



Lead Service Line Replacement Plan

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0234802.03

**City of Carlinville,
Illinois**

April 2025

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1. INTRODUCTION

The City of Carlinville, IL (City), located in Macoupin County, is submitting its second draft of the Lead Service Line Replacement (LSLR) Plan outlining the City's approach to replacing all lead and galvanized service lines within the City's service area. Replacement of lead and galvanized service lines is necessary to improve the health and safety of the City's residents and is required by the Illinois Lead Service Line Replacement and Notification Act (the Act), codified as 415 ILCS 5/17.12. This act requires the submission of a draft LSLR Plan yearly on April 15 from 2024 through 2027 to the Illinois Environmental Protection Agency (IEPA). The final draft of the LSLR Plan is due April 15, 2027. Following the final submission, the City will continue to submit an updated plan annually until all lead service lines (LSLs) are replaced. Illinois also regulates lead service line replacements and inventorying through the IL Administrative Code, Title 35 Part 611 (the Code). The Code references the newly published Lead and Copper Rule Improvements issued by the Federal Environmental Protection Agency, codified as 40 CFR Parts 141 and 142.

1.1 Background

The City of Carlinville owns and operates a public, community water supply that provides water to approximately 6,598 people. It operates under the Water System Name and Number: Carlinville Public Water Supply (PWS), IL1170150. The system includes: the Water Treatment Plant, distribution system piping, two (2) surface water reservoirs, one (1) raw water pump station, two (2) elevated storage tanks, one (1) ground storage tank, and one (1) booster pump station.

1.1.1 Makeup of Customer Base

Carlinville PWS has 2,871 active metered service connections including residential, commercial, and industrial customers, namely Blackburn College and Prairie Farms Dairy. Of these users, there are approximately 31 high-risk facilities identified that are further detailed in Section 2.2.1. The City began lead service line replacements in the year 2024 and has completed at least 47 service line replacements to date.

2. LEAD SERVICE LINE REPLACEMENT PLAN

2.1 Existing Service Line Inventory

The City has compiled a Lead Service Line Inventory (LSLI), to the best extent possible utilizing local construction records, historical knowledge, public outreach, and/or visual inspections. The material classifications for both the private and public side of the service connection is quantified in Table 2-1 below. A high number of unknown service line materials remain. These will be investigated via potholing or other approved methods as the City continues the replacement of service lines. These numbers will continue to be updated as more information becomes available. Of the 2,873 service connections, the City will be required to investigate, verify, and accordingly replace 824 total connections. This includes public-side only, private-side only, and full replacements, dependent on material. Figure 2-1 provides a map showing the current LSLI.

TABLE 2-1: SERVICE LINE MATERIAL CLASSIFICATION

Service Line Material	Private Side Quantity	Public Side Quantity
Copper	1,952	1,822
Plastic	350	245
Unknown, Not Lead	5	6
Cast / Ductile Iron or Transite	2	3
Total Not Requiring Replacement	2,309	2,076
Lead	2	1
Galvanized	125	115
Unknown	437	681
Total Requiring Replacement	564	797

FIGURE 2-1: CURRENT LEAD SERVICE LINE INVENTORY MAP

Figure Exported: 3/11/2025 By: KStrocker Using: \\woodardcurran.net\shared\Projects\0234802.01 Carlinville IL Lead Service Line Replacement\wp\GIS\SL\Carlinville_IL_SLR.aprx Layout: Individuals

