Town of Wakefield Lead Forum

Wednesday, May 11, 2016 at 6:30 pm
Public Safety Building, 1 Union Street

Richard Stinson, Director of Public Works
Steven Fitzpatrick, Water and Sewer Supervisor
Ruth Clay, MPH, Health Director
Carol Rego, P.E., CDM Smith Inc.
Meeting Agenda

- Introductions
- Lead and Copper Regulatory Overview
- How Wakefield’s Water is Treated to Reduce Lead Corrosion
- Sources of Lead in Drinking Water
- Steps You Can Take to Reduce Lead at the Tap
- Lead Service Lines
  - Ownership
  - Identifying
  - Replacing
- Questions & Answers
How is Lead Regulated in Drinking Water?

- In 1991, EPA established Action Level for Lead of 15 parts per billion (ppb)
  - Most recent results in Wakefield were 2 ppb
- Samples collected at customer’s taps
- Action Level based on 90\textsuperscript{th} percentile
  - If 100 samples are collected, 90 must be below 15 ppb
  - If 30 samples are collected, 27 must be below 15 ppb
How Wakefield’s Water is Treated to Reduce Lead Corrosion

- **Source water in the reservoirs does not contain lead**
  - Crystal Lake
  - MWRA’s Quabbin and Wachusett Reservoirs
- **Water is treated to make it less corrosive**
  - pH increased to 9.5 +/- by both Wakefield and MWRA
- **Water leaving the treatment plants does not contain lead**
How Corrosion Control Treatment Works

1. Lead Service Pipe Cut in Half
   - Protective Scale Layer
   - Lead Pipe

2. Magnified View

3. Cross-Section View
Town of Wakefield Lead Compliance Summary

- 90th Percentile Lead Level (ppb)
- EPA Lead Action Level

<table>
<thead>
<tr>
<th>Date</th>
<th>Lead Level (ppb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar-2001</td>
<td>8</td>
</tr>
<tr>
<td>June/Dec 2003</td>
<td>7</td>
</tr>
<tr>
<td>Sep-2004</td>
<td>4</td>
</tr>
<tr>
<td>Sep-2006</td>
<td>2</td>
</tr>
<tr>
<td>Sep-2009</td>
<td>3</td>
</tr>
<tr>
<td>Sep-2012</td>
<td>2</td>
</tr>
<tr>
<td>Sep-2015</td>
<td>2</td>
</tr>
</tbody>
</table>
Sources of Lead

- Service lines (if made of lead)
- Valves
- Faucets
  - Especially brass or chrome-plated brass faucets
- Solder
- Other fixtures with lead solder

Homes built before 1986 are more likely to have lead pipes, fixtures and solder
Lead Corrosion in Water Depends on Many Factors

- If there is lead present:
  - The chemistry of the water
  - The amount of lead the water comes into contact with
  - The water temperature
  - The amount of wear in the pipes
  - How long the water stays in pipes, and
  - The presence of protective scales or coatings inside the plumbing materials
Steps You Can Take to Reduce Lead at the Tap (1 of 4)

- Have your water tested
  - You can’t see, smell or taste lead in water
  - Make sure the laboratory is certified in Massachusetts
  - Testing usually costs between $20 and $100
- Flush your tap water when used for cooking or drinking
  - Whether or not you have a lead service line because plumbing fixtures like faucets and valves can contain lead
  - Especially if the faucet has gone unused for more than a few hours
  - Let the water run from the faucet until it is noticeably colder
  - Flush each drinking water faucet after long periods of non-use
  - Use the flushed water for non-potable purposes like watering plants or household chores
  - After flushing the faucet, store water in the refrigerator for later use
Steps You Can Take to Reduce Lead at the Tap (2 of 4)

- Use only cold water for cooking or drinking
- Clean faucet strainers and aerators regularly

Steps You Can Take to Reduce Lead at the Tap (3 of 4)

- Install faucets certified to be “lead-free” or contain no lead
  - Purchase products that have been certified
  - The American National Standards Institute (ANSI) has accredited 8 third-party organizations to certify products
  - Look for the registered trademark PLUS lead free certification identifier text (see examples below)

Source: USEPA Factsheet How to Identify Lead Free Certification Marks for Drinking Water System & Plumbing Products

http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100LVYK.txt
Steps You Can Take to Reduce Lead at the Tap *(4 of 4)*

- Some home treatment devices remove lead, but not all do
  - Test your water first
  - Install a device that has been independently certified to remove lead
  - NSF International, the Water Quality Association, Underwriters Laboratories and CSA International certify home treatment products
  - Be sure to follow the manufacturer's operation and maintenance instructions carefully

**Note**: Boiling water DOES NOT remove lead
Lead Service Lines: Ownership

- The service line is the pipe that connects the water main outside your home to your household plumbing
  - Town owns from water main to property line
  - Homeowner owns from property line to house
Lead Service Lines: Identifying

- How do I know if my service line is made out of lead?
  - Hire a certified plumber or call the Water Department
  - Lead service lines are dull gray color and very soft
  - Carefully scratch with a key – the scratch will turn bright silver if it is lead (don’t use anything sharp!)
  - Some galvanized piping can also be dull gray in color. A strong magnet will cling to galvanized pipe but not lead.

Lead Service Lines: Replacing

- Replacing just part of the line can sometimes actually **increase** lead levels
  - If the Town replaces its part of the line, it's a good idea for the homeowner to do the same
- Hire a licensed plumber
  - Obtain multiple written quotes
- Set aside or purchase enough water for anticipated uses during construction
- After replacement, your plumber should remove faucet screens and open the cold water tap completely, letting the water flow for 30 minutes
- Prior to using water inside the home for normal use, flush each faucet
Town of Wakefield Service Line Inventory

- Detailed review of individual service cards was completed in the early 1990s
- Inventory reviewed and checked in 2016
- Removal of service lines planned for Summer 2016
- Additional locations may be present but not recorded as lead on service card records

<table>
<thead>
<tr>
<th>Number Listed as Containing Some Lead</th>
<th>Town-owned Portion</th>
<th>Homeowner –owned Portion</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Copper</td>
<td>Lead-lined</td>
</tr>
<tr>
<td>5</td>
<td>Lead-lined</td>
<td>Lead-lined</td>
</tr>
<tr>
<td>0</td>
<td>Lead-lined</td>
<td>Copper</td>
</tr>
<tr>
<td>Total = 14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Contact Us for Assistance

<table>
<thead>
<tr>
<th>Contact</th>
<th>Title</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard Stinson</td>
<td>Director of Public Works</td>
<td>(781) 246-6301, Ext. 4120</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(339) 219-4120</td>
</tr>
<tr>
<td>Steven Fitzpatrick</td>
<td>Water/Sewer Supervisor</td>
<td>(781) 246-6318</td>
</tr>
<tr>
<td>Ruth Clay, MPN</td>
<td>Health Director</td>
<td>(781) 246-6375</td>
</tr>
</tbody>
</table>
Questions & Answers