

Lead Water Service Lines Action For Milwaukee

Steering & Rules Committee

June 23, 2016

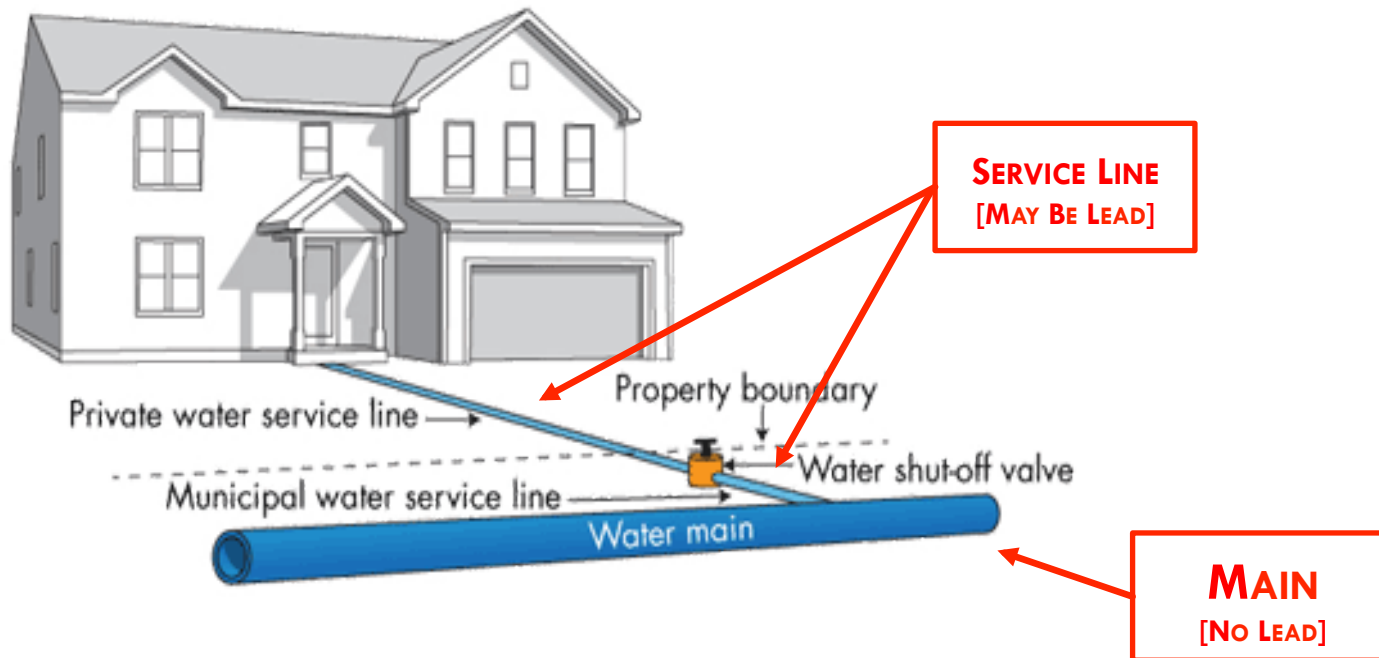
Lead Service Lines - Update

- ▶ Progress To Date - 2016
 - ▶ Testing & Public Health
 - ▶ State & Federal Coordination
 - ▶ Replacement Planning
- ▶ Action Plan 2016-17
 - ▶ Advocacy
 - ▶ Replacements
 - ▶ Public Information