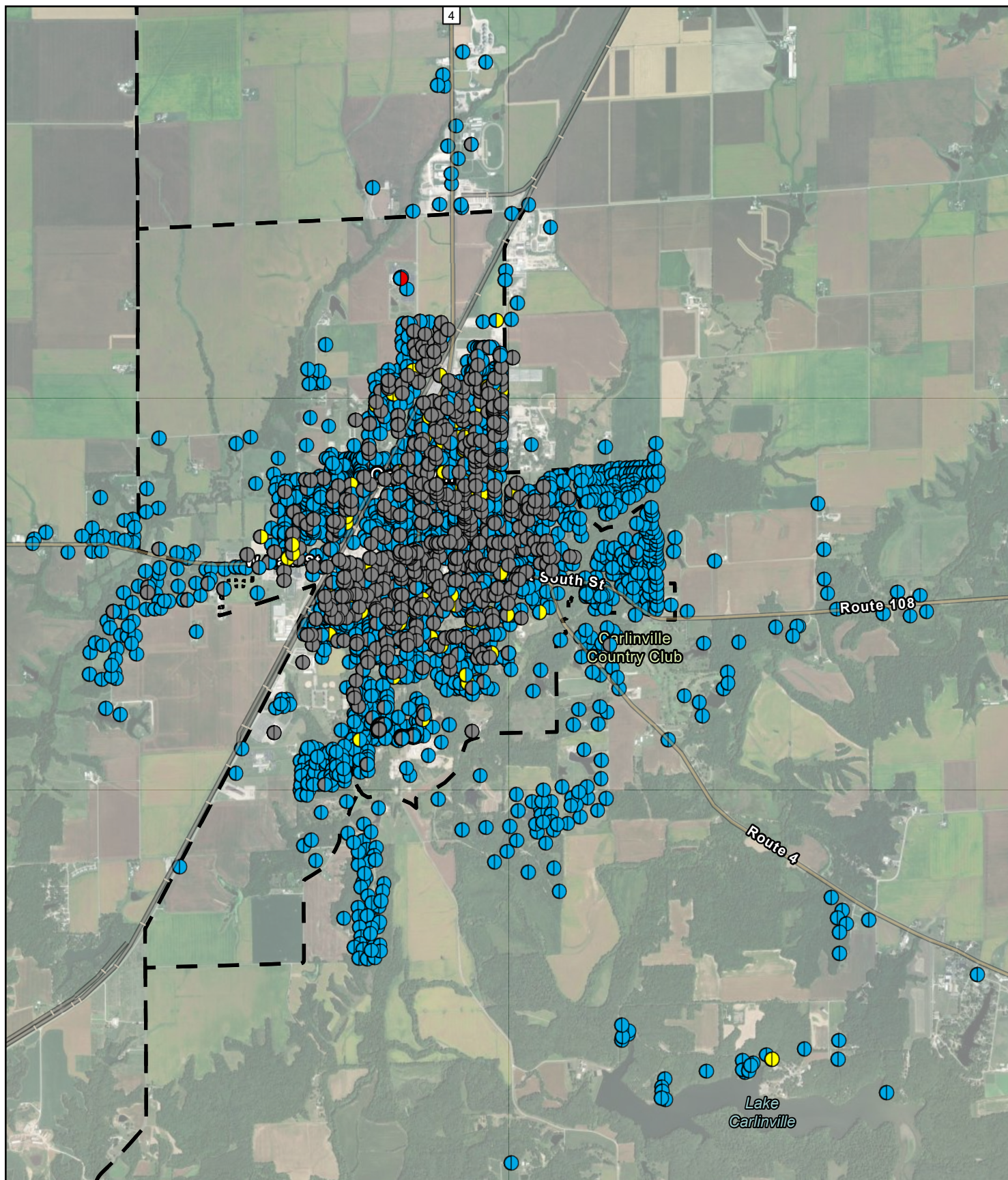


Figure 2-1: Current Lead Service Line Inventory Map

0 5001,000 2,000 Feet

Legend

- | | |
|---|--|
| Galvanized Requiring Replacement Galvanized Requiring Replacement | Non-Lead Non-Lead |
| Galvanized Requiring Replacement Non-Lead | Non-Lead Unknown |
| Galvanized Requiring Replacement Unknown | Unknown Galvanized Requiring Replacement |
| Non-Lead Lead | Unknown Non-Lead |
| Non-Lead Galvanized Requiring Replacement | Unknown Unknown |
| | Census Tracts |



Project #: 0234802.03
Map Created: February 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:** City of Carlinville, IL

2.2 Long-term Plans and Goals

Based on the current stage of the LSLI, the City has identified a long-term plan to replace all lead and galvanized service lines within the service area. The total number of service lines requiring investigation and/or replacement is 824. This number is expected to decrease as current “unknown” lines are investigated and classified appropriately. Based on regulations in the LCRI, the City must replace all lines by 2037. The City hopes to maximize the number of replacements in Fiscal Year (FY) 2026 and plans to replace approximately 232 service lines while funding is still available with 100% principal forgiveness via the Public Water Supply Loan Program through the IEPA. Assuming this happens, the yearly replacement rate after FY 2026 will be approximately 47 service lines per year.

2.2.1 Prioritization of High-Risk Facilities

High-risk facilities are facilities that have the greatest risk associated with its occupants drinking lead-contaminated water due to known health risks; the greatest risk being to young children and pregnant women. High-risk facilities include preschools, day care centers, day care homes, group day care homes, parks, playgrounds, hospitals, and clinics, as well as any high-risk areas identified by the City. As part of the public outreach, the City will ask any and all high-risk facilities, namely day care homes, to identify themselves and provide their address so they can be added to the priority list. These facilities will be prioritized during the upcoming phases of the service line investigation and replacements.

The City has identified the following as high-risk facilities. Locations requiring replacement are bolded.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Children’s Garden Learning Center (1 Garden Dr) • Loveless Park (1000 Locust St) • Cross Church Preschool (1030 W Main St) • Village at Morse Farms (1050 W Main) • Lakeside Healthcare (1200 University St) • Patterson Group Home (1221 S Plum St) • Carlinville Country Club (15253 Willow Dr) • Carlinville Primary School (18456 Shipman Rd) • The Cottages (18804 Rte 4) • Carlinville Area Hospital (20613 & 20733 N Broad St) | <ul style="list-style-type: none"> • Macoupin County Fairgrounds Buildings (21480 RT 4) • Forever Friends Family Childcare (217 W 2nd S St) • ROE #40 District Carlinville (227 E 1st South) • Home Day Care (318 N High St) • Congregate Housing at Walnut Villa Apartments (333 Walnut St, #1-#25) • Carlinville Intermediate School (450 W Buchanan St) • Zion Lutheran Preschool (501 S Broad St) • Carlinville Head Start (501 W Nicholas St) • Macoupin County Housing Olroyd Court (see Figure 2-2) |
|--|---|

- **Patterson House Group Homes (522 S Broad St)**
- Patterson Group Home (525 Harrington St)
- Carlinville Head Start (610 N Charles St)
- **Macoupin Center for the Developmentally Disabled (700 E Elm St)**
- Patterson Group Home (717 E 1st S St)
- Carlinville Rehabilitation and Health Care Center (751 N Oak St)
- **Patterson Group Home (815 Johnson St)**
- **Hallmark Healthcare of Carlinville (826 N High St)**
- **Carlinville High School (829 W Main St)**
- Carlinville High School – Football Field
- Carlinville Park District (859 Ramey St)
- Home Day Care (904 W Nicholas St)

FIGURE 2-2: MACOUPIN COUNTY HOUSING - OLROYD COURT



2.2.2 Year One Replacement Plan and Schedule

The first year of service line replacement efforts occurred in 2024, beginning in July and continuing through the end of the year. The City prioritized galvanized and unknown service lines outside of its main census tract to reduce outlier locations. Several service lines were investigated and identified as materials not requiring replacement, which allowed the City to conduct more investigations to surpass the previous annual replacement goal. There were a total of 167 addresses investigated and replaced as needed; details are provided below in Table 2-2.

