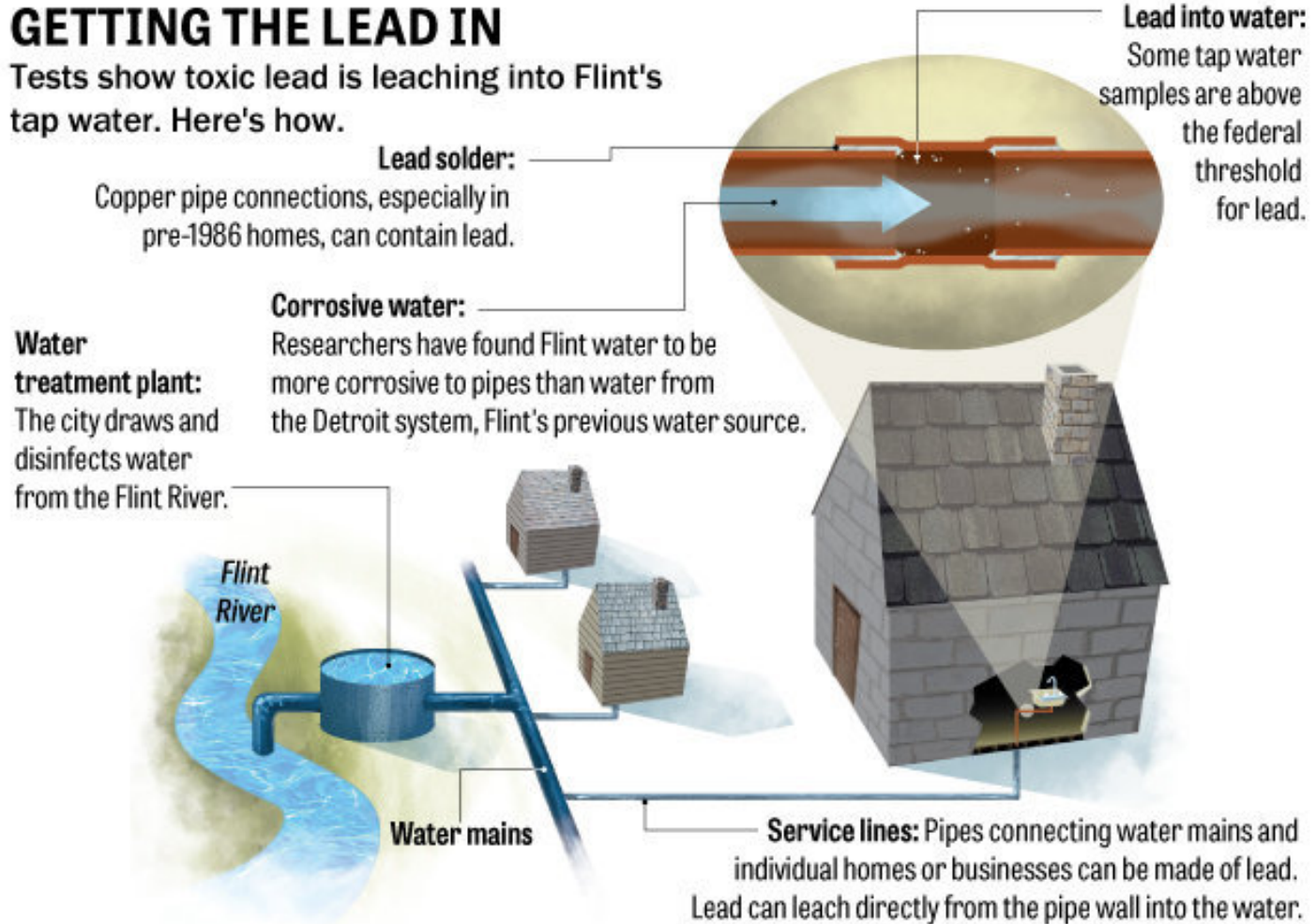




Sources of Lead in Flint

GETTING THE LEAD IN

Tests show toxic lead is leaching into Flint's tap water. Here's how.





Flint Lead map

FLINT WATER SAMPLES

Overview

Feed

List

Query

Search

Bounds

Satellite

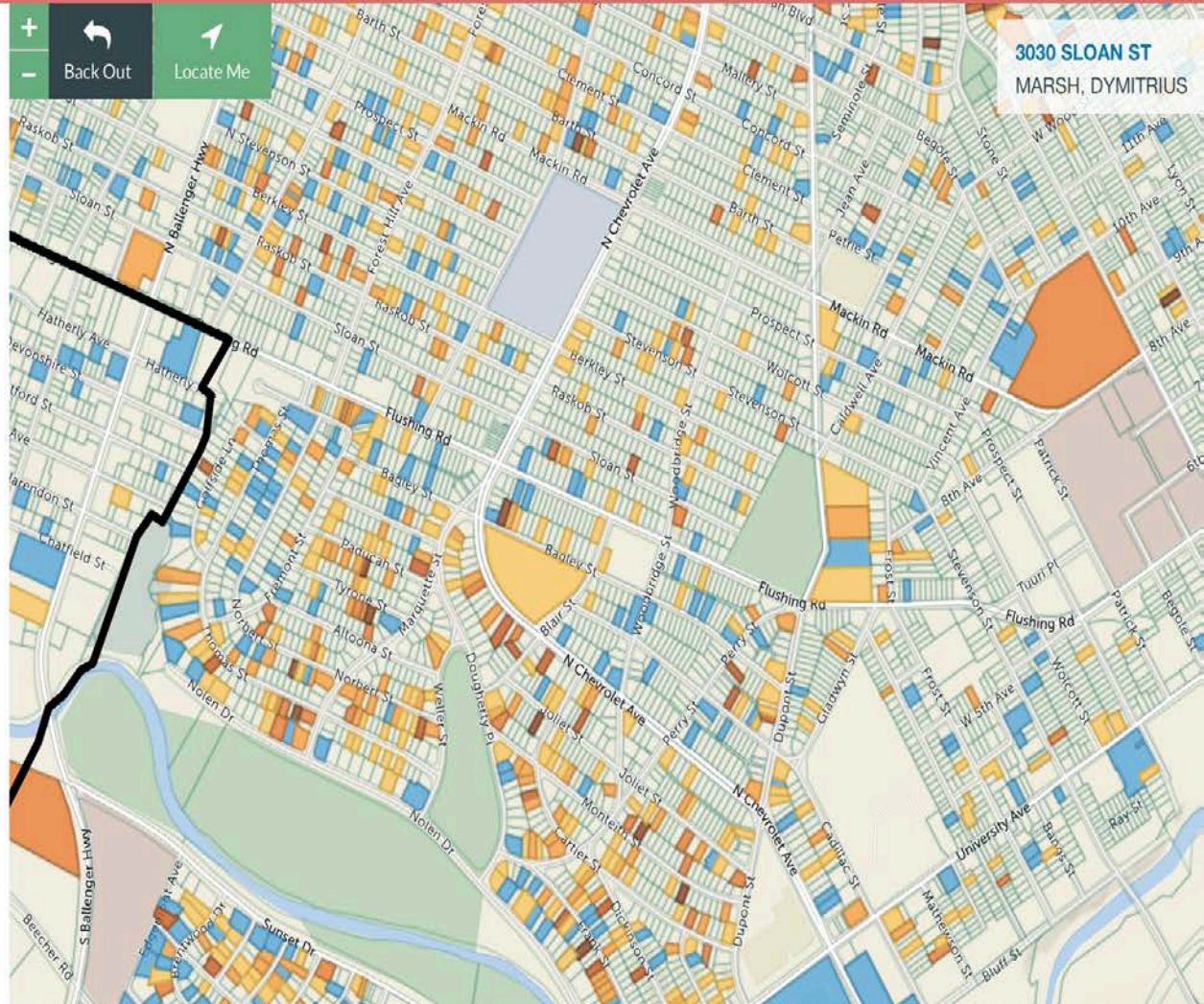
FLINT

15,912 POSTS

10,259 PARCELS POSTED TO

LEAD LEVELS:

- 186** 150ppb+: a range at which the federal government says water filters might not work
- 308** 50-149ppb: reaching dangerous levels, but can be treated by filters
- 883** 15-49ppb: a range above the federal action level for lead, but can be treated by filters
- 2039** 5-14ppb: exposure is a concern, but still below an EPA 'federal action level'
- 5069** 1-4ppb: the EPA deems this range as acceptable
- 7427** Oppb: no lead detected in the drinking water



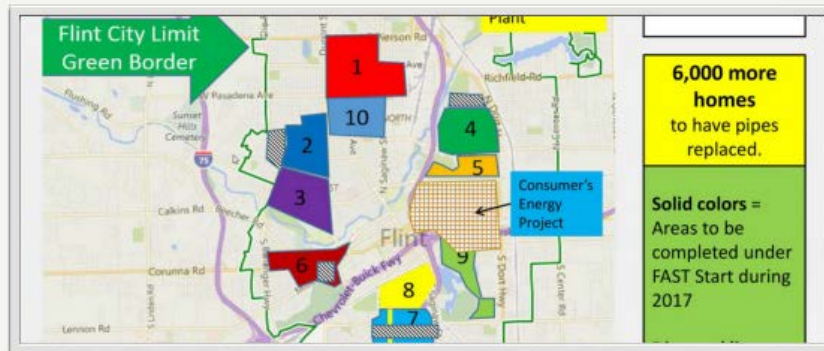


Flint Moving Ahead with Lead Service Line Replacements

Press Releases

Work to Begin Next Week to Replace 6,000 Lead-Tainted Service Lines in Flint This Year

Posted by: [Kristin Moore](#)



AARP Volunteers to Bring Consent Cards to Residents' Homes Starting Saturday

FLINT, Mich. — Mayor Karen Weaver announced today that dozens of Flint residents will have their water service lines replaced next week as crews begin working to replace lead-tainted pipes leading to 6,000 homes during the 2017 phase of her FAST Start replacement initiative.



Some Good Press About Lead Service Lines

Flint's pipe replacement may speed up in June

By STEVE CARMODY - MAY 28, 2017

[Tweet](#) [Share](#) [Google+](#) [Email](#)



STEVE CARMODY / MICHIGAN RADIO

Flint officials expect the city's pipe replacement program will **ramp up in the month of June.**

The city is removing lead and galvanized service lines connecting Flint homes and businesses to city water mains – and replacing them with copper pipes.

Mike McDaniel oversees [Flint's pipe replacement program](#). He says digging up the pipes is time consuming, especially when crews discover a copper pipe is already in place.

Next month, McDaniel hopes to start using specialized equipment to drill small holes to check to see whether the pipes in the ground are lead or copper. He says that should speed the process up.

"That's a priority for me to do that as soon as possible," says McDaniel.

McDaniel's goal is to replace more than 40 service lines a day. That will enable the city to replace 6,000 service lines this year.

Michigan reaches deal with Flint to replace 18,000 lead-tainted water lines



Flint will replace at least 18,000 lead or galvanized-steel water lines by 2020, and the state will pick up the bill with state and federal money. (Carlos Osorio / AP)

By **Ed White**
Associated Press

MARCH 27, 2017, 7:10 PM | DETROIT

Michigan and the city of Flint agreed Monday to replace thousands of home water lines under a sweeping deal to settle a lawsuit by residents over lead-contaminated water in the struggling community.

MBD – MONEY MARKET
1.15% On balances of \$5,000 or more.
 APY [Learn More.](#)

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In case you missed it

Confederate monument in St. Louis to be removed this week
10:11 AM

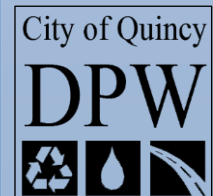
Detroit judge to consider U.S. freeze on Iraq deportations
JUN. 25, 2017

Lawyer: Race a factor in St. Louis cop being mistakenly shot by fellow officer
JUN. 24, 2017

Quincy is **LEAD**ing the Way...

