



The Wisconsin Section of the American Water Works Association presents its Utility Special Achievement Award to the Milwaukee Water Works

**Annual Meeting and Expo, Monona Terrace, Madison, Wisconsin
Sept. 15, 2016**

Special Project: Milwaukee Water Works "Lead Service Line Program"

The Milwaukee Water Works (MWW) worked effectively with health and regulatory agencies to shape field and water quality monitoring activities and customer outreach to reduce lead at the customer's tap.

On ascertaining in January 2016 that 70,000 of City of Milwaukee properties (44%) have lead service lines (LSLs), the MWW collaborated with the Milwaukee Health Department (MHD), Wisconsin Departments of Health Sciences and Natural Resources and U.S. Environmental Protection Agency to develop protocols for field activities and lead testing to gain a new understanding of measuring lead concentrations of LSL disturbances. The utility had conducted lead sampling at households with lead service lines (LSLs) in spring 2015 before, during, and after main replacement that affected the properties. Lead levels increased after the work but returned to pre-disturbance levels in about a month.

MWW identified construction projects and emergency activities that could disturb LSLs and devised a plan to protect customers while performing needed work, such as responding to leaking LSLs. MWW implemented a comprehensive sampling plan of 12 consecutive 1L samples plus a 13th well-flushed sample, collected by customers who volunteered. The same residences were sampled before, soon after, and about a month after construction. As of June 20, over 1,800 samples had been collected from 65 residences; results were shared with those customers with risk messaging tailored to the presence or absence of vulnerable populations and measured lead concentrations.

Personnel throughout MWW have been involved. Section managers met regularly to share information, report results, develop field protocols, write scripts and questionnaires for employee-customer contacts, and devise templates for letters returning sampling results to customers. Employees were routinely briefed to ensure understanding of the issue and consistent messages to customers.

A citywide outreach campaign, including MWW-MHD team appearances at community events, was devised by staff representing Mayor Tom Barrett's office, MWW, the Department of Public Works and MHD. Field personnel provide personal contact, informational materials that include an emphasis on flushing plumbing after construction, pour-through filters certified to remove lead, and encourage replacement of private side LSLs. A citywide public outreach and news media campaign was based on AWWA guidance.

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Tools in English and Spanish included fact sheets and FAQs, graphics describing lead service lines and faucet aerator cleaning, a brochure, bill insert and letter to customers with lead service lines, an illustrated list of NSF-certified lead removal filters and a list of laboratories that test water for lead. These are available in print and on relevant city department websites. Tracking of inquiries to MWW and city call centers provides direction for shaping communications and outreach.

Targeting the most vulnerable customers, next steps underway in June included a plan to use a \$1 million state loan to begin replacing LSLs, with a priority on 385 state-licensed day care centers. The public schools do not have lead service lines. Estimates for replacement of all LSLs ranged from \$500 million to \$750 million over three to five decades. MWW's 20-year-old corrosion control program effectively complies with EPA regulations.

Citation:

With over 70,000 lead service lines (LSLs), the Milwaukee Water Works identified water and sewer projects that could disturb LSLs and collaborated with the health and regulatory agencies to protect customers during work. Twelve consecutive 1L samples plus a well-flushed sample were collected before and after construction. As of June 20, over 1,800 samples had been collected from 65 residences; results were shared with customers with risk messaging tailored to vulnerable populations based on lead concentrations. Results will inform future construction practices and protective measures. Public outreach provided easy steps for all customers to reduce their exposure to lead in drinking water.

WIAWWA is a 900-member organization of water professionals dedicated to providing a sufficient, high-quality supply of drinking water. WIAWWA engages members in educational opportunities and legislative participation addressing water treatment, quality, regulatory issues and customer service.

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