TABLE 2-2: PHASE 1 INVESTIGATION & REPLACEMENT RESULTS

Service Line Material	Quantity
Inspected – replacement not required	120
Inspected – required private-side only or public-side only replacement	35
Inspected – required full replacement of private-side and public-side	12
Total Inspected & Replaced as Required	167

2.2.3 Year Two – Five Replacement Plan and Schedule

For year two of the replacement plan, the City will focus on 83 service lines in an area with suspected LSLs. Appendix A shows the maps for phase two. More than 83 addresses are included in the phase two maps to ensure 83 replacements occur even if some service lines turn out to be materials not needing replacement. This project was bid on January 9, 2025 and construction is expected to start in April of 2025.

Phase three plans to replace approximately 232 service lines, funding dependent, and reduce the number of required service line replacements for the following years. High-risk facilities will be prioritized during phase three of investigation and replacement. Once high-risk facilities and known lead and galvanized lines are addressed, investigation and subsequent replacement of unknown service lines within the main census tract will take place. A map showing phase three can be found in Appendix B.

Phases four and five will replace at least 47 service lines per year. Investigations and subsequent replacements of unknown service lines will focus on areas with suspected LSLs based on a map provided by the community water supply. A map showing phases four through 13 is provided in Appendix C.

2.2.4 Year Six-Ten Replacement Plan and Schedule

Years six through ten will continue with material investigations and the replacement of a minimum of 47 service lines, as required, of currently unknown materials in varying regions of the City. The replacement regions have been prioritized based off a suspected LSL map provided by the community water supply. A combined phase four through 13 map is included in Appendix C.

2.2.5 Year 11-14 Replacement Plan and Schedule

Years 11 through 14 will continue with material investigations and the replacement of a minimum of 47 service lines, as required, of currently unknown materials in varying regions of the City with phase 14 investigating some service lines outside the main census tract. The replacement regions are prioritized based on a suspected lead service line map provided by the community water supply. A map showing phases four through 13 is included in Appendix C. A map showing phase 14 is included in Appendix D.

With the current inventory, all replacements should be complete by year 14. As unknown service connections are investigated, it is likely that many will not require replacement, thus reducing the total number of assumed lead lines. This could shorten the period of time needed to complete lead service line replacements within the City's service area, potentially eliminating the need for at least year 14.

2.2.6 Anticipated Lead Service Line Locations

As discussed in the above sections, several service lines of unknown material remain in the City's inventory. The community water supply has provided W&C with a map marked with suspected areas of lead service lines. This map was referenced when sequencing the phases replacing unknown service lines.

Additionally, investigations will be completed in unison with the replacement efforts. Service line replacements will first prioritize known lead or galvanized lines requiring replacement, followed by the unknown material service lines. These unknown lines will be sequenced for replacement based on the anticipated number of lead or galvanized lines in the area. This is determined by reviewing surrounding known service line materials and the dates of construction, if known, in addition to utilizing the map provided by the City. Appendix C shows the anticipated high priority areas with the sequencing shown as phases.

2.3 Inventory Procedure

Lead status unknown lines will be investigated via visual inspection at the water meter or curb stop, and / or inside the home. Potholing will be used to inspect the material at the main and meter or curb stop. In most cases, this inspection process will happen concurrently with the lead service line replacement construction process. Unknown lines that are identified as non-lead during investigation will be updated accordingly in the inventory and will not be replaced. If an unknown line is identified as lead or galvanized, it will be replaced during that phase of construction. The City plans to primarily hire contractors to complete this work.

In the event that any lead gooseneck, pigtail, or connector is encountered during investigations or other water system infrastructure work, the City will replace all portions of lead or galvanized on that service line.

2.4 Lead Service Line Replacement Procedure

Lead service lines will be replaced in full. No partial service line replacements will occur. This will be executed by following the procedure detailed below and summarized in Figure 2-3.

Customers will then be notified at least 45 days in advance of replacement and provided with a Consent Form to be completed by the Customer to allow the replacement of the service line. Customers will then be

notified again, 15 days in advance of the replacement detailing the work and its potential effects. The City (or its Contractor) will confirm the appointment date with the Customer.

On the day of replacement, the City or its Contractor will confirm the pipe material at the three locations including: the meter, the water main (extending 2 feet from the main along the service), and the curb stop (extending two feet towards the main and to the property line in the opposite direction along the service) to verify existing service line materials. If lead, galvanized, or unknown materials are found, the City or Contractor will continue with the service line replacement.

For every service replacement, a new corporation and curb stop will be installed. The existing service will be replaced with new polyethylene piping in the same location as the existing service. The existing service is to be removed and disposed of.

