

BURLINGTON WATER RESOURCES

WATER SERVICE LINE INVENTORY PROJECT



HISTORY OF LEAD EXPOSURE IN DRINKING WATER: THE EPA LEAD AND COPPER RULE (LCR)

- Early 1980s: National awareness grows around the health impacts of lead in drinking water
- 1986: Safe Drinking Water Act amended to ban lead pipes
 - Does not require utilities to retroactively remove existing lead pipes
- 1991: EPA establishes the Lead and Copper Rule to reduce lead and copper exposure in drinking water
 - Rule establishes maximum contaminant levels for lead and copper in drinking water
 - Rule requires water systems to implement treatment techniques if more than 10% of samples exceed maximum levels



BURLINGTON WATER LEAD EXPOSURE PREVENTION

- 1982: Burlington begins sampling drinking water for Lead, Copper, Iron, Zinc, and Cadmium following EPA procedures
 - Lake Champlain water is naturally corrosive to internal plumbing due to its neutral pH and low amount of dissolved minerals
 - 6 sites sampled immediately at the tap had elevated lead levels
- 1984: Burlington starts using sodium hydroxide to prevent corrosion
- 1990: Burlington upgrades to zinc orthophosphate to prevent corrosion
 - **Burlington has been in compliance with maximum levels since 1990**
 - Burlington samples lead and copper levels every 3 years in 30 high priority locations.



2021 LEAD AND COPPER RULE REVISION AND IMPACTS

- 2021: EPA revised the Lead and Copper Rule following national discourse on clean drinking water. The revised rule mandates the removal of significant sources of lead from all American drinking water systems
- **All water utilities must submit comprehensive water service line inventories by October 16, 2024**
 - Utilities must identify lead and “galvanized requiring replacement” (GRR) service lines
 - Utilities must also create a plan for lead and GRR removal by the same deadline
- Annual reports from 1929-1937 list lead as one of the materials used in the water distribution system. Lead is no longer mentioned in annual reports from 1938 and on.
- **Burlington has no records or evidence of active lead service lines today**



BURLINGTON INVENTORY STATUS & STRATEGY

~11,009

Total service lines



Records review

7,238

**Service lines reviewed
and materials identified**



**Customer identified
lines**

2,075

**Service lines reviewed
and materials unknown**



In-person inspections

~1,696

Unreviewed service lines



WATER SERVICE LINE INVENTORY TIMELINE

01

Initial outreach

Nov 23: Inform public of project

03

Compile responses

May 24- June 24:
Highlight missing or non compliant information

02

Records Review

Nov 23- May 24: Contact priority properties: unknown lines in older neighborhoods

04

Follow-up

June -Sep 24:
Direct outreach to missing info

05

Submission

Oct 24: Submit inventory to State of Vermont

06

Share results

Nov 24: Share completed inventory and map with public. Introduce next phase as needed



WATER SERVICE LINE INVENTORY COMMUNICATIONS

- Inform public of project via November On Tap Newsletter
- Mail postcards to every address in City of Burlington
- Utilize social media
- Survey form, survey how-to and FAQs available on WRD website in multiple languages
- Partnering with other City programs (Burlington Lead Program, Fire Marshall, Code review, CEDO)
- Partnering with large community organizations and landlords: UVM, UVM Medical Center, Schools
- WRD Customer Care team available for questions

SURVEY RESULTS DECEMBER-APRIL 24

983

SURVEY
RESPONSES

Ward/ Material	Copper	Galvanized	Plastic	Ductile Iron	Unknown	Sum Responses
1	67	8	2	1	8	86
2	47	4	1	0	2	54
3	72	6	2	1	4	85
4	177	46	8	0	4	235
5	142	14	3	0	5	164
6	144	17	5	1	4	171
7	156	19	1	0	3	179
8	9	0	0	0	0	9
Sum Material	814	114	22	3	30	983

EXAMPLE SURVEY PHOTOS



- Well lit
- Clearly shows service entering from floor from side angle
- Water meter visible
- Photo framed closely around the service and meter

This is an ideal survey photo submission

EXAMPLE SURVEY PHOTOS



- Poorly lit
- Cannot see service entering floor due to top-down angle
- Water meter visible
- Photo taken far away from the service and meter

We cannot verify the service line material from this photo

EXAMPLE SURVEY PHOTOS



- Well lit
- Clearly shows service entering from floor from side angle
- Water meter visible
- Photo framed closely around the service and meter

This is an ideal survey photo submission

THANK YOU.
QUESTIONS?