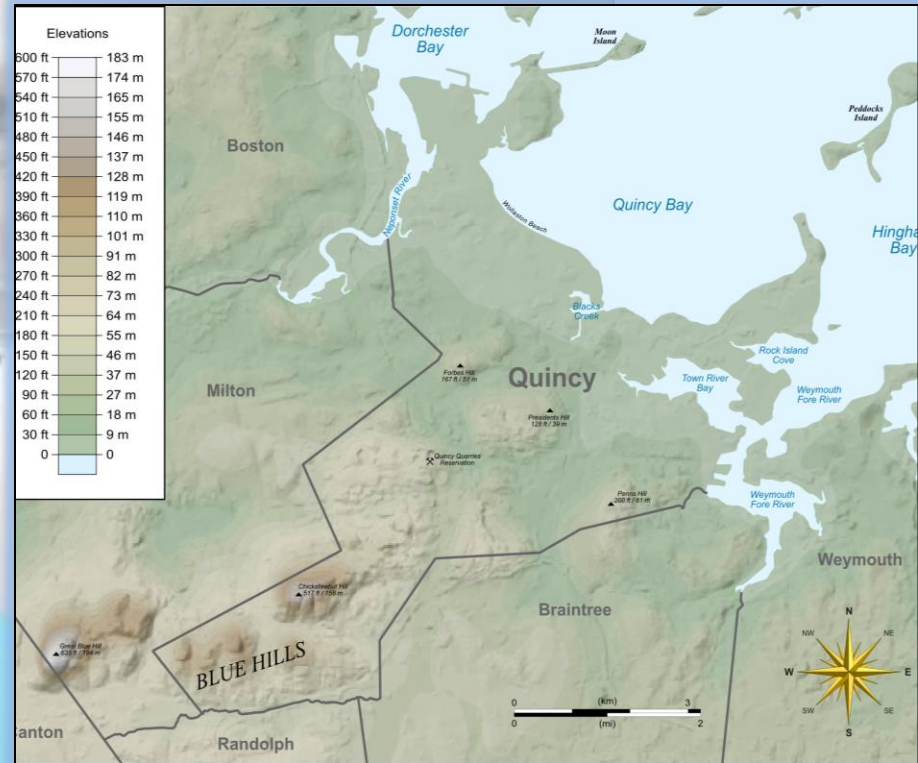
Quincy's Lead Service Replacement
Program

Quincy is **LEAD**ing the Way...



City of Quincy (Quin-zee)

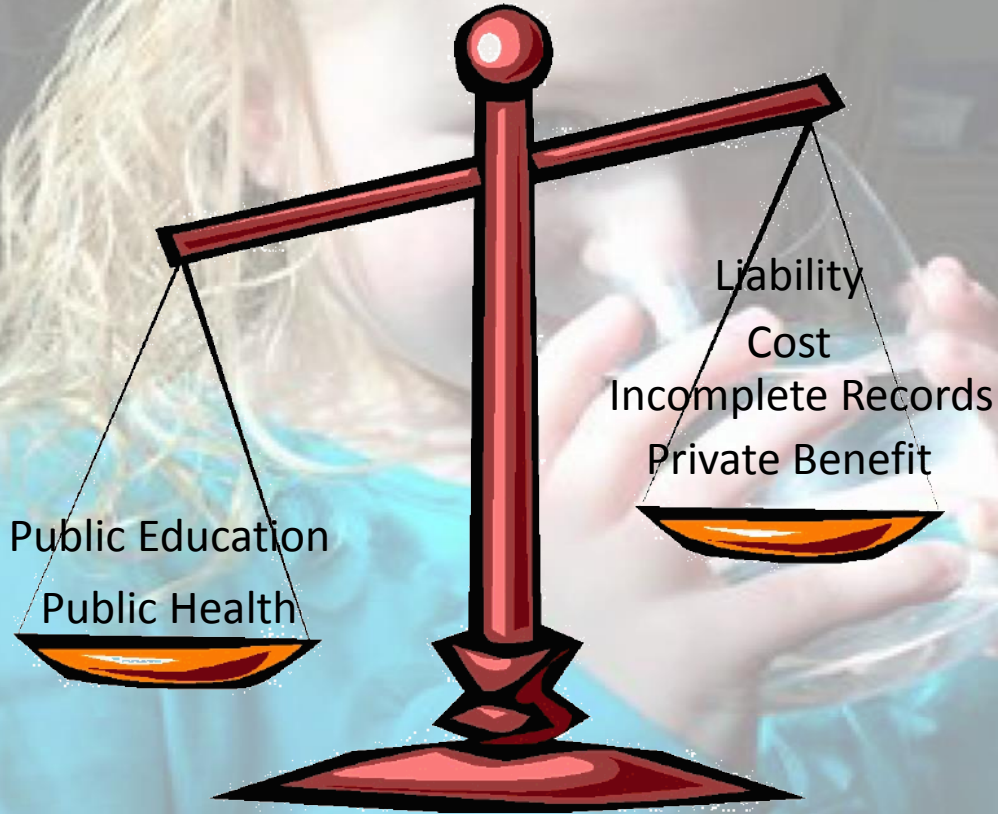
- Average demand 9.2 MGD
- 240 miles of water distribution pipe
- 4 pressure zones
 - 3 high service
 - 1 main service
- 2 storage tanks
- 5 metered connection points with the MWRA



Quincy is **LEAD**ing the Way...



Unconventional Approach



Quincy is **LEAD**ing the Way...

Preparation

- Thorough review of City records
 - History of service line replacements with water main projects
 - Cross reference those records indicating a lead service line

14-16
No. ~~14-16~~ Windsor Rd St. Ward 6

Laid for J. A. Fay

Put in by Ryan, Sept. 5, 1923 Service No. 12648

Size of Service 3/4" Kind L.L. Size of Main 6"

Location of Box 21' from 6" main
5' N. of E. line of House
19' S. of Piazza

7/8 NEP 2120 94828 10/15/11
5/8 NASH #1649832-7/124

-A Library Bureau U74999



Property Inspections

Crews visited each location to determine the pipe material at the water meter

Quincy is **LEAD**ing the Way...



Esri, Inc., City of Quincy, Massachusetts, Weston & Sampson



Quincy is **LEAD**ing the Way...



Community Engagement

- Multiple letters to impacted homeowners
 - Included necessary translation
- Public Meetings
- Info Letter/Calendar
- Public Information Display
- Right of Entries
- Website publication

Bid Package

- The Department working closely with our consultant engineer determined what possible pay items needed to be included in the Bid Specs
 - This part of the process required multiple group meetings

Award

Contractor Responsibilities

- Initial contact with homeowners
- Follow-up with homeowners
- Initial property survey
- Police Details
- Repairs of private property

Department Responsibilities

- On site engineer to help with day to day construction issues
- Right of Entry Forms
- Trench and sidewalk restoration
- Public Outreach

Quincy is **LEAD**ing the Way...

Construction

- Construction Observations
 - Test Pits (excavation/fill)
 - 1-2 services/day
 - Partial replacement for those who deny access
 - 118 to start- 105 complete (6/26)
 - About 25% were found not to be lead



Quincy is **LEAD**ing the Way...

City of Quincy

DPW



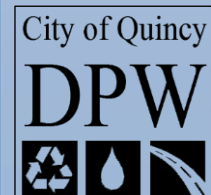
Helpful Hints for a Successful Project

- Choose a few locations for before and after sampling to show your successes
- Build excitement and public interest around your project

Quincy's Recognitions

- 2017 Regional Recognition from DEP for Outstanding Performance and Achievement in 2016
- Recognition from Clean Water Action for Quincy DPW's dedication to protect health and prevent harm to children and families from lead in drinking water.

Quincy is **LEAD**ing the Way...



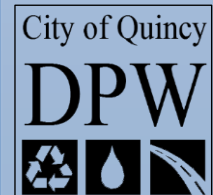
Questions/Comments?

Contact

Daniel G. Raymondi
Commissioner
617-376-1959

Paul Della Barba
Business Manager
617-376-1406

Quincy is **LEAD**ing the Way...





Update on Lead Service Line Replacement Loan Program

Carl Leone
Massachusetts Water Resources Authority

June 29, 2017



Home
About MWRA
Water System
Sewer System
Harbor and Bay
School Program
Doing Business with MWRA
Contact MWRA

Community Support Programs Massachusetts Water Resources Authority

WATER SYSTEM TOPICS	
	Local Water System Assistance Program (LWSAP) Loan program to fund local water system improvement projects for member water communities from FY11 through FY20.
	Lead Service Line Replacement Program/ Lead Loan Program (LLP), an Enhancement to the Local Water System Assistance Program Loan program to fund local projects for member water communities that will <u>fully</u> remove lead service lines from the community water main all the way to the home or business.
	Water Conservation and Efficiency Information for member communities, local businesses and residents; free educational brochures and low-flow fixtures; case studies.
	Leak Detection Task Order Contract This contract provides member communities access to high quality leak detection service at a reasonable cost. Services performed under the task order contract are paid by MWRA; communities are billed the following year.
	The MWRA Water System Information about our water system, including drinking water quality and recent improvement projects.

MWRA Contacts

- Carl Leone
617-788-4356
Carl.Leone@mwra.com
- Elaine Donahue
617-788-4824
Elaine.Donahue@mwra.com
- Kristen Hall
617-788-4831
Kristen.Hall@mwra.com

<http://www.mwra.com/comsupport/communitysupportmain.html>



Lead Loan Program

- \$100 Million for community projects
- 10 year interest-free loans
- Projects must replace **ALL** lead pipe within a service line
- Both public and private portions
- If any portion of service is lead or brass, entire service is eligible for replacement under MWRA Loan Program





Lead Loan Program

MWRA Communities with Potential to Utilize Lead Loan Program

- 9 Communities with Greater than 500 Lead Services
- 7 Communities with 90-300 Lead Services
- 12 Communities with Fewer or No Lead Services and More Than 100 Lead Goosenecks
- 6 Communities with Few or No Lead Services and Low Number of Lead Goosenecks
- 11 Communities with No Lead Services and No Lead Goosenecks



Lead Loan Program

- 3 Communities Funded
 - Newton \$4 Million
 - Quincy \$1.5 Million
 - Winchester \$0.5 Million
- 2 Community Applications Pending FY18 Distribution
 - Somerville \$1.2 Million (Phase 1)
 - Marlborough \$1.0 Million (Phase 1)





What Should Be Replaced - All Items Eligible

- Lead Service Pipe
- Lead-Lined Service Pipe
- Lead Goosenecks
- Galvanized Pipe Connected with Lead Gooseneck
- Any Brass Pipe or Fitting





Lead and Lead-Lined Service Pipes





MATERIALS USED FOR SERVICE PIPES IN MASSACHUSETTS.

198 STATE BOARD OF HEALTH. [Pub. Doc.

In order to learn to what extent lead is used for service pipes as compared with other materials in this State, and the experience in the use of the various kinds of service pipes, information has been collected from the water departments of the cities and towns, the results of which are presented herewith.

Number of Service Pipes of Different Materials in Use in Cities and Towns of Massachusetts.

CITY OR TOWN.	Wrought Iron.	Galvanized Iron.	Cement lined.	Lead.	Lead lined.	Tin lined.	Total.	Material now used for New Services.



Lead Service Line Project Components

- Establish a goal to fully remove all lead pipe from both publicly-owned and privately-owned water services
- Project Planning – Community Staff and Consultant Engineer
- Inventory of Lead Services, Mapping and Public Disclosure
- Community Planning for Private-Side Incentive
 - Fully Fund Private Side
 - Partially Fund Private Side
 - Multi-Year Payment Plan for Private Side
- Targeted Outreach to Homeowners (Right of Entry/Waiver Form)





Lead Service Line Project Components

- Application to MWRA for Lead Loan Program Funding
- Community Authorization for Loan Repayment (via Town Meeting or City Council)
- Community Executes Financial Assistance and Loan Agreements
- Bond Counsel Issues Bond and Opinion
- Distribution of Funds to Community





Lead Service Line Project Components

- Engineering Design and Bid Opening
- Construction and Resident Engineering Services
- Flushing of Interior Plumbing After Service Line Replacement (or after ANY service disruption in lead service line)