The City or Contractor will connect the new water service to the existing service or interior plumbing equipment 18 inches beyond the interior building foundation wall or to the first shut-off valve (whichever is shorter) and will install a new angle ball meter valve between the foundation wall and the connection to existing plumbing.

Following the replacement of a service line, the Customer will be provided with a flushing protocol, pitcher filter and replacement cartridges, and a notification that the City will provide sampling at 3 to 6 months post-replacement.

At 3-months post replacement, the City will send notice to customers that they will provide post-replacement sampling kits to analyze for the presence of lead. The City will provide sampling results to the Customer once received.

The 15-day notification letter, flushing protocol, pitcher filter notification, and sampling notification are included in Appendix E.

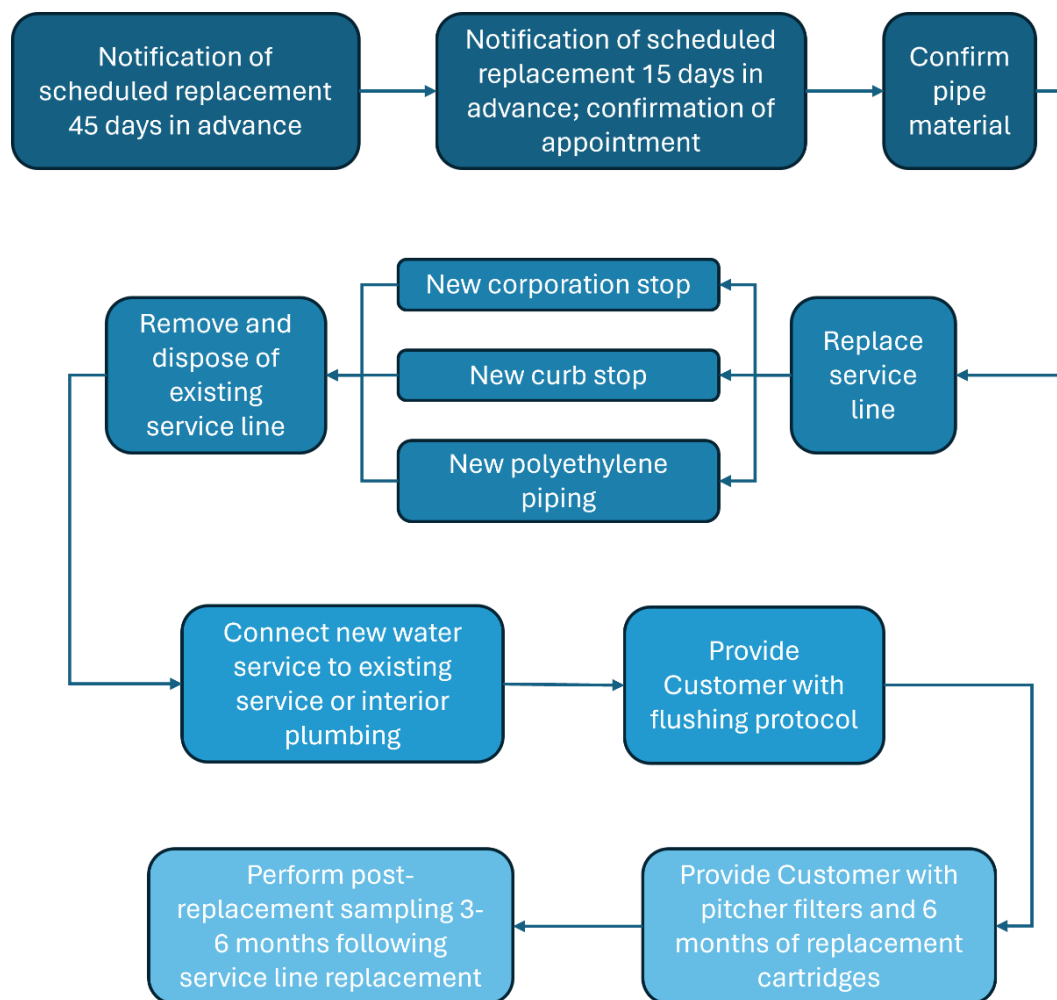


FIGURE 2-3: SERVICE LINE REPLACEMENT PROCEDURE

2.5 Public Outreach

The City will publish this LSLR Plan along with the LSLI on the City's website by April 15, 2025. The announcement will include information on a public comment period including how to comment, the deadline for comments, and the date of a City Council meeting where the comments will be addressed (date TBD). A similar informational advertisement will be published in the City newspaper to notify citizens where to find the LSLR and LSLI online. Additionally, in the Fall / Winter of 2023, public outreach letters were mailed to all residents with service lines of unknown material requesting that they either self-classify their service line material (using the guide provided) or request for a member of the water department to investigate the line.

2.6 Good Faith Effort

In order to encourage diversity in hiring, the City will make a good faith effort to hire contractors and vendors owned by minority persons, women, and persons with a disability for no less than 20% of the total contracts following Section 2 of the Business Enterprise for Minorities, Women, and Persons with Disabilities Act. This 20% of contracts is split among the groups as follows: 11% awarded to minority-owned businesses, 7% awarded to women-owned businesses, and 2% awarded to businesses owned by persons with a disability. Following subsection (n) of 415 ILCS 5/17.12, the City will take the following steps to make a good faith effort.