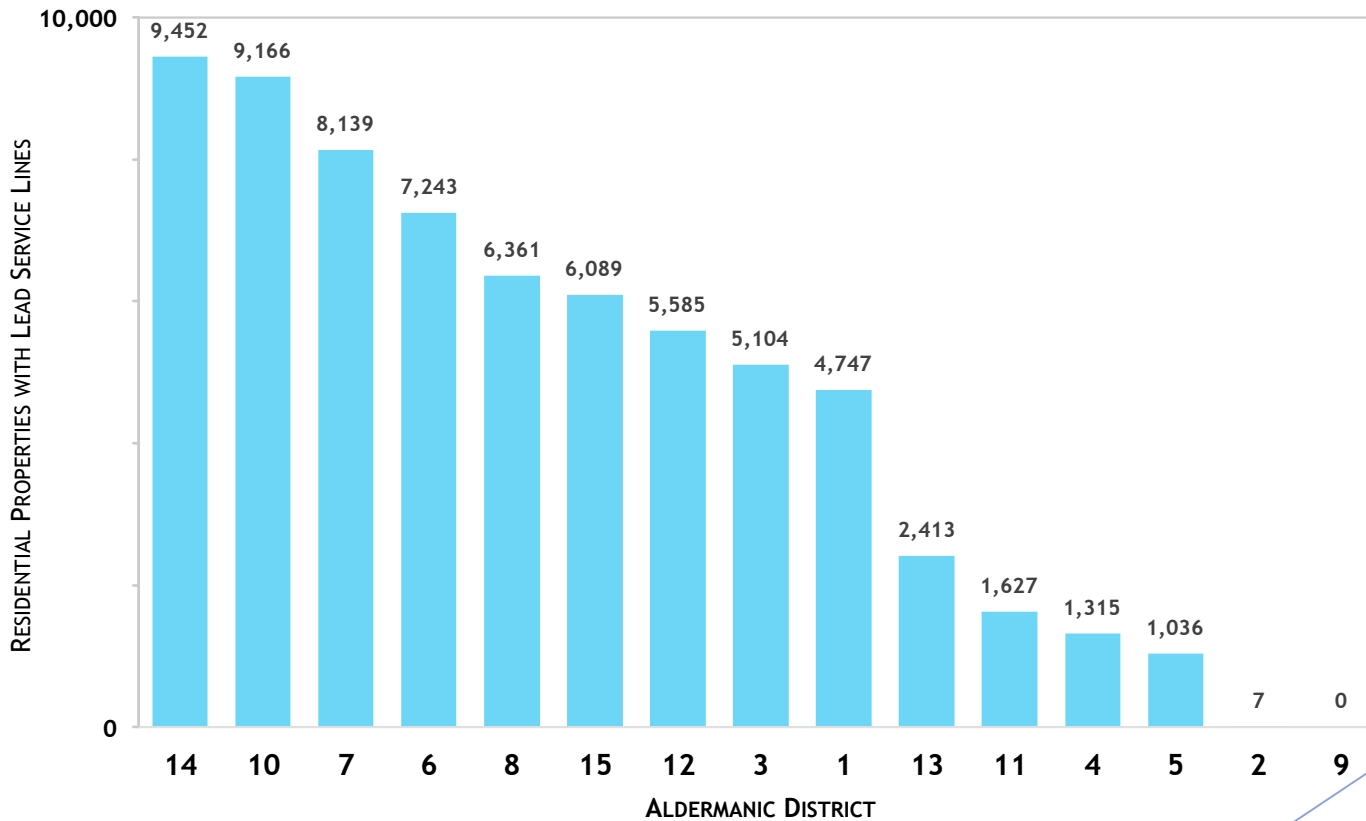
Lead Service Lines

- ▶ Pre-1951 housing stock throughout the city has lead service lines
- ▶ Corrosion control (phosphate) has been used since 1996 to “coat” lines
 - ▶ Phosphate levels tested daily in the MWW system
- ▶ Lead lines not isolated to any one Milwaukee neighborhood
- ▶ Other WI communities have significant numbers of lead service lines
- ▶ MHD and MWW in partnership on evaluation and response