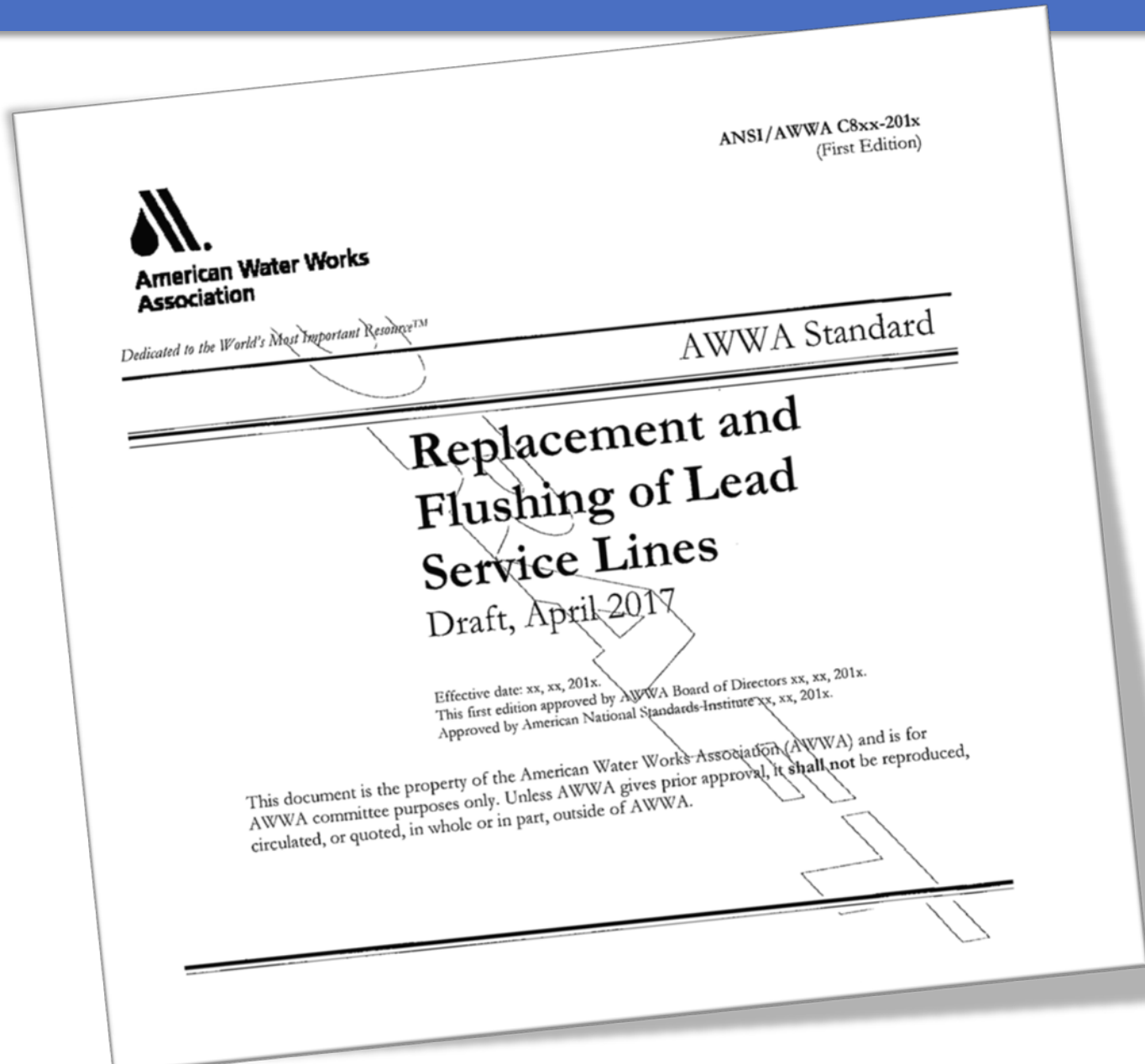
Post Project Activities

- Maintain Proactive Outreach to Customers with Known Privately-Owned Lead Service Lines and Provide Educational Information Regarding the Risks of Lead Exposure
- Include a Unit Cost Bid Item for Public/Private Service Line Replacement in All Water Pipeline Projects
- Replace Lead Goosenecks Encountered During Infrastructure Construction











AWWA Standard Being Developed





MWRA Contacts

- Carl Leone
617-788-4356
Carl.Leone@mwra.com
- Elaine Donahue
617-788-4824
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	Community Support Programs Massachusetts Water Resources Authority
Home	WATER SYSTEM TOPICS
About MWRA	 Local Water System Assistance Program (LWSAP)
Water System	Loan program to fund local water system improvement projects for member water communities from FY11 through FY20.
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Doing Business with MWRA	 Water Conservation and Efficiency
Contact MWRA	Information for member communities, local businesses and residents; free educational brochures and low-flow fixtures; case studies.
	 Leak Detection Task Order Contract
	This contract provides member communities access to high quality leak detection service at a reasonable cost. Services performed under the task order contract are paid by MWRA; communities are billed the following year.
	 The MWRA Water System
	Information about our water system, including drinking water quality and recent improvement projects.

<http://www.mwra.com/comsupport/communitysupportmain.html>

City of Newton DPW-Utilities Division Lead Service Replacement Program (LSRP) Update



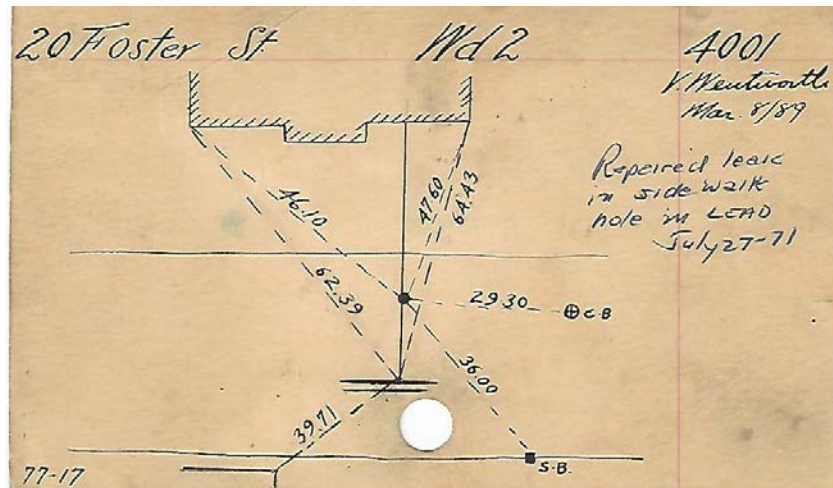
Objective of the LSRP

To investigate all city's records to determine locations of suspected lead water services and develop plans and bid specifications to replace them.



Types of Records Investigated

- Existing water service tie cards (+/-22,000)



- Engineering Department Water Main Improvement Program
- HANSEN Asset Management Reports



Location of Suspected Lead Water Services

- 266 services to be replaced-property only
- 4 services to be replaced-street only
- 318 services to be completely replaced
- 588 properties impacted by the LSRP



Work Completed to Date

- Right of Entry forms sent (78% returned)
- Utilities personnel marked out water service lines
- T&H took photographs and estimated quantities and costs
- Developed plans and bid specifications
- Developed cost estimate based on field measurements
 - service pipe lengths,
 - Pavement
 - sidewalk and curb
 - length of front yard
 - jackhammering and coring into basement



Work Completed to Date

- Bid Results
 - Five bids received
 - Bids ranged from \$3.4 million - \$5.4 million
 - Awarded to CJP & Sons Construction Co., Inc.



Optional Payment Plan

- Property owners may pay for replacement in installments
- Ten year period at zero percent interest
- Payment is for replacement from property line to meter



Project Specifics

- Trenchless methods required if conditions allow
- Homeowner responsible for restoration on private property
- Contractor responsible for loam and seed and/or driveway/pavement trench restoration only
- Contractor responsible for restoring disturbed areas beyond limit of work
- Finished basements to be repaired by the homeowner
- Contractor to minimize disturbance to the basement



Response from Public

- Certified letters instructed to call T&H to confirm interest
- 588 certified letters sent
 - 292 residents responded yes
 - 21 residents responded no
 - 48% response
- Majority of homeowners are very excited about project



Photographs



Costs

- **Minimum Service Replacement Cost***
 - \$1,000
- **Average Service Replacement Cost***
 - \$2,855
- **Maximum Service Replacement Cost***
 - \$9,800

*All above listed replacement costs are estimated using bid prices



Where do we go from here?

- Pre-construction meeting took place mid-June
- Begin construction after second week in July
- Schedule inspections with homeowners to determine final cost and complete a pre-construction inspection report
- Services to be replaced by Ward
- Construction will begin in Wards with most responses



Construction Schedule

- July 2017 – Begin Construction
- October 2017 – Construction 50% Complete
- April 2018 – Construction 100% Complete
- July 2018 – Punch List Items and Final Payment



Questions?





Lead Service Line Inventories and Programs

Stephen Estes-Smargiassi
Massachusetts Water Resources Authority

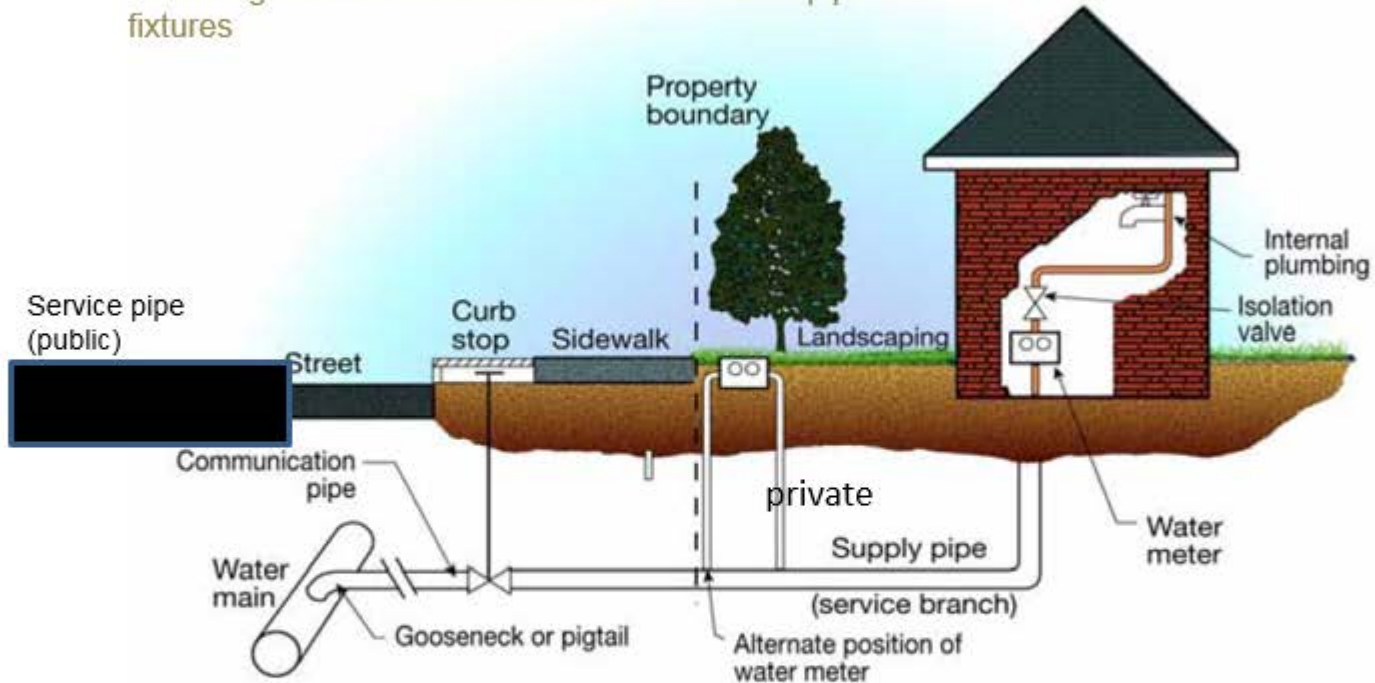
June 29, 2017



What is a Lead Service Line?

Defining Lead Service Lines

Cannot ignore the lead contribution from brass pipe and fixtures





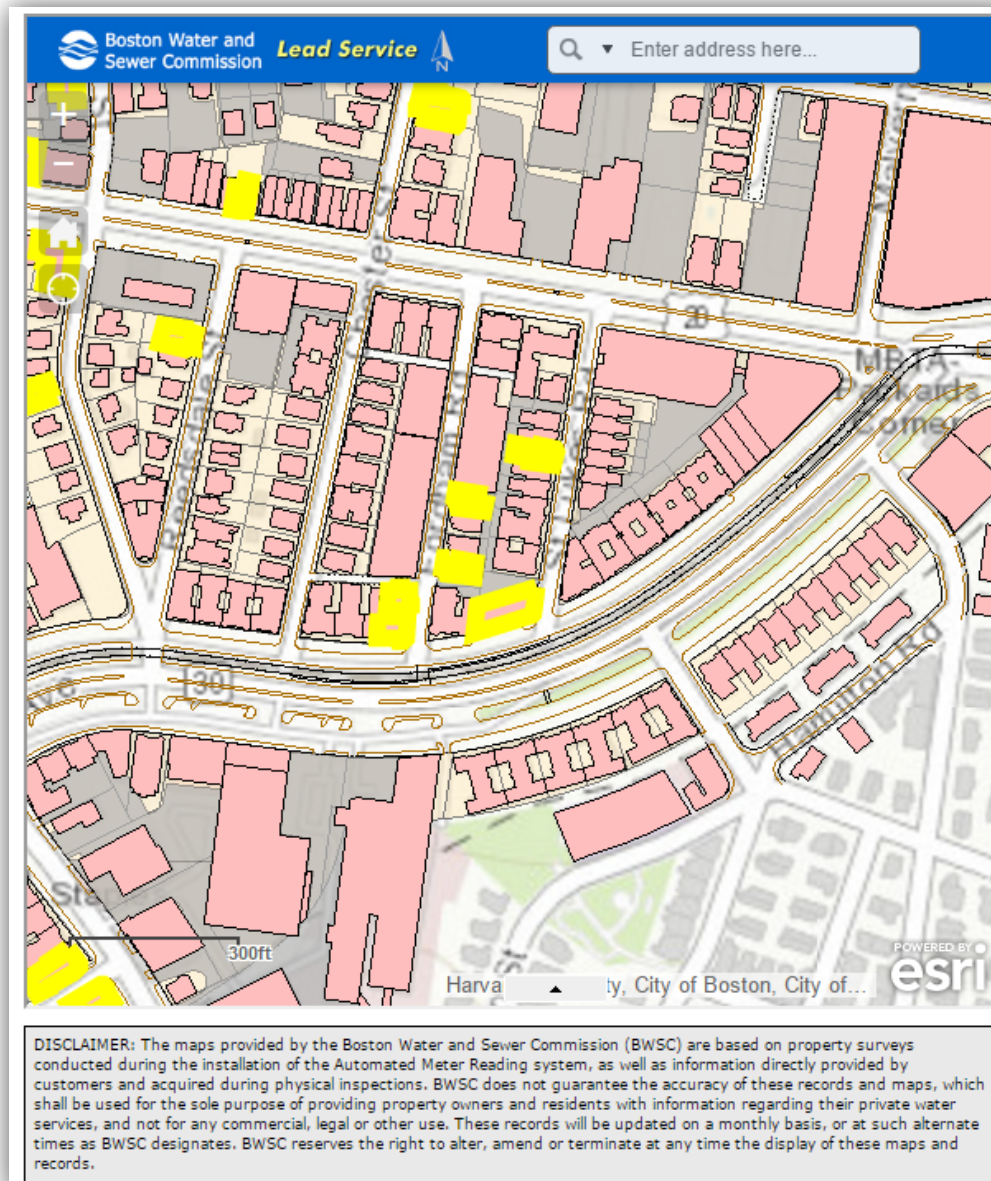
Brass Components



Old galvanized water service pipe >



Boston Water and Sewer Commission Lead Service Map






BWSC Website - Lead Service Map

BWSC Home

Guest

← → ↻ **bwsoc.org/home/home.asp** 🔍



Boston Water and Sewer Commission

080 Harrison Ave. Boston, MA 02110

Martin J. Walsh, Mayor Henry F. Vitale, Executive Director

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GO **BWSC Home**

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Leak Up To Owner
Lead Service Replacement
Free Grease Can Lid
Currents Newsletter