1. When economically feasible, the City will divide projects into contracts of smaller size to allow small business contractors and vendors to have the ability to qualify in the applicable bidding process.
2. The City will solicit through reasonable and available means the interest of businesses that have the capability to perform the work of the contract with sufficient time to allow certified businesses to respond.
3. The City will provide interested certified businesses with adequate information about the plans, specifications, and requirements of the contract, including addenda, in a timely manner to assist them in responding to the solicitation.
4. The City will meet in good faith with interested certified businesses that have submitted bids.
5. The City will effectively use the services of the State, minority or women community organizations, minority or women contractor groups, local, State, and federal minority or women business assistance offices, and other organizations to provide assistance in the recruitment and placement of the certified businesses.
6. The City will make efforts to use the appropriate forums for purposes of advertising subcontracting opportunities suitable for certified businesses.

3. COSTS & FINANCING

3.1 Cost Estimates

Table 3-1 shows a detailed construction cost estimate for lead service line replacements in Fiscal Year (FY) 2026. The total construction costs are anticipated to be **\$2,184,700** since the City is planning to replace 232 lines.

TABLE 3-1: FY 2026 CONSTRUCTION COST ESTIMATE

CITY OF CARLINVILLE, IL - LSLR					
ENGINEER'S COST ESTIMATE					
Bid Item	Description	Quantity	Unit Price	Unit	Total Price
1	Mobilization / Demobilization	1	\$25,000	LS	\$25,000
2	Traffic Control	1	\$12,000	LS	\$12,000
3	Inspection Pits in Unpaved Areas	232	\$525	EA	\$121,800
4	Inspection Pits in Paved Areas	232	\$800	EA	\$185,600
5	Water Service Replacement - Property Line to Building Interior (Private Side)	232	\$2,100	EA	\$487,200
6	Long Water Service Replacement - Water Main to Property Line (Public Side)	116	\$4,000	EA	\$464,000
7	Short Water Service Replacement - Water Main to Property Line (Public Side)	116	\$3,000	EA	\$348,000
8	Water Service Piping Beyond 100ft	10	\$60	LF	\$600
9	3/4-inch Curb Stop and Box	220	\$600	EA	\$132,000
8	1-inch Curb Stop and Box	10	\$700	EA	\$7,000
9	1-1/2-inch Curb Stop and Box	1	\$1,100	EA	\$1,100
10	2-inch Curb Stop and Box	1	\$1,300	EA	\$1,300
16	Lead Removal Pitcher Including 6 Month Supply of Replacement Filters	232	\$100	EA	\$23,200
17	Post-Replacement Water Sampling	232	\$75	EA	\$17,400
15	Brick Street Surface Repair	10	\$40	SF	\$400
16	Aggregate Surface Repair, Type A 8-inch	1450	\$15	SF	\$21,750
17	Temporary Aggregate Surface, 6-inch	5800	\$12	SF	\$69,600
11	Hot Mix Asphalt Surface Replacement	116	\$280	TON	\$32,480
12	Portland Cement Concrete Roadway Pavement, 8-inch (Replacement)	1450	\$15	SF	\$21,750
13	Portland Cement Concrete Driveway Pavement, 6-inch (Replacement)	290	\$12	SF	\$3,480
14	Concrete Sidewalk Removal and Replacement	4640	\$15	SF	\$69,600
15	Curb and Gutter Removal and Replacement	1160	\$65	LF	\$75,400
	Subtotal				\$2,121,000
	Contingency		3%		\$63,700
TOTAL BASE BID CONSTRUCTION COST ESTIMATE					\$2,184,700

Table 3-2 provides the anticipated FY 2026 total project cost, including design and construction engineering.

TABLE 3-2: TOTAL FY 2026 PROJECT COST ESTIMATE

FY 2026 Total Project Cost Estimate Table		
1	Design Engineering (including planning and form preparation):	\$65,600
2	Construction Engineering (including bidding):	\$240,400
3	Other Professional Services (separate legal, loan admin, etc.):	\$0
4	Construction:	\$2,121,000
5	Contingency (at 3% of estimated construction costs):	\$63,700
6	Total Estimated Project Costs:	\$2,490,700

Table 3-3 shows a detailed construction cost estimate for FY 2027. The total project costs are anticipated to be **\$476,900**. This cost estimate will be updated following bid openings to more accurately reflect the unit prices in the region.

