Strategies for Implementation of Full Lead Service Replacement Program

AGENDA

Looking Ahead: Revised Lead and Copper Rule and Getting all the Lead Out

Case Studies: Legal and Financial Issues
  DC Water
  Providence, RI
  Madison, WI
  Lansing, MI
  Ithaca, NY

Questions
LOOKING AHEAD
Revised LCR and Getting all the Lead Out
Typical Water Service Line
Public Side and Private Side

Source: Healthy Homes Coalition
Lead Service Line Replacements (LSRs)

Contractor using trenchless technology (mole) for installing service line

Typical service line tap

Typical construction activity, public side
“There is no safe level of lead”

Recommends proactive lead service line (LSL) replacement programs

*Full replacements strongly encouraged*

Strengthen corrosion control treatment (CCT)

*Be alert to unintended consequences*

Establish a health-based, household action level

Sampling and reporting recommendations
Problems Uncovered With Partial Lead Service Line Replacements (PLSLR)

Current Lead Copper Rule (LCR) allows either full or partial replacements.

EPA Science Advisory Board (SAB) was asked to evaluate the current scientific data regarding the effectiveness of PLSLR.

EPA SAB issued report on September 28, 2011 stating “The SAB finds that the quantity and quality of the available data are inadequate to fully determine the effectiveness of PLSLR in reducing drinking water lead concentrations.”

PLSLR in many cases causes temporary spikes in lead levels to customers; and may result in long-term increases due to galvanic corrosion.

Expect that LCR will be revised in 2017 to discourage PLSLRs / encourage full LSRs.
Rhode Island Proposed Lead and Copper Drinking Water Protection Act

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<th>Would require promulgation of regulations requiring:</th>
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<td>Protections for pre-schools, day cares, and other selected high risk facilities</td>
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<td>• Demonstration that new facilities are lead free</td>
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<td>• Annual testing of existing facilities</td>
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<td>• Comprehensive environmental lead inspections by state inspectors</td>
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<td>Adoption of a full lead service line replacement program within 10 years</td>
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<td>Prohibition of partial lead service line replacements</td>
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<td>Water testing prior to sale or rental of any dwelling and disclosure of results in the agreement</td>
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<td>Reduction of the lead action level to 10 PPB</td>
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CASE STUDIES
Legal And Financial Issues
Utility was required by LCR and Consent Order to replace lead services, but City concluded that it had no authority to make or pay for a real property improvement on private property.

Replaced 16,207 public side replacements at cost of $135 Million.
Replaced about 4,000/year for several years, until lead crisis faded.

Replaced 3,806 private sides (23% participation).

Contractor with pre-negotiated rates for LSRs was made available for private sides.

DC Water offers one year interest free financing for private side.

DC Water will replace the public side for any customer who voluntarily replaces their side.
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<th>DC Water currently exploring these additional means to remove all lead</th>
<th>Promoting removal of other lead sources (e.g. household plumbing)</th>
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<td>Partner with other agencies (with utilities in the streets) to accelerate LSRs</td>
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<td>Require LSR at time of home sale</td>
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<td>Reinstall regulation requiring LSR when 50% or more of home is renovated</td>
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<td>Educate home inspectors / use as advocates</td>
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<td>Search for funding for low income homes</td>
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<td>Determine unknown service lines to improve material inventory (New website provides current information on material type at each address)</td>
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Utility was required by LCR and Consent Order to replace lead services

25,600 lead services in baseline inventory

Replaced 9,955 public side services (39%) at cost of $32 Million

1.6% private side participation

Utility’s LSR contractor was made available for private side replacement

ProvWater offers one year interest free financing for private side

Now encouraging LSR at time of home sale

OBG recruited Expert Panel, and is directing extensive water quality research

OBG managed LSR program for 8 years, met Consent Order
**Madison, WI**

*LSR Legal Aspects*

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<th>Adopted a City Ordinance to effect full LSR replacement within 10 years (January 1, 2011) and achieved nearly 100% replacement</th>
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<td>LSR approach avoided cost of phosphates, and potential that phosphates would have adverse consequences for wastewater discharges to sensitive lakes</td>
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<th>Madison assigned implementation schedule based on risk tier</th>
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| **First 90 days**
Survey and self inspection of service material |
| **First year**
Schools and child care facilities |
| **Within 2 years**
Services exceeding lead action level (15 ppb) |
| **Within 3 years**
Properties serving more than 20 people |
Madison, WI

**Full LSR Legal / Financial Aspects**

- **Full LSR cost**
  - $19.4 Million

- 5,600 property owners participated, average cost about $3,500 per service

- 20% of cost was borne by the customers

- Property owners have 1 year to complete after notification

- Madison reimbursed 50% of owner’s cost up to $1,000

- Madison offered financing for balance of homeowner cost

- Penalty of $50-$1,000/day for non-compliance
Madison, WI

Initial Customer Survey

Madison achieved approximately 90% participation in initial customer survey

Property owners were assumed to have completed an informed and truthful survey

Madison found significant errors in the initial survey as a result of an ongoing meter a distribution pipe replacement programs

Homeowner’s time to replace the service was then reduced from 1 year to 30 days

Non-compliance resulted in homeowners loss of rebate from City
**Madison, WI**

*Program Participation Results*

| Achieved voluntary participation in LSR from all but 60-70 homeowners - mostly absentee landlords | Participation encouraged through a progressive series of steps | Notice of potential loss of rebate from City Attorney and deferral of pubic side service replacement achieved participation in all a handful of services | Madison current has less than 10 known lead services to complete | Uncollected fines have been levied against the outstanding property owners; In some cases the fines exceed the value of the property |
Madison, WI

Lessons Learned

- 50% rebate for private side replacement was a good incentive for participation
- Getting the City Council to adopt the enabling ordinance was the key challenge
- Public Service Commission prevented payment of rebates out of water utility operating funds; cell phone revenue used
- Expect scope creep as the number of known lead services expands
- Not all plumbers saw the value in chasing this market
Lansing acquired ownership of the entire service line in the 1920s to deal with extensive leakage.

Lansing finances individual service line replacements through water rates.
Utility owns entire water service, from main to meter in house

Established 10 year full LSR replacement program in 2004 (This was done as a voluntary program, not driven by LCR monitoring)

Ordinance requires homeowner to provide access to Utility to replace line

As of May 2016, less than 400 of original 17,000 identified LS remained; Completion schedule extended to 2017

Using trenchless technologies when possible

13,500 LSRs completed at cost of $42 million ($3,100/LSR)
Drivers for an enhanced full service lead replacement program include lead detection in public schools and other public controlled spaces.

On September 6, 2016, the Governor signed into legislation requirement for lead testing in public schools.
Ithaca, NY

Full LSR Plans in Discussion Phase

460 lead services in baseline inventory, 1,100 services with unknown materials

Many lead services are undersized (1/2”)
Replacements will improve household pressure

Encouraging LSR at time of home sale
Owner provides statement of non-compliance on pre-sale disclosure form
Utility provides notification at time of sale, coincident with initial meter reading
Educate realtors on how assist homeowners at the time of initial disclosure,

Educate home inspectors on importance of identifying lead services, and potential cost to buyer

Educate lenders on potential financial risks of deferred replacement
Homeowner Identification of Lead Service Line

Outlet Valve
Water Meter
Pipe to Home Plumbing
Inlet Valve
Pipe to Outside of Building
TEST AREA

Source: Green Bay Water Utility
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City of Ithaca

Providence Water
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