Hours of Operation
Location & Directions
Proposals and Bids
Departments
Report a Problem
Water Quality Report

Welcome

Boston is home to New England's oldest and largest water, sewer and stormwater systems, which are owned, maintained and operated by the Boston Water and Sewer Commission (BWSC). Established in 1977, BWSC provides potable water and sewer services to more than one million people per day. BWSC is also the leading organizer of We Are All Connected, a campaign to raise public awareness about the importance of protecting and preserving Boston's waterways.

What's New



Check Your Local Rainfall Index

Customer Login

Account Number

Access Number

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Public Notices

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- [JUNE UPDATE - FENWAY](#)
- [JUNE - NORTH END PROJECT UPDATE](#)
- [JUNE - DUDLEY SEWER PROJECT UPDATE](#)
- [JUNE-MWRA DISCOLORED WATER NOTICE](#)
- [MAY-SOUTH BOSTON WATER AND SEWER IMPROVEMENTS](#)
- [Sewer Lateral Bonded Contractor List](#)
- [Bonded Contractors - Full List](#)
- [Customer Safety Alert](#)


Did You Know?

The body is comprised of 65-80% water; there is not a more important thing we can put in our body than drinking water.




Boston Water and Sewer Commission Employees Honored by Boston Fire Department

Pair Awarded Outstanding Civilian Service Award for Courage on Dartmouth Street



Lead Service Map

Lead is everywhere. Whether you live in an apartment or single family home, in an old or new neighborhood, lead is in your environment.



Automatic Meter Reading System Upgrade

The Automatic Meter Reading System allows customers to monitor usage and control costs.

ALL APPOINTMENTS for upgrades, contact Customer Service at 617-989-7800


bwsoc.org/COMMUNITY/rainfall/telog_rainfall/rf_daily.asp




BWSC Website - Lead Service Map

Lead Service Map x Guest

bwsc.org/COMMUNITY/lead/leadmaps.asp#TOP_PAGE



Boston Water and Sewer Commission
980 Harrison Ave. Boston, MA 02119
Martin J. Walsh, Mayor Henry F. Vitale, Executive Director



Home About BWSC Customer Service Public Outreach Projects Doing Business Regulations June 22, 2017

Public Outreach Lead Resources Lead Service Map

Quick Links

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- FAQs

Forms and Permits

- General Service Application
- Hydrant Meter
- Dewatering
- New Construction

Programs

- The Water Trailer
- Sewer Lateral
- Leak Up To Owner
- Lead Service Replacement
- Free Grease Can Lid
- Currents Newsletter

Hours of Operation

Location & Directions

Proposals and Bids

Departments

Report a Problem

Water Quality Report

Lead Service Map

Prior to 1950, lead was commonly used in the manufacture and installation of water service pipes and some private water service lines are made of lead. If too much lead enters your body, it can pose significant health risks, especially to children. For more information, refer to our [Sources of Lead](#) page.


The following map indicates, in **yellow**, properties within the City of Boston that have private lead service pipes. If your property has a lead service pipe, consider the following:

- Owners of properties with lead service pipes can call the BWSC Lead Hotline at (617) 989-7888.
- Any building with an active water and sewer account serviced by a domestic water service pipe of two inches in (2") diameter and under may be eligible for BWSC's [Lead Replacement Incentive Program](#).
- Tenants, whose building has a lead water service should contact their landlord or building manager.


Instructions

1. Begin entering an address in the search box, then select an address from the dropdown. Properties with lead service are highlighted in **yellow** and listed below the map.
2. Use the plus and minus buttons in the upper left corner to zoom in and out.
3. If you cannot find your street on the map, call the Lead Hotline at (617) 989-7888 for assistance.


Note:

- To view a list of the buildings in the current map extent with lead service, click the up-arrow button  at the bottom center of the map.
- To export the data in the Lead Buildings table to a CSV excel file, click the 'Options' button to open a drop down list. Click 'Select Records in All Pages' to select all records, or choose your own selection. Next, click the 'Options' button again to open the drop down list, and click 'Export to CSV' at the bottom of the list. Click OK to generate the CSV file.

For more information on the health risks of lead, see our [Lead in Drinking Water](#) brochure.


Lead Service

Enter address here...



CUSTOMER LOGIN

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- JUNE UPDATE - FENWAY
- JUNE - NORTH END PROJECT UPDATE
- JUNE - DUDLEY SEWER PROJECT UPDATE
- JUNE-MWRA DISCOLORED WATER NOTICE
- MAY-SOUTH BOSTON WATER AND SEWER IMPROVEMENTS
- Sewer Lateral Bonded Contractor List
- Bonded Contractors - Full List
- Customer Safety Alert

DID YOU KNOW?

A tributary is a small stream that flows into a larger stream.

RELATED LINKS



BWSC Website - Lead Service Map

Lead Service Map

Guest

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Currents Newsletter

- Hours of Operation
- Location & Directions
- Proposals and Bids
- Departments
- Report a Problem
- Water Quality Report

1. Begin entering an address in the search box, then select an address from the dropdown. Properties with lead service are highlighted in **yellow** and listed below the map.

2. Use the plus and minus buttons in the upper left corner to zoom in and out.

3. If you cannot find your street on the map, call the Lead Hotline at (617) 989-7888 for assistance.

Note:

- To view a list of the buildings in the current map extent with lead service, click the up-arrow button at the bottom center of the map.
- To export the data in the Lead Buildings table to a CSV excel file, click the 'Options' button to open a drop down list. Click 'Select Records in All Pages' to select all records, or choose your own selection. Next, click the 'Options' button again to open the drop down list, and click 'Export to CSV' at the bottom of the list. Click OK to generate the CSV file.

For more information on the health risks of lead, see our [Lead in Drinking Water brochure](#).

Lead Service

Search: Enter address here...

DISCLAIMER: The maps provided by the Boston Water and Sewer Commission (BWSC) are based on property surveys conducted

JUNE - NORTH END PROJECT UPDATE

JUNE - DUDLEY SEWER PROJECT UPDATE

JUNE-MWRA DISCOLORED WATER NOTICE

MAY-SOUTH BOSTON WATER AND SEWER IMPROVEMENTS

Sewer Lateral Bonded Contractor List

Bonded Contractors - Full List

Customer Safety Alert

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RELATED LINKS

- Steps to Reduce Exposure
- Lead Pipe Replacement Program
- Lead Testing Centers
- Other Lead Sources



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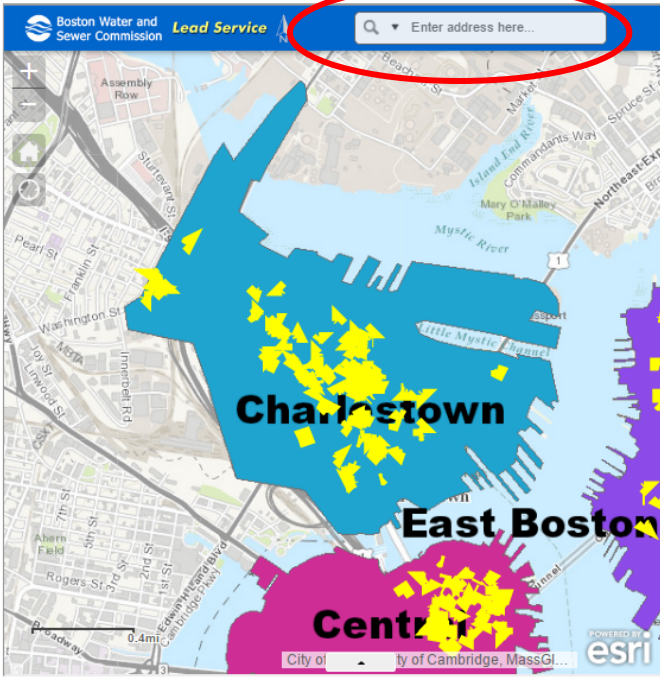


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Boston Water and Sewer Commission **Lead Service**

Assembly Row, Sturges St, Franklin St, Washington St, Pearl St, 9th St, 10th St, 11th St, 12th St, 13th St, 14th St, 15th St, 16th St, 17th St, 18th St, 19th St, 20th St, 21st St, 22nd St, 23rd St, 24th St, 25th St, 26th St, 27th St, 28th St, 29th St, 30th St, 31st St, 32nd St, 33rd St, 34th St, 35th St, 36th St, 37th St, 38th St, 39th St, 40th St, 41st St, 42nd St, 43rd St, 44th St, 45th St, 46th St, 47th St, 48th St, 49th St, 50th St, 51st St, 52nd St, 53rd St, 54th St, 55th St, 56th St, 57th St, 58th St, 59th St, 60th St, 61st St, 62nd St, 63rd St, 64th St, 65th St, 66th St, 67th St, 68th St, 69th St, 70th St, 71st St, 72nd St, 73rd St, 74th St, 75th St, 76th St, 77th St, 78th St, 79th St, 80th St, 81st St, 82nd St, 83rd St, 84th St, 85th St, 86th St, 87th St, 88th St, 89th St, 90th St, 91st St, 92nd St, 93rd St, 94th St, 95th St, 96th St, 97th St, 98th St, 99th St, 100th St

Charlestown, East Boston, Central

City of Cambridge, MassGl... esri

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JUNE - NORTH END PROJECT UPDATE

JUNE - DUDLEY SEWER PROJECT UPDATE

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RELATED LINKS

- ▶ Steps to Reduce Exposure
- ▶ Lead Pipe Replacement Program
- ▶ Lead Testing Centers
- ▶ Other Lead Sources



BWSC Website - Lead Service Map

Lead Service Map

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bwsc.org/COMMUNITY/lead/leadmaps.asp#TOP_PAGE

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Boston Water and Sewer Commission **Lead Service** Enter address here...

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200ft

City of Cambridge, MassGl...