TABLE 3-3: FISCAL YEAR 2027 CONSTRUCTION COST ESTIMATE

CITY OF CARLINVILLE, IL - LSLR					
Bid Item	Description	Quantity	Unit Price	Unit	Total Price
1	Mobilization / Demobilization	1	\$25,000	LS	\$25,000
2	Traffic Control	1	\$12,000	LS	\$12,000
3	Inspection Pits in Unpaved Areas	47	\$525	EA	\$24,675
4	Inspection Pits in Paved Areas	47	\$800	EA	\$37,600
5	Water Service Replacement - Property Line to Building Interior (Private Side)	47	\$2,100	EA	\$98,700
6	Long Water Service Replacement - Water Main to Property Line (Public Side)	24	\$4,000	EA	\$96,000
7	Short Water Service Replacement - Water Main to Property Line (Public Side)	23	\$3,000	EA	\$69,000
8	Water Service Piping Beyond 100ft	10	\$60	LF	\$600
9	3/4-inch Curb Stop and Box	35	\$600	EA	\$21,000
8	1-inch Curb Stop and Box	10	\$700	EA	\$7,000
9	1-1/2-inch Curb Stop and Box	1	\$1,100	EA	\$1,100
10	2-inch Curb Stop and Box	1	\$1,300	EA	\$1,300
16	Lead Removal Pitcher Including 6 Month Supply of Replacement Filters	47	\$100	EA	\$4,700
17	Post-Replacement Water Sampling	47	\$75	EA	\$3,525
15	Brick Street Surface Repair	10	\$40	SF	\$400
16	Aggregate Surface Repair, Type A 8-inch	294	\$15	SF	\$4,410
17	Temporary Aggregate Surface, 6-inch	1175	\$12	SF	\$14,100
11	Hot Mix Asphalt Surface Replacement	24	\$280	TON	\$6,720
12	Portland Cement Concrete Roadway Pavement, 8-inch (Replacement)	294	\$15	SF	\$4,410
13	Portland Cement Concrete Driveway Pavement, 6-inch (Replacement)	59	\$12	SF	\$708
14	Concrete Sidewalk Removal and Replacement	940	\$15	SF	\$14,100
15	Curb and Gutter Removal and Replacement	235	\$65	LF	\$15,275
	Subtotal				\$463,000
	Contingency		3%		\$13,900
TOTAL BASE BID CONSTRUCTION COST ESTIMATE					\$476,900

Table 3-4 provides the anticipated FY 2027 total project cost, including design and construction engineering and other professional services.

TABLE 3-4: TOTAL FISCAL YEAR 2027 PROJECT COST ESTIMATE

Non-Escalated Fiscal Year 2025 Total Project Cost Estimate Table		
1	Design Engineering (including planning and form preparation):	\$14,400
2	Construction Engineering (including bidding):	\$52,500
3	Other Professional Services (separate legal, loan admin, etc.):	\$0
4	Construction:	\$463,000
5	Contingency (at 3% of estimated construction costs):	\$13,900
6	Total Estimated Project Costs:	\$543,800

A cost escalation table for the next four years is provided in Table 3-5. This shows the total project cost from Table 3-4 escalated by 3% each year.

TABLE 3-5: FOUR-YEAR COST ESCALATION

Cost Escalation (Assumed 3% per Year)	
Year	Cost
Total Estimated Project Costs (FY 2028)	\$561,000
Total Estimated Project Costs (FY 2029)	\$578,000
Total Estimated Project Costs (FY 2030)	\$596,000
Total Estimated Project Costs (FY 2031)	\$614,000

3.2 Customer Affordability

TABLE 3-6: CURRENT WATER RATES

Water Charges	Water Inside City	Water Outside City
Minimum Charge up to 1,500 gallons	\$ 17.35	\$ 26.03
Next 8,500 gallons	\$ 11.56	\$ 17.35
Next 10,000 gallons	\$ 7.95	\$ 11.94
Next 130,000 gallons	\$ 7.22	\$ 10.84
Over 150,000 gallons	\$ 3.49	\$ 6.38
Bulk 200,000+ gallons	\$ 3.49	\$ 6.38
Resellers	\$ 8.33	

The average water use per customer is approximately 4,898 gallons per month (including both inside and outside City customers). The average water bill per customer inside the City is approximately \$56.63 (\$17.35

for first 1,500 gallons + \$39.28 for remaining 3,398 gallons, at \$11.56 per 1,000 gallons). The average water bill per customer outside the City is approximately \$84.99 (\$26.03 for first 1,500 gallons + \$58.96 for remaining 3,398 gallons, at \$17.35 per 1,000 gallons). The weighted average water bill per customer is approximately \$60.18, considering approximately 87.5% of the customers are inside the City and 12.5% fall outside the City (inside City bill X 87.5% weighting factor + outside City bill X 12.5% weighting factor or $\$56.63 \times 0.875 + \84.99×0.125).

Wastewater service users pay \$7.78 per 1,000 gallons of water used. Average use per customer is 4,898 gallons. Therefore, the average wastewater bill is \$38.11 ($\$7.78 \times 4,898$ gallons)

Median Household Income (MHI) in Carlinville is \$52,738. Carlinville ratepayers currently pay an average of \$60.18 for water service, and \$38.11 for sewer service. The average combined water and sewer bill is \$98.28/month, or \$1,179.38 a year. The average water and sewer charge is currently 2.24% of MHI.

3.3 Payment Structure Options

The cost of replacing service lines in Carlinville is estimated at \$2,490,700 in 2026 and \$543,800/year thereafter. These estimates are in 2025 dollars and future years will be escalated at a 3% rate. The cost of all the work is projected to be \$9.5 million. Replacements are expected to take place over the next twelve (12) years, with expected completion in 2037. Three options were considered:

Option 1 – Financing all costs using state LSLR loan

The state of Illinois offers a 30-year loan @ 0% interest for lead service line replacements. If the City can take advantage of this program, they would borrow \$9.5 million over the next 12 years. By 2037, annual debt service payments would be \$316,117/year. These payments would continue through 2055, and then steadily decrease (as debt is amortized and retired) until they end in 2066.

There are currently around 2,871 service connections to the water system. Based on recent census data, the population in Carlinville is decreasing by 0.35% per year. If this trend continues, the number of connections will decrease to 2,603 by 2053. Therefore, in 2053 the debt service cost will be \$121.44/connection ($\$316,117/2,603$ users). Total water and sewer costs would equal \$1,300.82 ($\$1,179.38$ current costs + \$121.44 in new debt service costs). This projected bill is 2.47% of MHI.