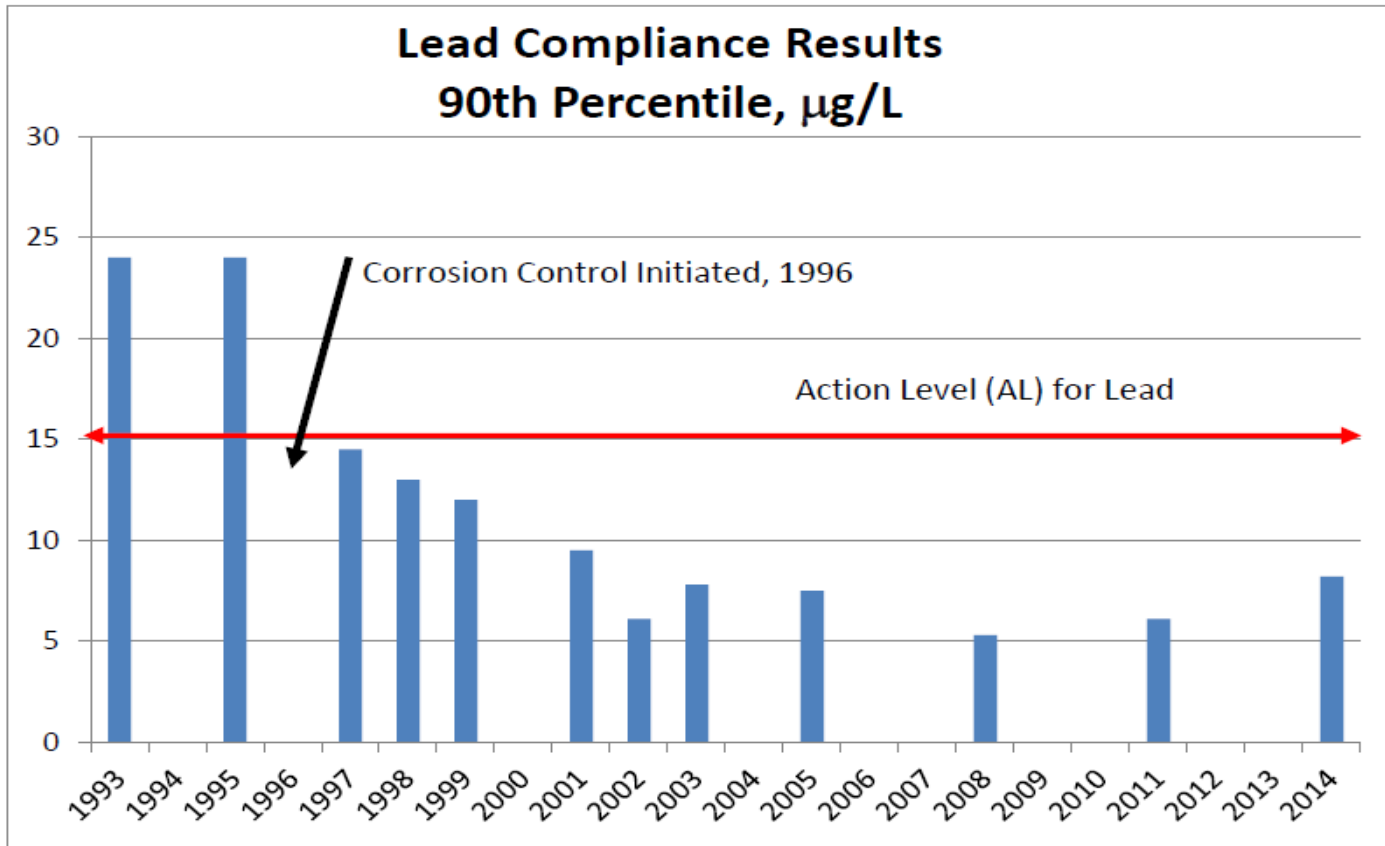
Service Line Diagram



Residential Lead Service Lines By Aldermanic District



Milwaukee's EPA Tap Sample Results



Milwaukee's Lead Reduction Strategy

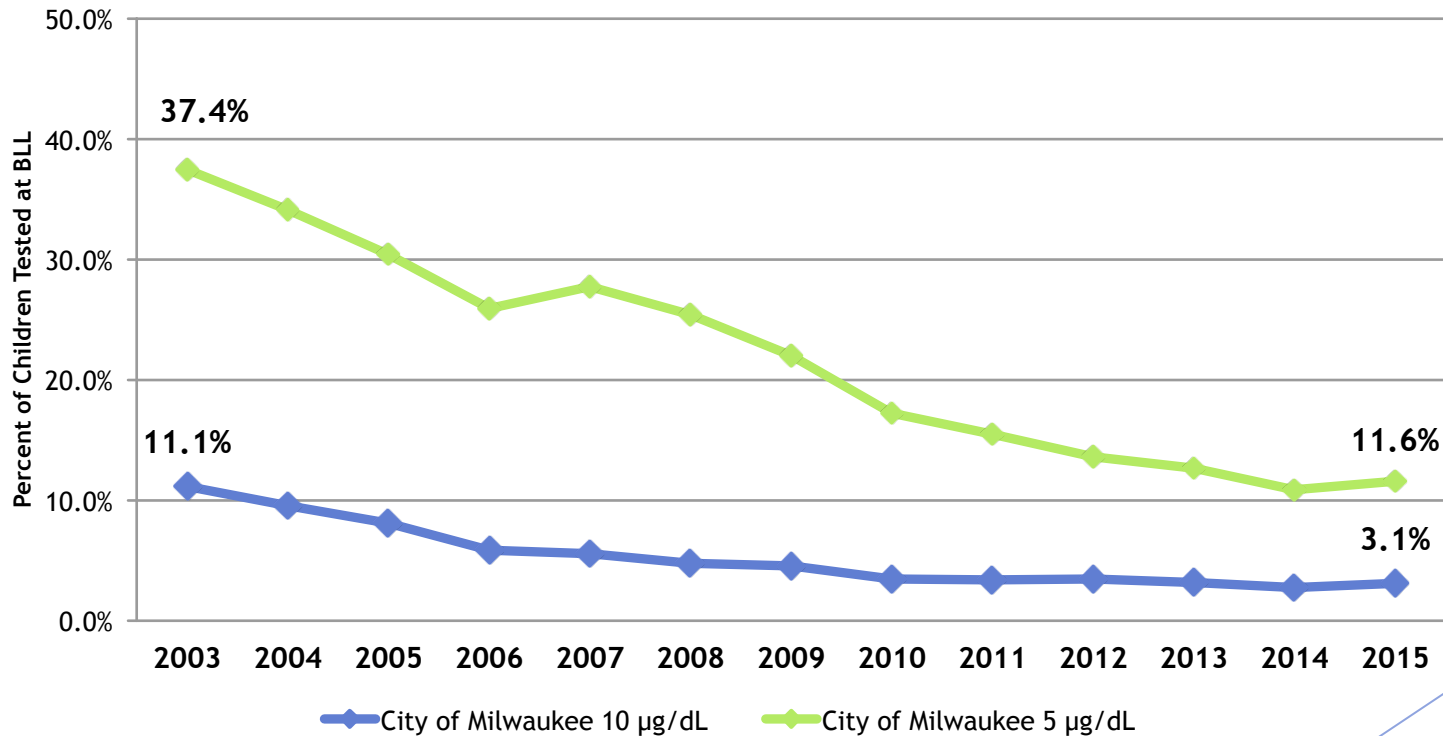
- ▶ Primary source of lead exposure is paint in older housing stock
 - ▶ Critical populations: children <6, nursing and pregnant mothers
- ▶ MHD has abated 17,000+ units in high-prevalence areas since 1998
- ▶ 2016 \$3.4M HUD grant adds to \$48M in lead abatement funding since 2005
- ▶ Children tested w/ elevated blood lead levels down from 37.4% to 11.6% since 2003

Milwaukee's Lead Reduction Strategy

- ▶ Newest HUD funding in June 2016 expands lead focus from 6 to 9 ZIP codes
 - ▶ 53206, 53208, 53209, 53210, 53212, 53216
 - ▶ 53205, 53204, 53215 added 2016
- ▶ Adding water investigation to discovery of elevated blood lead levels in children
- ▶ Continue work to get 100% of children under 3 tested
 - ▶ “3 Before 3” annual testing of children age 0 - 3

Blood Lead Prevalence

City of Milwaukee
Prevalence Rate for Children under 6 Years of Age



CDC definition of elevated blood lead was reduced from 10 ug/L to 5 ug/L in 2012

MWW & MHD - Water Quality Assurance

- ▶ Corrosion control (phosphate) proven to reduce lead levels in place since 1996
- ▶ Corrosion control quality checked at plants and throughout system daily
- ▶ Safety protocols for main breaks and repairs to assure customer confidence during disruptions
- ▶ Regular consult and validation with State DNR, State Div. of Public Health, US EPA on testing methodology and results
- ▶ MWW internal testing on disrupted properties is more comprehensive than EPA compliance testing