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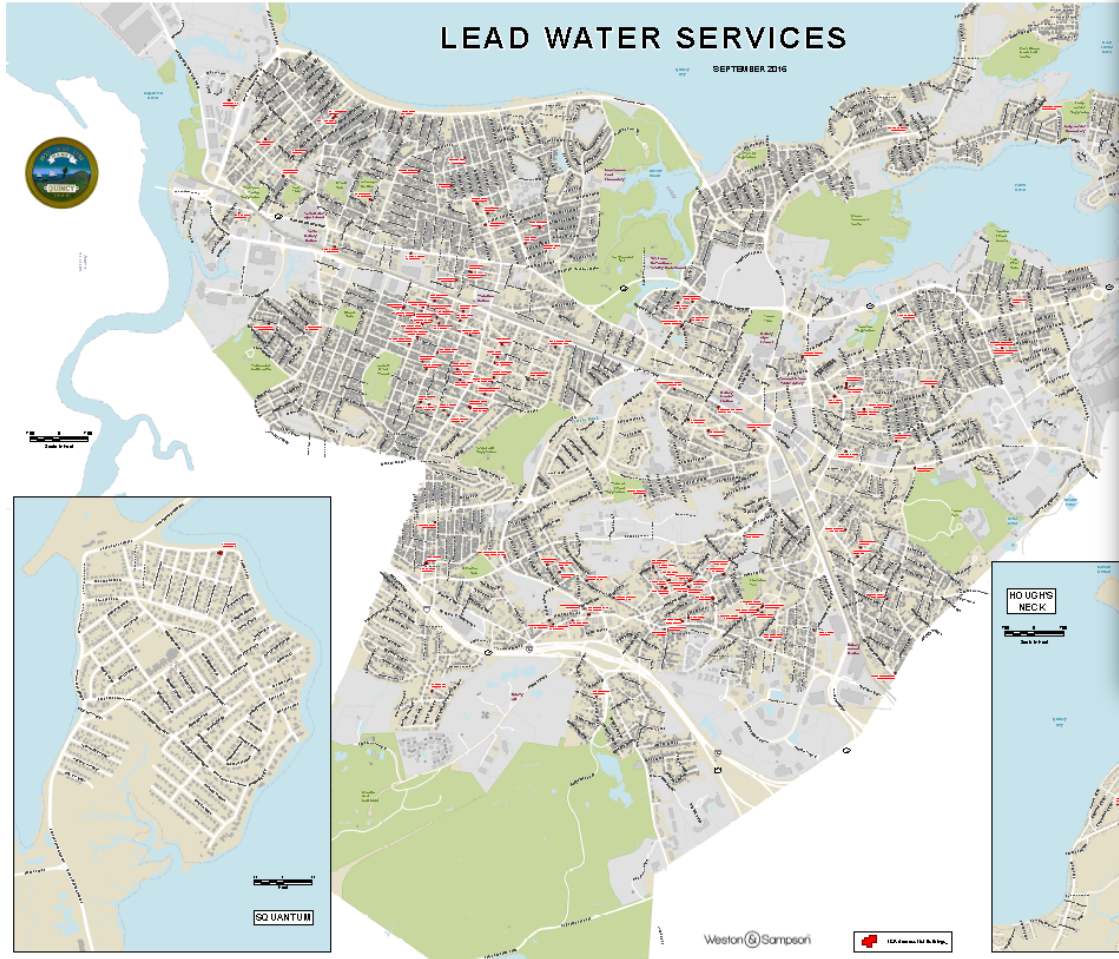
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Quincy Map

LEAD WATER SERVICES

SEPTEMBER 2016



Site Address

- 188 ALBATROSS ROAD
- 35 APPLETON STREET
- 41 APPLETON STREET
- 166 ARLINGTON STREET
- 226 ARLINGTON STREET
- 74 ARNOLD ROAD
- 21 ARTHUR STREET
- 30 ARTHUR STREET
- 32 ARTHUR STREET
- 35 ARTHUR STREET
- 13 BALLOU STREET
- 15 BALLOU STREET
- 18 BARRY STREET
- 23 BARRY STREET
- 51 BARRY STREET
- 25-27 BAXTER STREET
- 26-28 BAXTER STREET
- 85 BAYSIDE ROAD
- 74 BEACH STREET
- 99 BEACH STREET
- 129-131 BEACH STREET
- 309 BEALE STREET
- 188 BELMONT STREET
- 254 BELMONT STREET
- 269 BELMONT STREET
- 31 THOMAS BURGIN PARKWAY
- 117-119 THOMAS BURGIN PARKWAY
- 94 BUTLER ROAD
- 21-23 CALEDONIA AVENUE
- 69 CENTRE STREET
- 100-102 CENTRE STREET
- 42-44 CHESTER STREET
- 22 CLIVE STREET
- 186 COMMON STREET
- 251 COMMON STREET
- 51 COMMONWEALTH AVENUE
- 72 COMMONWEALTH AVENUE
- 321 COPELAND STREET
- 26 CRESCENT STREET
- 106 CRESCENT STREET
- 33 CUMMINGS AVENUE
- 9 CUSHING STREET
- 11 CUSHING STREET
- 110 DYSART STREET
- 43 ELM AVENUE
- 130-132 ELM STREET
- 104 ELMWOOD AVENUE
- 143 ELMWOOD AVENUE
- 21 ENDICOTT STREET
- 29 EUSTIS STREET
- 231 EVERETT STREET
- 235-237 EVERETT STREET
- 34 FAIRMOUNT WAY
- 196 FARRINGTON STREET
- 232 FARRINGTON STREET
- 248 FARRINGTON STREET
- 312 FARRINGTON STREET
- 243 FAYETTE STREET
- 76-78 GLOVER AVENUE
- 63 GODDARD STREET
- 250 GRANITE STREET
- 342-344 GRANITE STREET
- 32 GREENE STREET
- 167 HARRIET AVENUE
- 243 HIGHLAND AVENUE
- 313 HIGHLAND AVENUE
- 314 HIGHLAND AVENUE
- 25 HIGH SCHOOL AVENUE
- 48 HOBART STREET
- 17-19 HOLMES STREET
- 269 MANET AVENUE
- 14 MARION STREET
- 42 MARION STREET
- 129 MARLBORO STREET
- 64-68 MERRYMOUNT ROAD
- 118 MERRYMOUNT ROAD
- 15 MINHANS LANE
- 151 MONROE ROAD
- 8 MYRTLE STREET
- 1-3 NELSON STREET
- 15 NELSON STREET
- 40 NELSON STREET
- 45 NELSON STREET
- 49 NELSON STREET
- 99 NEWBURY AVE.
- 52 NEWCOMB STREET
- 51 NEWTON AVENUE
- 37 NIGHTINGALE AVENUE
- 42 NIGHTINGALE AVENUE
- 87 NIGHTINGALE AVENUE
- 35 NIGHTINGALE AVENUE
- 45-47 NIGHTINGALE AVENUE
- 136 NORFOLK STREET
- 153 NORFOLK STREET
- 183 NORFOLK STREET
- 109 NORTH CENTRAL AVENUE
- 28 NORTH CENTRAL AVENUE
- 33 NORTH CENTRAL AVENUE
- 39 NORTH CENTRAL AVENUE
- 64 NORTH CENTRAL AVENUE
- 92 NORTH CENTRAL AVENUE
- 35-37 NORTH PAYNE STREET
- 40 NORTHFIELD AVENUE
- 32 PROSPECT AVENUE
- 98 PUTNAM STREET
- 891 SEA STREET
- 1173 SEA STREET
- 5-13 SHAW STREET
- 251 SOUTH CENTRAL AVENUE
- 39-41 SOUTH WALNUT STREET
- 41 STEWART STREET
- 2-4 TOWN HILL STREET
- 32 VERCHILD STREET
- 18 WALL STREET
- 182 WARREN AVENUE
- 25-27 ARTHUR STREET
- 81 SOUTH WALNUT STREET
- 26 BAY STATE ROAD
- 41-43 BRADFORD STREET
- 199 THOMAS BURGIN PARKWAY
- 35 CRESCENT STREET
- 288 FAYETTE STREET
- 1022 FURNACE BROOK PARKWAY
- 313 GRANITE STREET
- 244 INDEPENDENCE AVENUE
- 70 KENT STREET
- 21 ROBERTSON STREET
- 35 SAGAMORE AVENUE
- 85 TABER STREET



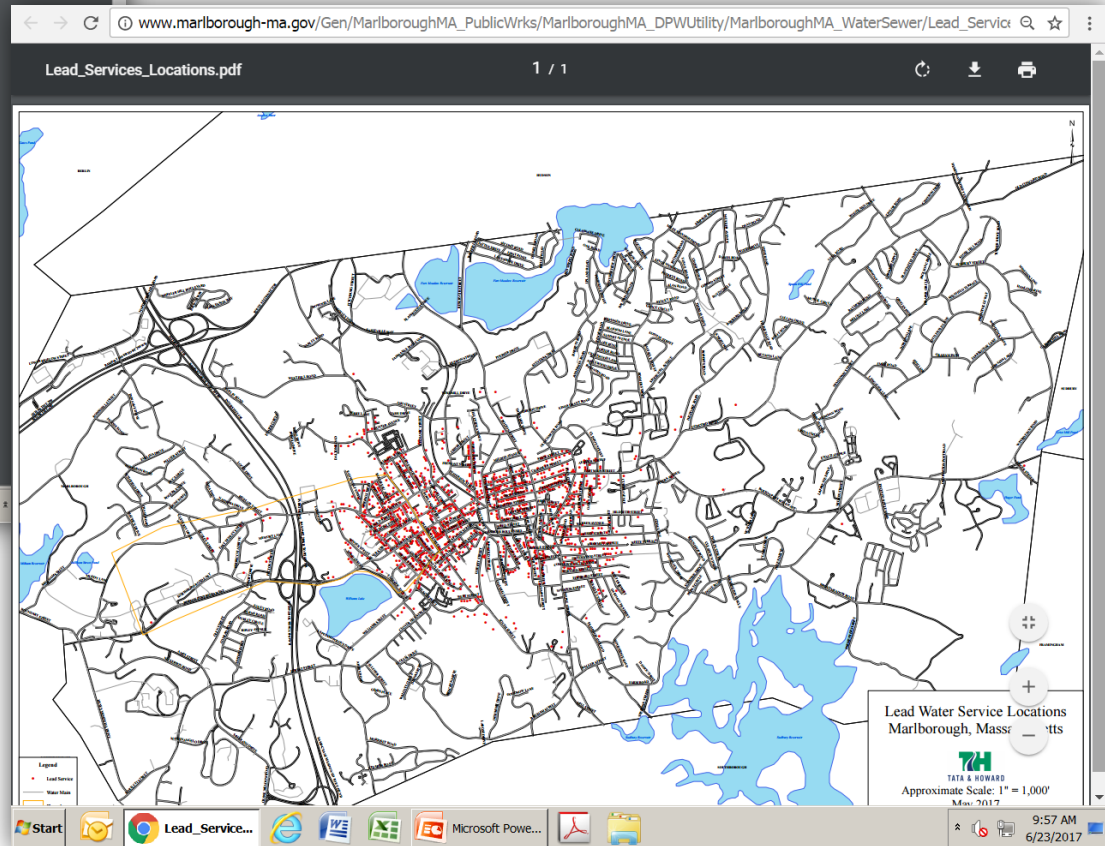
Marlborough Lead Inventory List and Map

Marlboro looks to MWRA loans to replace lead water lines

Section 4 List of Lead Services.xlsx 1 / 29

Section 4 - Documentation of Project Need
Suspected Lead Services
Marlborough, Massachusetts

SERVICE #	Address	Length of Service (feet)	
		from Water Main to Curb Box	from Curb Box to Building
885	14 ADAMS ST	16	
1241	16 ADAMS ST	21	
891	20 ADAMS ST	9	
1161	26 ADAMS ST	12	
871	32 ADAMS ST	23.6	
719	26 AMES PLACE	0	17.9
473	36 AMES PLACE	0	?
472	40 AMES PLACE	9	
569	43 AMES PLACE	0	29.9
2878	12 ARNOLD ST	0	25.4
1691	27 ARNOLD ST	12	27.11
2109	46 ARNOLD ST	0	13.7
2907	51 ARNOLD ST	13	23.1
1972	55 ARNOLD ST	0	21.4
849	24 AUBURN ST	0	15.6
2509	127 BEACH ST	0	39 GALV. 8 LD
2386	151 BEACH ST	0	14
1005	175 BEACH ST	0	21.4
1014	187 BEACH ST	0	13.3
2495	BEACH ST	0	331 GALV. 2 LD
3195	BEACH ST	34.4	
124	12 BELMONT ST	0	12
1140	16 BELMONT ST	21	18
2053	22 BELMONT ST	0	14.9
128	33 BELMONT ST	0	14
1797	65 BELMONT ST EXT	0	
3118	23 BERLIN ROAD	21.7	19
2609	43 BERLIN ROAD	12.6	74
2270	54 BERLIN ROAD	8.1	
2785	61 BERLIN ROAD	17.6	59.3
2472	66 BERLIN ROAD	14	
2277	84 BERLIN ROAD	5.6	
2563	100 BERLIN ROAD	6.4	
2268	108 BERLIN ROAD	7.5	
1787	36 BICKNELL	0	14
1568	40 BICKNELL	0	15.6
2186	14 Bicknell st	0	11
2586	17 BICKNELL ST	0	29.6
1999	20 BICKNELL ST	0	14





Malden Lead Service Line Map

← → ↻ **Secure** <https://maldenma.mapgeo.io/?latlng=42.4283%2C-71.067375&panel=themes&themes=%5B%22lead-overlay%22%5D&zoom=14> ☆ ⋮

MapGeo by AppGeo

City of Malden, MA
Proud Past, Strong Future

🔍 Search 🔄 Share 🖨️ Print 🗨️ Feedback

Getting Started

Use the tools to the right of the map to search for properties, toggle map themes, or add mark-up graphics to your map.

Please see the Help link below for additional information.