Option 2 – Paying cash for all LSLR

The cash option would have utility users pay cash for all service line replacements in the year the work is done, without any borrowing. The cost of all the work is projected to be \$9.5 million from 2026 to 2037. The costs per water connection run from \$190.74/user (2027) up to \$870.57/user (2026). When these service line replacement costs are added to the existing water & sewer bills, the average bill will increase to \$1,446.92/year by 2037. This is 2.74% of current MHI. This option has a larger impact on user bills for the next 12 years, but there is no long-term debt service. All work would be fully paid for when it is completed in 2037.

Option 3 – Financing all costs using state LSLR loan, with 49% principal forgiveness

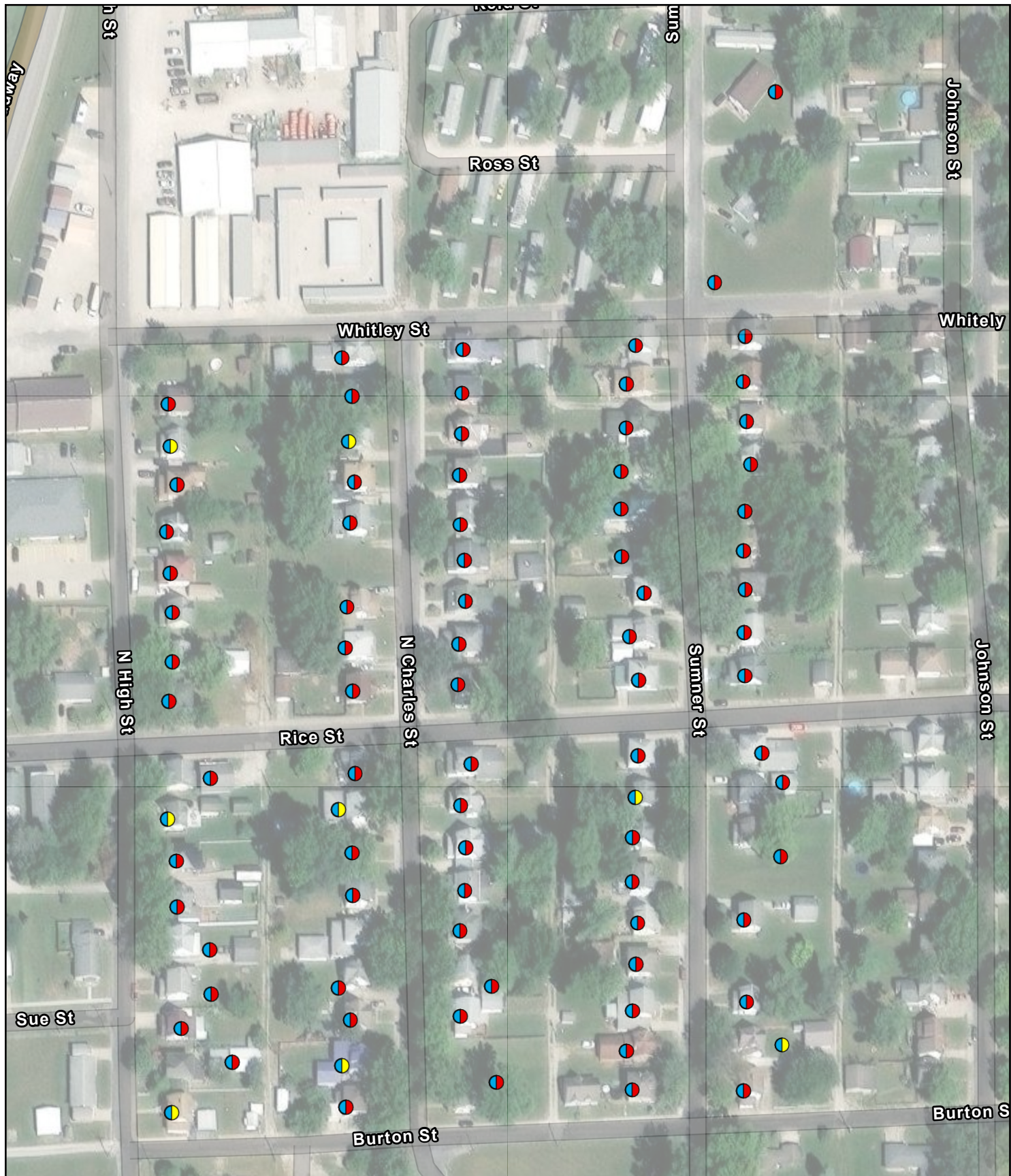
The state of Illinois offers a 30-year loan @ 0% interest for lead service line replacements. Principal forgiveness is also available to disadvantaged communities. If Carlinville can qualify for this program with

principal forgiveness, they would borrow \$4.85 million over the next 12 years. By 2037, annual debt service payments would be \$161,720/year. These payments would continue through 2055, and then steadily decrease until they end in 2066.

There are currently around 2,871 service connections to the water system. Based on recent census data, the population in Carlinville is decreasing by 0.35% per year. If this trend continues, the number of connections will decrease to 2,603 by 2053. Therefore, in 2053 the debt service cost will be \$62.13/connection (\$161,720/2,603 users). Total water and sewer costs would equal \$1,241.51 (\$1,179.38 current costs + \$62.13 in new debt service costs). This projected bill is 2.35% of MHI.





