

# MEMORANDUM

March 17, 2016

To: Trustee Davida Amenta, Chairperson  
Public Works Committee



From: Leeann Butschlick, Director of Public Works

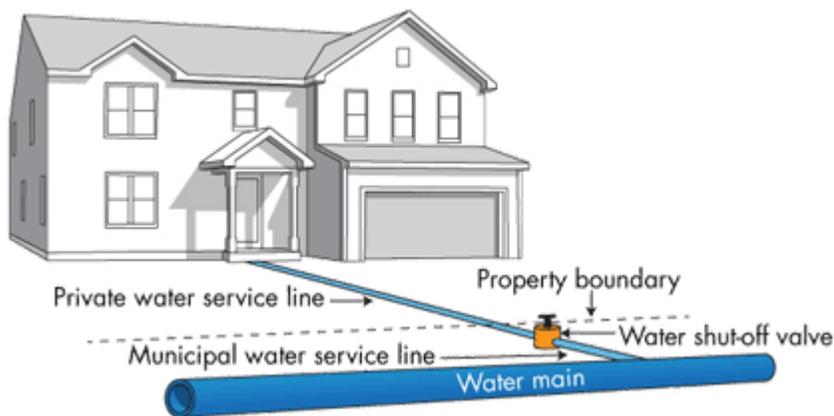
Copy: Village Board  
Chris Swartz, Village Manager  
Joel Kolste, Assistant DPW Director  
Mark Emanuelson, Finance Director  
Scott Bohm, Utility Foreman

Re: Water Service Line Replacement Program

Your March 21 agenda includes discussion and consideration of items relating to the replacement of lead water service lines.

## BACKGROUND

The Village of Shorewood owns and maintains a water distribution system that dates to the late 1880's. The system supplies water, purchased from Milwaukee Water Works, to 3,528 metered customers through nearly 32 miles of water main. These mains range in size from six through 16 inches and are comprised of a variety of materials, including ductile iron pipe, cast iron and PVC.



Water is delivered from the Village-owned main to a private building through the water service lateral or line. This line is comprised of two distinct parts: the municipal or Village service and the private service. The "Village service" is the section located in the area from the water main to and through the curb stop (the property's water shut off valve). This section is owned and maintained by the Village of

Shorewood. The second section, the "private service", is from the curb stop into the building. This section is owned and maintained by the property owner as outlined in §415-20.C.

The vast majority of the water services were constructed in an era in which lead was the construction material of choice. Our records indicate that 3,518 (90.4%) of the Village services are lead. It is estimated that a similar number of the private services are also lead and that home built during this era may also have lead plumbing components.

**Milwaukee Water Works**

You may recall a January 27, 2016 Milwaukee Journal-Sentinel article regarding Milwaukee Water Works's intent to cancel planned 2016 water main relays. This change was due to findings of recent studies that indicate the disturbance of service lines through partial replacement increases the risk of lead exposure in the connected home. Like Milwaukee and many other area municipalities, this is the approach Shorewood has utilized to replace the aging lead services.

It must be reiterated that lead is NOT found in the source water, Lake Michigan, and it is NOT found in our treated drinking water. Water can dissolve lead from the service lines and internal plumbing made of lead, especially when water stands unused for several hours. Since 1996 Milwaukee Water Works has treated its water with a phosphate compound that forms a protective coating inside pipes to control lead dissolving into the water.

**Public Health & Safety**

Without exception, the primary focus of the Village of Shorewood and the Department of Public Works is the protection of the public health and safety of our residents.

The Village complies with all state and federal drinking water safety standards and testing requirements. The EPA's Lead and Copper Rule sets an action level for lead at 15 micrograms per liter. At least 90 percent of all samples taken in any sampling round must be less than 15 micrograms per liter. The Village of Shorewood has NEVER exceeded this action level.

All actions considered and recommended by the Department of Public Works and Shorewood Water Utility have always been and will continue to be done with the public health and safety as the foremost consideration.