Contact Information

Disclaimer

Login

About MapGeo

Help

Inbox - Microsoft Outlook

Map Themes

Base Theme: Google Map

Lead Service Overlay:

Transparency:

CITY SIDE SERVICE

- ABANDONED
- CAST IRON
- CEMENT LINE
- COPPER
- DUCTILE IRON
- GALVANIZED
- LEAD
- UNKNOWN

Attribution

The city makes no representation as to the accuracy of this information. Some properties may have a lead service, or some properties may have removed a lead service that is not shown on this map, because the information is not known to city records. For more information contact City of Malden Engineering Department 781-397-7040.

[Click Here for more information.](#)

[Click here to request a drinking water test.](#)

USGS Aerial Photo, 2013 - 2014

Windows Taskbar: Start, Inbox - Micro..., City of Malde..., lead presentatio..., 10:21 AM 6/23/2017



Denver Water – Lead Service Line Program

Español Customer Support Emergencies Contact Us 303-893-2444 Pay Bill My Account

DENVER WATER I am a Residential Customer Go Search

Water Service & Support Billing & Rates Conservation **Water Quality** Supply & Planning Recreation Construction Projects Education & Outreach About Us

Water Quality

- Treatment Process
- Reports
- Managing Quality from Source to Tap**
 - Crypto & Giardia
 - Dirty Water
 - Disinfection Byproducts
 - Fluoride
 - Lead**
 - Where Water Meets Lead
 - Reducing the Risk
 - Home Treatment Devices
 - Lead Service Lines**
 - Request a Lead Test
 - Using Our Lead Test
 - Perchlorate
 - Taste & Odor
 - Trace Pharmaceuticals
 - Water Hardness

Home → Water Quality → Managing Quality from Source to Tap → Lead → Lead Service Lines


Lead Service Lines

Our goal: Get lead service lines out of our community

Property owners are [responsible for service lines](#), but Denver Water supports recommendations by the American Water Works Association and the National Drinking Water Advisory Council that utilities create plans for removing all lead service lines in their systems, with a shared responsibility among regulatory agencies, governments, utilities and customers.

If you're concerned about lead exposure, you can [request a free water quality test](#) and take [steps to reduce risk](#). But if you have a lead service line, the best way to remove lead from water is to replace that line with copper in full, from the water main into your home.

Loans for lead service line replacement



Replacing a lead service line can be a financial challenge, so Denver Water is partnering with [Denver Urban Renewal Authority \(DURA\)](#) to provide low-cost financing to replace these lines.

Under this 2017 pilot, which is serving as a trial for a potential wider-scale program in the future, DURA issues loans with interest rates of zero to 2 percent and repayment periods of 5 to 15 years, based on income. Eligibility requirements include owning a single-family home or duplex in the City and County of Denver or a Total Service distributor.

Contact DURA at 303-534-3872 to learn more.



Denver Water – Lead Service Line Resources

Home → Water Service & Support → Homeowner Responsibility

Homeowner Responsibility

Denver Water is responsible for maintaining and replacing water mains throughout its service area, while property owners are responsible for the service lines and meter pits at their service address.

Water damage can cost you

Water damage may or may not be covered separately from a typical homeowner's insurance policy. To verify whether water damage is covered in your policy, contact your insurance agent. Denver Water is not responsible for water damage caused by a property's service line or internal plumbing.

Service lines

Service lines include all pipe and fittings up to and including the stop and waste valve in a building with an outside meter setting, and up to and including the valve at the downstream side of the meter for an inside meter setting.

The dividing point between Denver Water-owned mains or distributor-owned mains and service lines that are the responsibility of the property owner is located where the property taps into the main, or the discharge side of the valve closest to the Denver Water-owned or distributor-owned main. At this dividing point, water leaves the public system and enters privately-owned facilities to serve individual premises. The service line is owned by and installed at the expense of the property owner.

We strongly encourage replacing a lead service line with copper to reduce the risk of lead exposure, which can have significant health impacts. Although lead isn't present in the water Denver Water sends to your house, lead can get into water as it moves through lead-containing service lines and household plumbing. Homes built before 1951 are more likely to contain lead service lines. If you suspect your service line is made of lead, you can request a water quality test and/or hire a plumber to check.

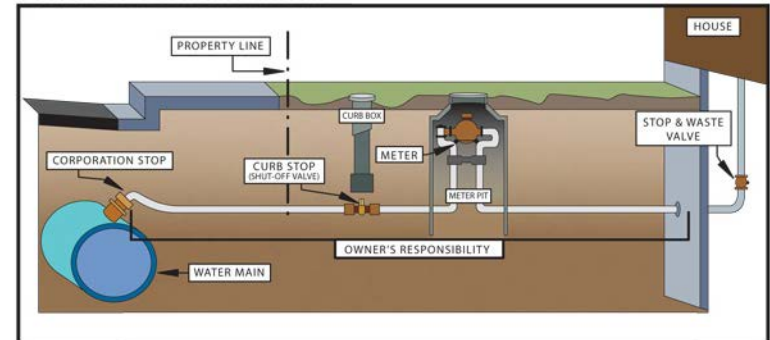
Through a partnership between Denver Water and Denver Urban Renewal Authority (DURA), owners of single-family homes or duplexes with verified lead service lines may be eligible for a no- to low-interest loan to replace their lines with copper. Contact DURA at 303-534-3872 for details.

Below is an example of an outside and an inside meter setting. Refer to Denver Water's Engineering Standards, standard drawings 53, 54 and 55 for specific layout dimensions.

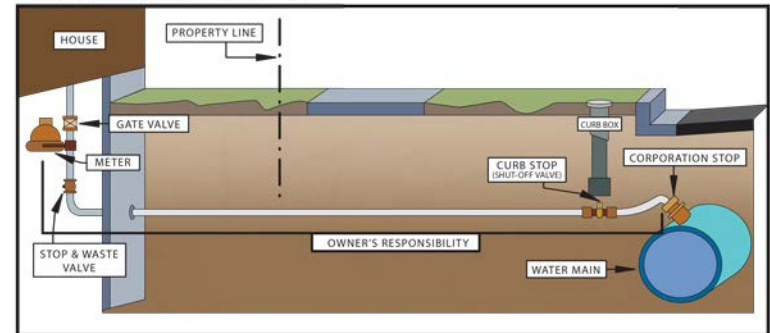
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OUTSIDE METER INSTALLATION



INSIDE METER INSTALLATION



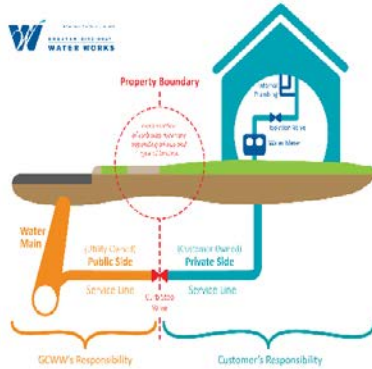


Cincinnati Lead Service Line Assistance

GCWW MENU

- Pay Your Bill / LOG IN
- H200
- Lead Awareness
- Leaks and Breaks
- About GCWW & Your Water
- Billing Information
- Moving or Selling Your Property
- News
- Engineering & Construction
- 2017 Rate Updates / Service Charges
- Contact Us

Service Line Ownership: "Public" versus "Private"



The figure above illustrates a typical service line ownership situation.

The water main runs down the street and the public (utility-owned) service connection runs from the water main to the property line. This is the GCWW portion of the connection and the responsibility of the utility (public responsibility).

The property owner owns the private service line section from the property line into the home. This private section is made of lead. Brass fittings, faucets and solder may also exist in the home and cause lead to be present. This is the owner's portion of the connection and the responsibility of the property owner (private responsibility).



Lead Line Replacement Customer Assistance Interest Form

YES! I would like to learn more about the GCWW Lead Line Replacement Customer Assistance Program. Please contact me when more information is available.

1. Please enter the information indicated below.

By entering my personal information, I consent to receive email communications from the survey author's organization based on the information collected.

First Name:

Last Name:

Work Phone:

Home Phone:

Email Address:

Address 1:

Address 2:

City:

State/Province (US/Canada):

Postal Code:

2. What year was your home built?

50 characters left.



Green Bay – Lead Information



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Green Bay Water Utility

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General Lead Information

Nationwide, water infrastructure is aging and needs to be replaced. Accordingly, Green Bay Water Utility continues to replace lead service lines, which run from the water main in the street to individual homes, as quickly as possible.

While we're happy to report that fewer than 4% of our customers are currently affected by lead service lines, we won't be satisfied until the lead is completely out of our system.

You can find out if your home is part of the fewer than 4% by viewing a map of Green Bay's remaining lead water service lines.

There are some **easy tips to follow to minimize lead in your water.**

How was the lead issue determined?

In 2011, Green Bay Water Utility found lead levels in some homes to be above the U.S. Environmental Protection Agency's (EPA) action limit of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). This was the first time Green Bay Water Utility exceeded the action level for lead since the EPA established testing requirements in 1992.

After conducting a corrosion study, Green Bay Water Utility discovered that the high lead levels were linked to lead service lines. The utility worked with the DNR to create an action plan to reduce lead levels that continues to be implemented.

How does lead get into the water?





Funding for Customers

What Is the Cost?

The estimated cost of the private lead water service replacement will be determined after an initial review of the property. Eligible property owners may qualify for a credit of up to \$2,000 towards the cost of the replacement by enrolling in this voluntary program.

How Can I Pay?

Property owners will have the ability to pay for the lead service replacement either:

- ▶ In a lump sum payment
- ▶ Interest-free, over a 48-month period as part of the water and sewer bill

How to Apply

To apply, call the Lead Hotline at 617-989-7888. Your property will be reviewed. Once the cost is determined, you may enroll, if eligible. Service replacement work is generally performed from April to October and is subject to availability.

Additional Information

For more information, call the **Lead Hotline** at **617-989-7888**.

Supplemental Information

Boston Public Health Commission
www.bphc.org
617-534-5395

Environmental Protection Agency
www.epa.gov/lead
1-800-424-LEAD (5323)

Department of Environmental Protection
www.mass.gov/eea/agencies/massdep/water/
E-mail: Program.Director-DWP@state.ma.us
617-292-5770

Massachusetts Water Resources Authority
www.mwra.com
617-242-LEAD (5323)



Let's protect Boston's waterways



Boston Water and Sewer Commission

Lead Hotline
617-989-7888

980 Harrison Avenue
Boston, MA 02119-2540
www.bwsc.org

Martin J. Walsh
Mayor, City of Boston

Henry F. Vitale
Executive Director



union bug



Boston Water and Sewer Commission

The Lead Replacement Incentive Program





Lead Testing in Schools

Joshua Das
Massachusetts Water Resources Authority

June 29, 2017



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

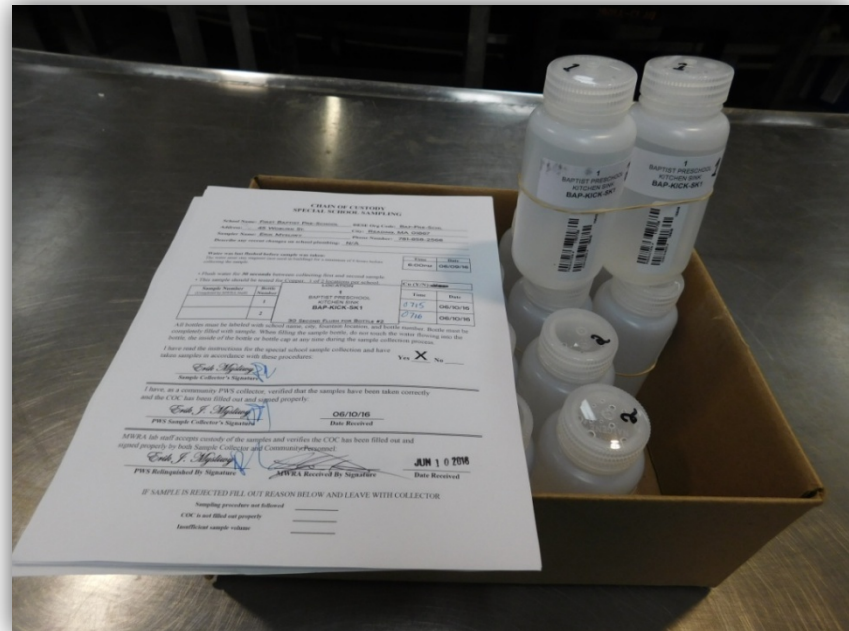
- Need Strong Organization
- Labeling is key
- Follow the paper trail
- Set system for accepting samples
- Staffing Issues





