To: Ald. Mark Borkowski  
From: Tea Norfolk, Legislative Fiscal Analyst – Lead  
Date: January 3, 2017  
Subject: Date Milwaukee Started Using Copper for Water-Service Lines

This memo is in response to your request for information regarding the reason 1951 is used as a reference date for properties being serviced by lead water-service lines versus copper water-service lines.

The 1951 date does not come from the Milwaukee Code of Ordinances, but rather, from a search that Milwaukee Water Works (MWW) conducted of the actual materials historically used in water-service lines that were installed throughout the City.

A search of the historic Code did not reveal specific requirements for copper to be the only material used for water-service lines in 1951. A 1948 publication by Milwaukee Water Works provided that either copper or lead may be used for water-service lines. In 1957, the Common Council passed a resolution giving MWW and the Commissioner of Public Works authority to set forth water service piping specifications. In 1962, the City mandated copper as the material to be used in water-service lines.

Please see the pertinent provisions from the MWW and Department of Public Works publications below, followed by an explanation of MWW’s searchable database used to determine the materials in water-service lines.

Pertinent Provisions
In 1948, Section 6.07 of the “Rules, Regulations and Rates Governing Water Service” by the Milwaukee Water Works (MWW) provided as follows:

**6.07 Required Size, Type and Control**

The size and type of piping for a water supply to the premises and the means of controlling such supply shall be as set forth herein:

<table>
<thead>
<tr>
<th>Size of Corp. Stop or Tapping Valve</th>
<th>Size of Service of Valve</th>
<th>Control of Valve</th>
<th>Pipe Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8”</td>
<td>3/4”</td>
<td>Curb Stop</td>
<td>Lead or Copper</td>
</tr>
<tr>
<td>3/4”</td>
<td>1”</td>
<td>Curb Stop</td>
<td>Lead or Copper</td>
</tr>
<tr>
<td>1”</td>
<td>1-1/4”</td>
<td>Curb Stop</td>
<td>Lead or Copper</td>
</tr>
<tr>
<td>1-1/2”</td>
<td>1-1/2”</td>
<td>Curb Stop</td>
<td>Lead or Copper</td>
</tr>
<tr>
<td>2”</td>
<td>2”</td>
<td>Branch Gate</td>
<td>Lead or Copper</td>
</tr>
<tr>
<td>3” &amp; Up</td>
<td>3” &amp; Up</td>
<td>Branch Gate</td>
<td>Lead or Copper</td>
</tr>
</tbody>
</table>

In 1957, the Common Council passed a resolution by File No. 57-1603 which provided, in pertinent part, as follows:

*Whereas*, The interests of the utility are best served by having a separate publication of “Rules and Regulations” governing water service by the Milwaukee Water Works and a separate publication of “Water Service Piping Specifications” to be used separately and independently, as the situation requires, and….. therefore be it…

*Resolved*, That the Commissioner of Public Works is hereby authorized and directed to alter and modify the “Water Service Piping Specifications” in the future, as required, without the approval of the Common Council….

In 1962, Section 2.1.3 of “The Specifications For Water Service Piping” by the Department of Public Works and MWW provided, in pertinent part, as follows:

**2.1.3 Copper Water Service Piping**
1. Use—Copper piping shall be used in all new service installations two (2) inches or smaller. Copper piping may be used to repair existing lead water service piping. Connections to lead pipe shall be made “lead to copper” wiped solder joints.

**Milwaukee Water Works Search of Records**

Milwaukee Water Works (MWW) keeps records of the materials used in the City-owned portion of water-service lines. The records are kept because a permit is required every time a water main is tapped. Tapping permits are numbered in sequential order, beginning with Number 1, which was issued in 1874. Permits provide the address and the material used for the water-service line.

A search of the records revealed that all city-owned water-service lines up to permit no. 139,000, which was issued in 1947, were made of lead. All water-service lines after permit no. 150,000, which was issued in 1951, were made of copper. The water-service lines installed from 1947 to 1951 (permit nos. 139,001 – 149,999), were made of either lead or copper. Because some permits for lead lines were issued in 1951 prior to permit no. 150,000, using 1951 as the reference year is an estimate of the last year lead service lines were used.

MWW keeps records of the material used on the city-owned portion of the water-service lines for each specific property in its database of permit records. The records are searchable so that any property owner can contact MWW or download from the MWW website the list of properties that have a water meter or active billing account to find out whether the city-owned portion of their water-service line is made of lead or copper.

Note that the year refers to the date the water-service line was originally established. In some instances, a house may have burned down or been taken down, and a new house may have been built on the existing foundation. If the original water-service line remained connected and was still used in the new home, then the records reflect that original installation date and not the date that the new home was built on the property.

Also note that MWW does not have records of the material used for the privately-owned portion of the water-service line or even whether the material on the private side has been changed. Unless MWW has information to the contrary,
MWW assumes that the material used on the private side is the same as the material used on the public side of the water-service line.

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