MWW - Safety Protocols

- ▶ Main replacements with lead services suspended in January 2016 out of abundance of caution
- ▶ Residents with severed lead services get customer support
 - ▶ Filters and information delivered to every property with disrupted lead service
- ▶ When owner replaces private side, MWW will coordinate replacement of “city” side
- ▶ Testing of properties w/ lead lines around sewer and other construction projects to understand impacts and lead levels

EPA Compliance Testing Process

SAMPLING STEPS	EPA REQUIREMENT 1991 - 2015	MWW ACTION 1991 - 2015	EPA RECOMMENDATION 2016	MWW ACTION 2016
1 - PRE-FLUSH	NO INSTRUCTIONS	PRE-FLUSH	DO NOT PRE-FLUSH	NO PRE-FLUSH
2 - NO WATER USE PRE-SAMPLE	6 HOURS	6 HOURS	6 HOURS	6 HOURS
3 - SAMPLE	FIRST 1 LITER	FIRST 1 LITER	FIRST 1 LITER	FIRST 1 LITER

EPA vs. MWW Testing Process

SAMPLING STEPS	EPA COMPLIANCE	MWW-SERVICE LINE DISRUPTIONS
1 PRE-FLUSH	2015: NO RECOMMENDATION 2016: DO NOT PRE-FLUSH	2015: PRE-FLUSHED 2016: NOT PRE-FLUSHED
2 NO WATER USE PRIOR	6 HOURS	6 HOURS
3 # SAMPLES TAKEN (1 LITER)		
4 FLUSH 3 MINUTES	NO	YES
5 WELL-FLUSHED SAMPLE	NONE	

Safety Protocol For Lead Service Disruptions

	Service Leak-City	Service Leak-Customer	Main Break/Shutoff **	Sewer Work
Sampling/Testing w/ Results	Offered	Offered	Offered	Offered
Letter to Occupants With Results	From MWW	From MWW	From MWW	From MWW
Survey/ Questionnaire by MWW	Sent to MHD	Sent to MHD	Sent to MHD	Sent to MHD
Lead Awareness Information **	Same Day	Same Day	Same Day	Prior To Work
Filter/Alt. Water for 30+ Days	Yes	Yes	Yes	Yes

*For day cares or schools with lead lines affected by sewer work, alternate water is provided before the project commences

** For overnight emergency repairs and shutoffs, door-to-door will be handled the following day. All occupants will get both the door hanger and a visit from MWW.

Test Results

- ▶ Regardless of situation: 99% of “well-flushed” samples show little to no lead content
- ▶ Results support flushing as most effective “right now” lead reduction for consumers

PROJECT TYPE	# PROPERTIES	SAMPLES 1-12			SAMPLE 13 (WELL-FLUSHED)		
		# SAMPLES	# NO LEAD DETECTED	# <15PPB LEAD	# SAMPLES	# NO LEAD DETECTED	# <15PPB LEAD
SEWER MAIN REPLACEMENT	4	208	35 (17%)	165 (79%)	16	12 (75%)	4 (25%)
ENTIRE LSL REPLACED	4	104	46 (44%)	41 (39%)	8	7 (88%)	1 (12%)
CITY-SIDE LSL REPLACED	45	1105	635 (57%)	384 (35%)	85	67 (79%)	16 (19%)
METER INLET VALVE REPLACED	6	182	99 (54%)	73 (40%)	14	12 (86%)	2 (14%)
STREET CONSTRUCTION	6	78	58 (74%)	20 (26%)	6	5 (83%)	1 (17%)
TOTAL	65	1,677	873 (52%)	683 (41%)	129	103 (80%)	24 (19%)

Public Information - To Date

- ▶ January media advisories by Mayor & Administration
- ▶ Council briefed late January
- ▶ MWW mailed 70,000 letters to affected customers February 4
- ▶ MHD mailed to 385 affected daycares April 28
- ▶ MWW field contacts: letters, door hangers, and door knocks for all disrupted lead services
- ▶ Offer free, voluntary testing of disrupted properties:
 - ▶ Service leaks
 - ▶ Main shutoffs
 - ▶ Sewer/road work
- ▶ List of confirmed lead service properties available on milwaukee.gov/water
 - ▶ Website includes advice and testing/filter service info
- ▶ Key messages to customers:
 - ▶ Water: flushing works, effective daily risk reduction
 - ▶ Children: test 3x before 3 years old