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



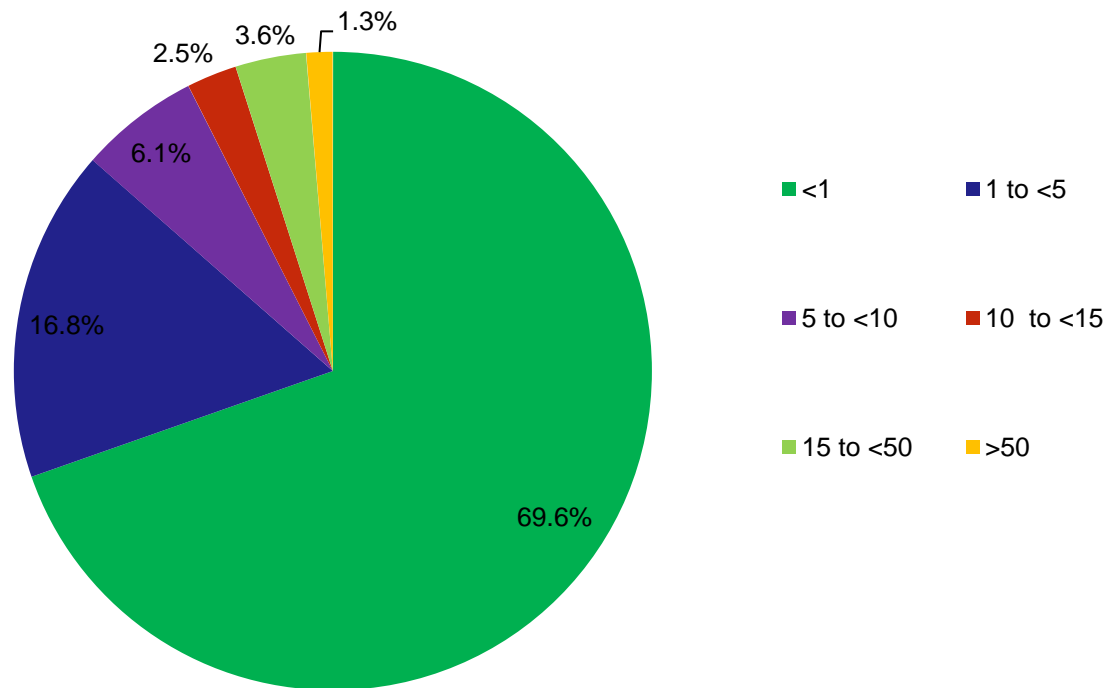
- Confirm the results
 - Provided high results to community
 - Made it to media
 - QA check determined that results were not accurate
 - Implemented a confirmation test for each high result
 - Had to apologize and have story retracted
 - At least with good news!

MWRA ‘mistakenly reported’ high lead levels at Brookline schools

Boston Globe – 6/2/16



2016 Schools Testing

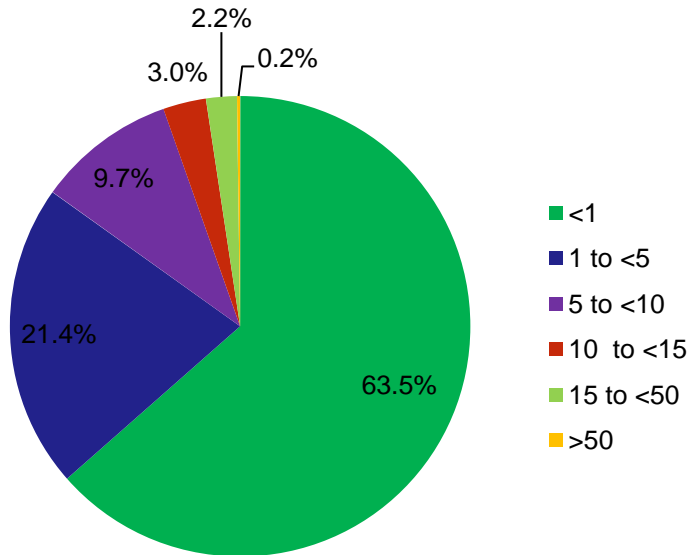


- Almost 70% of samples were below 1 ppb

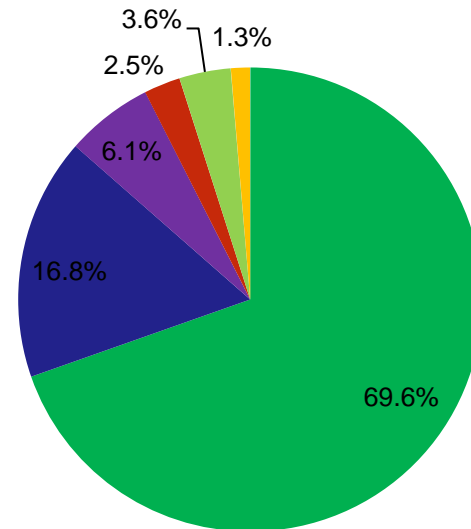


Comparison with LCR Testing Results

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



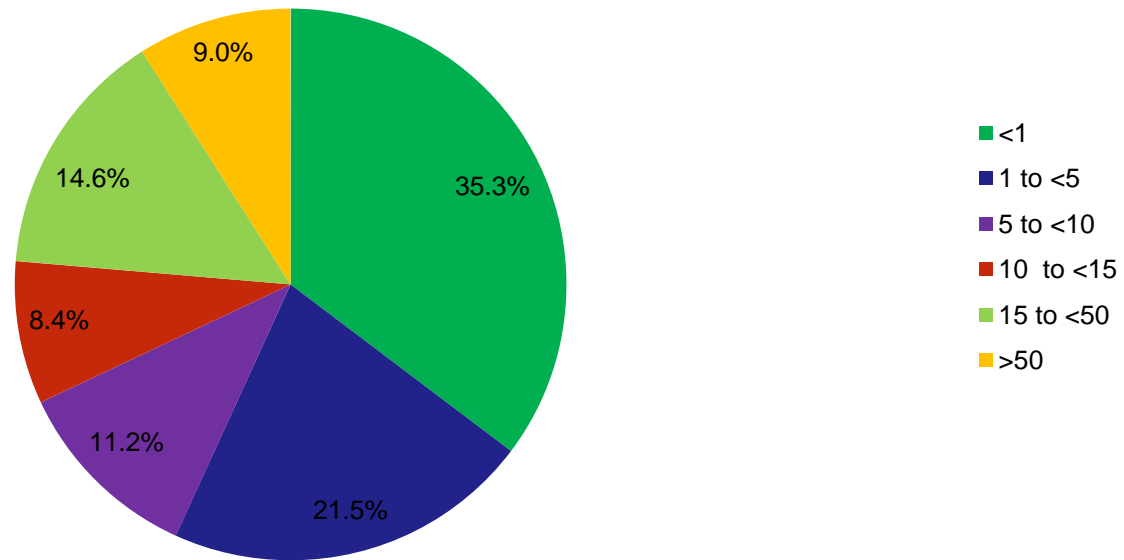
Repeat Samples

- 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

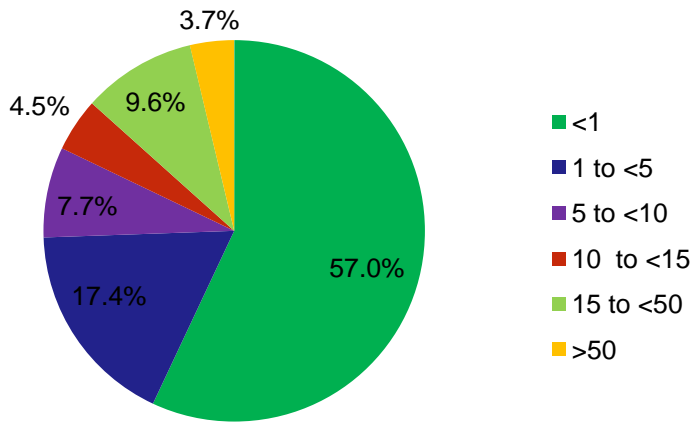
- Repeat or Investigatory Samples had more samples above Action Level including more above 50 ppb
- Many samples were not drinking water samples: showers, janitor sinks – you would not drink this water!



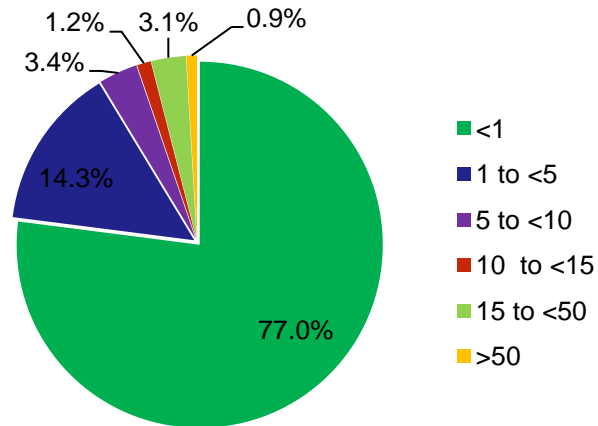


First Draw vs 30 Second Flush Sample

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



Credit: Phoebe Beierle, BPS

The Massachusetts Assistance Program for Lead in School Drinking Water

*Presentation at MWRA Community Forum on Lead in
Drinking Water*

Douglas Fine, Assistant Commissioner,
Bureau of Water Resources, MassDEP

June 29, 2017

Assistance Program for Lead in Schools Drinking Water (2016)

- ▶ Voluntary program – Open to all public schools/Early Ed and Childcare Facilities (EECFs)
- ▶ Provided hands-on technical assistance and free lab analysis for one round of samples
- ▶ Goal: Give schools info so they can act
- ▶ Partnership:
 - Superintendent, Principals, Facilities Personnel
 - UMass-Amherst TA Team
 - MassDEP, MWRA, DPH, DESE
 - Local Public Water Systems



Outputs / Findings



- ▶ **Samples** collected from;
 - 818 School Buildings in 153 Communities
 - 56,900 samples from 31,800 fixtures
- ▶ **70% of all buildings** had one or more fixture exceeding an Action Level (AL)
- ▶ **Lead – 8% of all individual samples** were above the lead AL of 0.015 mg/L.
- ▶ **Copper – 2% of all individual samples** were above the copper AL of 1.3 mg/L
- ▶ **Remediation** – Schools proactively remediated fixtures (disconnect, daily flushing, replace, “hand washing only” signs), and proactively communicated to families, staff, etc.

Public Transparency



Schools:

- ▶ MassDEP Online Reporting Tool for Schools – Web based online application, housed on agency website, where schools can:
 - Store sampling locations (sample plan / map)
 - View fixture specific sampling results (uploaded from eDEP)
 - Report remediation actions taken (entered by schools into tool so they can be posted along with the results)
- ▶ MassDEP posts summary of AL exceedences on agency website

Public Water Suppliers (PWS):

- ▶ MassDEP posts 90th percentile results on agency website
- ▶ MassDEP recommendations for PWS:
 - Post lead service line (LSL) information on their web sites
 - Use eDEP for reporting monitoring results
 - Provide consumer notices as soon as possible (instead of within 30 days as required by the current regulations)
- ▶ What else is being done / what else can be done?

After the School Assistance Program

- ▶ Recommended School Actions:
 - Complete all remediation measures (as applicable)
 - Follow the MassDEP Lead and Copper in School Drinking Water Program
 - Sample all school fixtures at least once every three years (e.g. one third each year)
 - Keep plumbing profile and sampling plan up-to-date
 - Update the MassDEP LCCA Maintenance Checklist after any sampling or programmatic change
- ▶ Final Report on the 2016 Program (on DEP's website)
- ▶ Additional schools can participate in 2nd round of Assistance Program (fall of 2017)

Additional Information

Lead in School Drinking Water

- ▶ <http://www.mass.gov/eea/agencies/massdep/water/drinking/testing-assistance-for-lead-in-school-drinking-water.html>

Douglas Fine, Assistant Commissioner, Bureau of Water Resources, MassDEP

- ▶ 617-292-5792
- ▶ Douglas.Fine@state.ma.us





Update on Lead and Copper Rule

Melissa Privetera
Massachusetts Department of Environmental Protection

June 29, 2017



Sampling Plans

- Check that your sampling plan is current
- Use only the primary locations on your approved Lead and Copper Sampling Plan
- Alternative LCR sites may be used
 - The primary site was not above the LCR Action Level during the previous sampling round
 - The alternative site is at the same or higher tier class than the primary site.



LCR School sampling

- Rotate through your school & childcare list
- Plan sampling dates at schools. Collect samples at school/childcare locations while school is in session
- Collect samples from taps that are in regular use
- Samples do not need to be collected on the same day. However, all samples need to be collected within the required monitoring period
- Use LCCA sampling codes



During and After Sampling

- Follow the MassDEP Instructions for sampling
- All MWRA Lab results are submitted to DEP via eDEP
- Notify participating residents within **30 days** of receiving results (“consumer notice”)
- Certify that you have notified residents to DEP within **90 days** of end of LCR monitoring period



- Next Sampling Date: **September 6, 2017**
- Sampling Plans Approved by DEP before this date
(Don't need to resubmit unless changes)
- Be Organized and Ready to Distribute Sample Kits
- Notify Residents Quickly Once Your Get Results
- School Tap Samples Should Be Labeled with DEP Name, Number,
and DESE Code

Public Health and Lead

MWRA Forum on Lead in Drinking Water June 29, 2017

Michael Celona, R.S.
Chief of Water Toxics

Environmental Toxicology Program
Bureau of Environmental Health
Massachusetts Department of Public Health



How does lead get into someone's body?