**ANNUAL INFRASTRUCTURE IMPROVEMENT PROGRAMS**

Within the last decade, the Village's asset management and infrastructure improvement focus have been evident in both the development of improvement and maintenance plans for the Village's various infrastructure systems (roads, sewers, water, etc.) and the funding commitments to ensure their implementation.

Great strides have been made in the coordination of the various major infrastructure improvement programs. Street reconstruction has been organized around major sewer construction and this has created additional opportunities to coordinate water distribution system improvements into these construction projects. Since 2012, Shorewood has replaced nearly four percent of its total water main system.

**2016 Construction Programs**

As you know, contracts have been awarded for approximately \$4 million dollars in roadway, sewer and water system improvements this year. Included in these programs are water system upgrades as follows:

- NE Area Combined Sewer – 760 lineal feet ductile iron pipe watermain, 4 gate valves and 11 service replacements.

- Beverly Road Reconstruction – 2,650 lineal feet ductile iron pipe watermain, 6 gate valves and 57 service replacements.

To address issues relating to both the water system infrastructure's age and material components, the Village has included municipal service replacements as a part of all water system construction for approximately the last ten years. The most opportune time to replace this section of the service is at the time of main replacement and/or street reconstruction.

Please note that the contract award for service replacements scheduled above include funding for only the Village-owned portion of the water service line. The Village has not previously coordinated private service line replacement with public construction projects. This year, however, we have secured unit prices from the respective underground contractors to replace the entire service line at one time if the homeowner elects to do so.

### **PROGRAM/POLICY CONSIDERATIONS**

Staff proposes a four step approach to address the issues related to lead services:

1. Formalization of a past policy which would authorize DPW/Utility staff to approve individual Village-owned water service replacements on an on-going basis when such a homeowner initiates the private service replacement.
2. Prequalification of private contractors for service lateral replacements as a resource for property owners who wish to replace their service lateral outside a Village program.
3. Development of a program to address replacement of lead services in the water main replacement areas of the 2016 construction programs.
4. Development of a comprehensive policy regarding replacement of lead services 2017 and beyond.

#### **Formalization of Past Policy**

Currently, if a homeowner replaces the private water service DPW staff will either replace the public section of the service or negotiate with the plumber to complete the work to the main. Such requests are infrequent, but could become more commonplace and require greater budgetary expenditures. As such, staff requests your authorization to continue this practice.

#### **Prequalification of Contractors**

In an effort to assist residents, DPW staff with significant input from Building Inspection staff would develop a list of contractors with good standing in the Village. This list would be available to residents who are interested in private service replacement and/or require emergency service for a failed service lateral.

#### **2016 Lead Service Replacement Program**

DPW staff has worked extensively with both the North Shore Health Department and its consultant, City Water, Inc., to develop a water service replacement program and protocol. The attached program is modeled on Cincinnati, Ohio, which is recognized nation-wide as a leader in this area.

**Continuing Lead Service Replacement Program**

Building upon the program developed for 2016, staff will continue its review of global best management practices. A long-term policy will also evaluate possible funding sources to continue to aggressively remove lead service laterals.

Staff is developing a comprehensive communication program with targeted pieces for residents in the water main relay area as well as Village residents in general utilizing public information meetings, direct mail, door hangers, bill inserts, the Village Manager's memo, the Village web site and other opportunities.

**VILLAGE BOARD ACTION**

If you concur with the above, staff suggests the following motions:

1. Authorization of staff to approve individual Village-owned water service replacements when homeowner initiates private service replacement.
2. Direct staff to develop a list of prequalified plumbing contractors as a resource to residents for the replacement of private water services.
3. Approval of the 2016 Lead Service Replacement Program
4. Direct to staff to develop a comprehensive replacement program for 2017 and beyond.

Representative from the North Shore Health Department, City Water, Inc., and DPW staff will present this item at your meeting on Monday evening. In the meantime, please do not hesitate to contact me if you should have any questions.