State Coordination - To Date

- ▶ Mayor Barrett, Health Dept. and Water Works communications to WI PSC, DHS, and DNR in January 2016
- ▶ US EPA, WI DNR, and WI State Division of Public Health consulted on testing protocols and utility practices
- ▶ Mayor Barrett submitted comments and advocated with Rep. Moore on WI Safe Drinking Water Loan funds
- ▶ Secured an increase from \$750k to \$1m (6% to just over 8% of SDWLP total)
- ▶ Also gained unlimited funds for schools and daycares

MWW & MHD - Schools & Day Cares To Date

- ▶ NO active MPS schools have lead service lines
 - ▶ 1 property (Redcat Academy) not currently in use
- ▶ MHD developed testing protocol being implemented by MPS
 - ▶ Focus on water fountains and food prep
 - ▶ Priority on schools serving children <6
- ▶ 15 private schools have lead services
 - ▶ Same testing protocol as MPS
- ▶ 385 State-licensed day cares have lead service lines
 - ▶ MHD letter to all in April 2016
 - ▶ MHD requested State require water testing of all licensees
 - ▶ Day cares prioritized for aggressive replacement with State funding

MWW - Replacement To Date

- ▶ 112 City-side service lines replaced due to leaks
 - ▶ Only 4 owners volunteered to replace the private side
- ▶ Offered testing and filter mitigation on all service line replacements
- ▶ June 30: Safe Drinking Water Loan Program Intended Use Plan due to WI DNR
 - ▶ Establishes eligible projects for LSL replacement funding
 - ▶ Will include all daycares, schools, and 300 residential service lines
- ▶ No main relay related service line replacements

Federal - Legislation

- ▶ Water Resources Development Act Bill - S. 2848
 - ▶ Approved by committee, 5 year program
 - ▶ \$300m in grants for full lead service line replacement
 - ▶ \$30m to childhood health programs including lead poisoning grant program
 - ▶ \$100m for lead testing in schools

Action Plan 2016-17

Lead Service Line Replacement - Short Term

- ▶ Next steps funded in Mayor's 2017 Proposed Budget
- ▶ Aggressively test and replace day cares with State funding
- ▶ Replace private side for City side replacements
- ▶ Use balance of State funds to begin private side replacements in mains projects
- ▶ Continue testing of disrupted properties
- ▶ Continue collaboration with State and Federal health and water agencies

Public Awareness - Short Term

- ▶ August 1 public information campaign: *Lead Safe Milwaukee*
 - ▶ Cover all sources of lead contamination
 - ▶ Increase testing percentages for children <3
- ▶ Must include Common Council and community voices
- ▶ Municipal service bill inserts
- ▶ Physician and health provider outreach
- ▶ Other points of contact w/ at-risk population

Public Awareness - Long Term

- ▶ Collaborate with Council on public message reinforcement
- ▶ Continue emphasis with public on:
 - ▶ Flushing water to ensure lead level reduction
 - ▶ Blood testing for children <3: “3 Before 3”
- ▶ Dialogue and regular meetings with community, State/ Federal agencies, other partners

Lead Service Line Replacement - Long Term

- ▶ Ongoing capital cost: 30-50 year replacement program
- ▶ First funding installment in Mayor's 2017 Proposed Budget
- ▶ Future (2020?) EPA Lead & Copper Rule revision will affect the particulars
 - ▶ Testing, replacement scope, action level for lead
 - ▶ MWW Superintendent on L&C Rule Advisory Committee
- ▶ LSLs will be incorporated in main replacement projects
- ▶ Eventual expansion to LSL-only replacements

State & Federal Policy - Long Term

- ▶ State: Safe Drinking Water Loan Program funding to match scale of issue in Milwaukee
- ▶ State/Federal: Tax credit for private side owner replacement
- ▶ State/Federal: Grant funds for LSL replacement
- ▶ Explore new funding sources at all levels

Keys To Success on LSLs

- ▶ Regular collaboration with Council and community
- ▶ Quality public information and continued transparency
- ▶ Focus on affordability and at-risk populations
- ▶ Continue collaborative approach between Health and Water Works