- Low levels may be present in food, drinking water, soil, dust, and air.
- Everyone is exposed to small amounts from these sources.
- It is not uncommon for individuals to have low levels of lead in their body.
- Main source for children is lead paint.



How can lead make someone sick?

- Developing brains of infants, young children, and developing fetuses are at greatest risk.
- The amount of lead in a child's body depends on several factors: age, nutritional status, and the various sources of lead in their environment.
- Lead exposure to young children and pregnant women should be reduced as much as possible.

Blood Lead Testing in Massachusetts

- Children are required to be screened for elevated blood lead levels.
- Children are tested at 9-12 months, ages 2 and 3, and sometimes at age 4, if they live in a High Risk community.
- This approach helps identify lead poisoned children, and eliminate lead sources.



Blood Lead Testing in Massachusetts

- MA currently defines lead poisoning as a venous blood lead level of 25 $\mu\text{g}/\text{dL}$ or greater.
- Lowering the definition of lead poisoning to a venous blood lead level of 10 $\mu\text{g}/\text{dL}$ is a key piece of proposed regulatory changes.



CLPPP Case Management

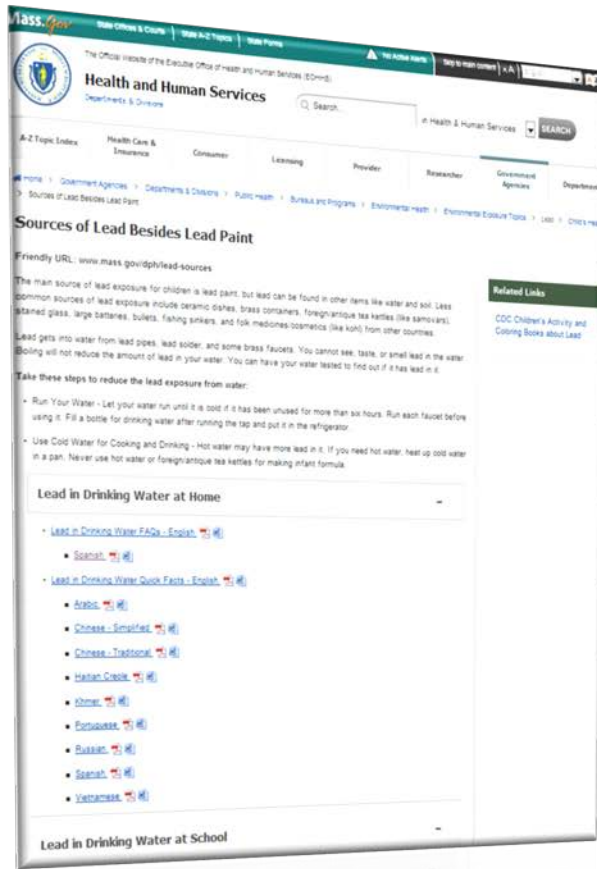
- The MDPH/BEH Childhood Lead Poisoning Prevention Program (CLPPP) currently offers home visiting services and inspections to all children in MA with blood lead levels 10 µg/dL or greater.
- If a child is lead poisoned (25 µg/dL or greater), then services are mandatory including home inspection and deleading of lead hazards in the home.
 - A lead hazard is defined by regulation as loose lead paint, lead paint on a moveable/impacted part of a window, or lead paint on woodwork like doors and door jambs.
 - Soil, water, folk remedies, etc. are not legally defined as a lead hazards, but they can be a source of exposure. CLPPP investigates and offers guidance for alternative sources.

Water Testing Results

- In October 2016, CLPPP began to include water testing in all homes where families received home visiting services.
- CLPPP has worked closely with MWRA to have many of these samples analyzed at the MWRA lab.
- CLPPP uses EHS Laboratories for those communities not within MWRA's jurisdiction.
- As of June 21, 2017, 104 families have had their water tested.
- There has been one exceedance.
 - The second draw was non-detect.
 - This was not in MWRA's service area.
 - CLPPP is providing guidance to the family and helping to prioritize possible sources of exposure, including loose lead paint and the elevated dust lead levels found in the child's home.

Where can I get additional information?

www.mass.gov/dph/lead-source



Copper in Drinking Water FAQ for School and Childcare Facilities

This fact sheet answers frequently asked questions about copper and health, how copper may get into the drinking water at your school or childcare facility, and how children, teachers, and staff can avoid exposure. Copper is a naturally occurring and essential nutrient for good health in low levels. Exposure to high levels of copper can harm health. Parents of infants and young children, pregnant women, and people with Wilson's disease or liver disease should be aware of possible health effects following exposure to high levels of copper and

dry. Our bodies have a natural mechanism to maintain the proper level of copper.

WHAT IF COPPER LEVELS IN THE DRINKING WATER AT SCHOOL OR CHILDCARE ARE HIGH?

If the copper levels are higher than the U.S. Environmental Protection Agency's (EPA) action

Lead in Drinking Water FAQ for School and Childcare Facilities

This fact sheet answers frequently asked questions about lead and health, how lead may get into the drinking water at your school or childcare facility, and how children, teachers, and staff can avoid exposure. Lead can be found in all parts of the environment. Although lead is found in nature, most exposure comes from human activities or use. Lead-based paint and lead-contaminated dust are the primary sources of exposure for children. Infants, young children, and developing fetuses are most sensitive to the effects of lead because their body systems are not fully developed. Precautions should be taken to minimize lead exposure.

HOW DOES LEAD GET INTO DRINKING WATER?

In Massachusetts, most drinking water sources from reservoirs and groundwater are lead free. When lead is present in water, it is typically due to the water flowing through lead pipes or plumbing in buildings with lead parts or solder. Service lines, which are the pipes that connect homes, schools, or other buildings to the water main, could have lead in them. Inside the school or facility, there may also be lead pipes, pipes connected with lead solder, or brass faucets or fittings containing lead. Lead levels are highest when the water has been sitting in lead pipes for several hours. Additionally, using hot water can draw lead out of pipes, solder or fixtures, releasing it into the water.

HOW DOES LEAD GET INTO SOMEONE'S BODY?

Lead is present in typically low levels in a variety of different sources, such as food, drinking water, soil, dust, and air. Individuals are exposed to lead from eating food, drinking water, accidentally swallowing soil and dust, and from breathing air that contains

lead. Other less common sources of lead include some handmade pottery and imported cookware, home remedies, toys, candy, jewelry, and canned food. Lead-based paint and lead-contaminated dust are the primary sources of exposure for children, but drinking water can be an important contributing source to overall exposure.

Since everyone is exposed to small amounts of lead in their daily life, it is not uncommon for a low level of lead to be present in someone's body.

IS IT SAFE TO BATHE IN WATER WITH ELEVATED LEVELS OF LEAD?

Yes. Lead is not easily absorbed through the skin. It is not a problem to wash hands, bathe, and/or shower in water containing lead.

WHAT IF LEAD LEVELS IN THE DRINKING WATER AT SCHOOL OR CHILDCARE FACILITIES ARE HIGH?

If the lead levels are higher than the Massachusetts Department of Environmental Protection (MassDEP) action level of 15 parts per billion (ppb), your school or childcare facility should work to determine the source. Once a school is aware of a water lead exceedance, they should prevent access to any tap or fountain above the action level and provide an alternate source of water. MassDEP can provide technical assistance to schools and childcare facilities with regard to testing and follow-up measures. There are a number of ways lead can be reduced in school drinking water, such as by replacing pipes and fixtures, reducing the corrosiveness of the water, or initiating a flushing program. Your school or childcare facility should keep parents, teachers, and staff updated

Lead in Drinking Water FAQ

This fact sheet answers frequently asked questions about lead and health, how lead gets into your drinking water, and what you can do to protect yourself and your family from lead exposure. Lead can be found in all parts of the environment. Although it is naturally occurring, most exposure comes from human activities. Young children, infants, and pregnant women are most vulnerable to the effects of lead and precautions should be taken to minimize their lead exposure.

HOW DOES LEAD GET IN MY DRINKING WATER?

In Massachusetts, most drinking water sources

Most children come into contact with lead by being exposed to the paint in old homes. When old paint that contains lead peels and cracks it creates lead dust and chips. Home renovation may also create significant amounts of lead dust and must be done with caution. Lead dust can be breathed in or get onto hands and toys. Lead intake often occurs when children put their hands and toys in their mouths.

Since everyone is exposed to small amounts of lead in their daily life, it is not uncommon for a low level of lead to be present in someone's body.

It is Massachusetts law that children be tested for lead at ages 0, 12 months, 2, 3, and

Preguntas frecuentes sobre el contenido de plomo en agua potable

En esta hoja de información se responden preguntas frecuentes sobre el plomo y la salud, la manera en que el plomo ingresa al agua potable y las medidas que usted puede tomar para protegerse y proteger a su familia de la exposición al plomo. El plomo puede encontrarse en todas partes en el ambiente. Si bien ocurre naturalmente, la mayor parte de la exposición proviene de actividades humanas. Los niños pequeños, los bebés y las mujeres embarazadas son más vulnerables a los efectos del plomo, y se deben tomar precauciones para minimizar su riesgo a la exposición.

¿De qué manera ingresa el plomo al agua potable?

En Massachusetts, la mayoría de las fuentes de agua potable, como tanques y agua subterránea, no tiene plomo. Si hay plomo en el agua, generalmente se debe al agua que corre por tuberías o plomería de plomo con partes o soldaduras de plomo en los hogares. Las conexiones a la red, que son las tuberías que conectan su casa con la tubería maestra, pueden tener plomo. Dentro de su casa, es posible que tenga tuberías de plomo, tuberías de cobre con soldaduras de plomo, o grifos o accesorios de bronce que tienen plomo. Los niveles de plomo son más altos cuando el agua ha estado en tuberías de plomo durante varias horas. El agua caliente provoca que el plomo ingrese al agua más rápidamente.

¿De qué manera ingresa el plomo al organismo?

En muchos casos, la mayor exposición al plomo proviene de polvo de pintura, partículas de pintura y suelo contaminado con plomo. El plomo también puede ingresar al organismo al beber o cocinar con agua con plomo. Los niños pequeños absorben plomo con mayor facilidad que los adultos, y una madre puede pasarle plomo al bebé. Por estos motivos, el plomo en el agua potable puede ser una fuente importante de exposición para mujeres embarazadas, niños pequeños y bebés alimentados con fórmula en polvo.

Datos resumidos sobre la exposición al plomo

- Descripción general:**
- Los bebés, los niños pequeños y las mujeres embarazadas son especialmente vulnerables a los efectos nocivos de la exposición al plomo.
 - La mayor parte de la exposición al plomo se debe a polvo y partículas de pintura con plomo.
 - La mayoría de las fuentes de agua pública en Massachusetts no tienen plomo, pero puede haber plomo en el agua de su casa debido a tuberías, soldaduras o accesorios antiguos de plomo.
- Medidas que se deben tomar:**
- Hable con el médico de su hijo sobre la exposición al plomo y para que le realicen un análisis de detección de plomo a su hijo.
 - Averigüe si en casa tiene pintura con plomo o tuberías/accesorios de plomo.
 - Use agua fría para beber y cocinar.
 - Llame al departamento local de agua para averiguar sobre la línea de servicio de su hogar y para analizar el agua.

Who can I contact with additional questions?

For questions about health effects from potential exposure to lead, contact:

Massachusetts Department of Public Health
Bureau of Environmental Health
(617) 624-5757

www.mass.gov/dph/lead-source



For questions about the Childhood Lead Poisoning Prevention Program, contact:

Terry Howard, Director of CLPPP

Terry.Howard@state.ma.us

Additional information on blood lead screening rates and numbers of elevated children by community is available at:

www.mass.gov/eohhs/researcher/community-health/environment-health/lead



Community Forum on Lead in Drinking Water Closing

June 29, 2017



Lead Service Lines – Replacements and Inventories

- Lead Service Line Replacement Programs
 - Began Planning/Talk to Us!
- Lead Service Line Inventories
 - Work on it/Improve Over Time
 - Publically Available





Lead Testing – Schools

- School Testing at MWRA Lab
 - Still Available
 - Day Cares
 - Other Locations
- Remediate higher areas
- Retest if desired
- Document efforts on DEP website





- LCR Testing
 - September 6
 - Check Sampling Plan
 - Prior Approval by DEP





Fall Emergency Response Training: Hold The Date

- Two-Day Course
- *Disaster Management for Water & Wastewater Utilities*
- DHS & Texas A&M

- **October 3 and 4** **Chelsea**
- **October 10 and 11** **Carroll Treatment Plant**