**APPENDIX A: LEAD SERVICE LINE INVENTORY MAPS – PHASE 2
REPLACEMENTS**

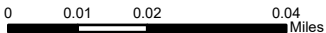
Figure Exported: 11/13/2024 By: KSnickler Using: \\woodardcurran\nt\shared\Projects\0234802.01 Carlinville IL Lead Service Line Replacement\wp\GIS\SL\Carlinville_IL_SLR.aprx Layout: Individuals



Lead Service Line Inventory Map - Phase 2 Replacements Part 1 of 2

Legend

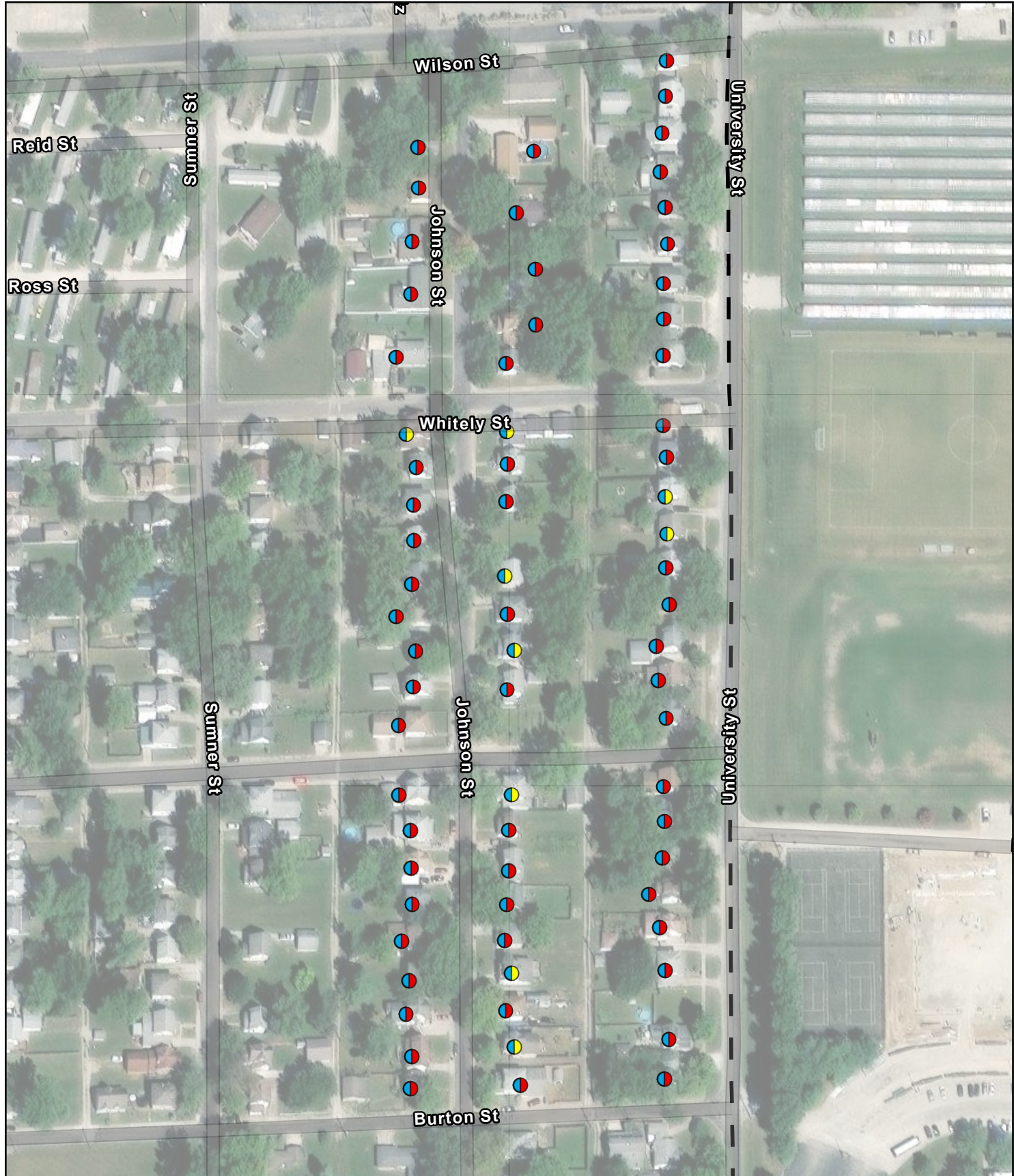
-  Non-Lead | Lead
-  Non-Lead | Galvanized
-  Requiring Replacement
-  Census Tracts



Project #: 0234802.00
Map Created: November 2024

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. Data Sources: City of Carlinville, IL

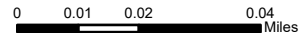
Figure Exported: 11/13/2024 By: KStrickler Using: \\woodardcurran\shared\Projects\0234802.01 Carlinville IL Lead Service Line Replacement\wp\GIS\SL\Carlinville_IL_SUR\Carlinville_IL_SUR.aprx Layout: Individuals



**Lead Service Line
Inventory Map -
Phase 2 Replacements
Part 2 of 2**

Legend

- Non-Lead | Lead
- Non-Lead | Galvanized
- Non-Lead | Requiring Replacement
- Census Tracts

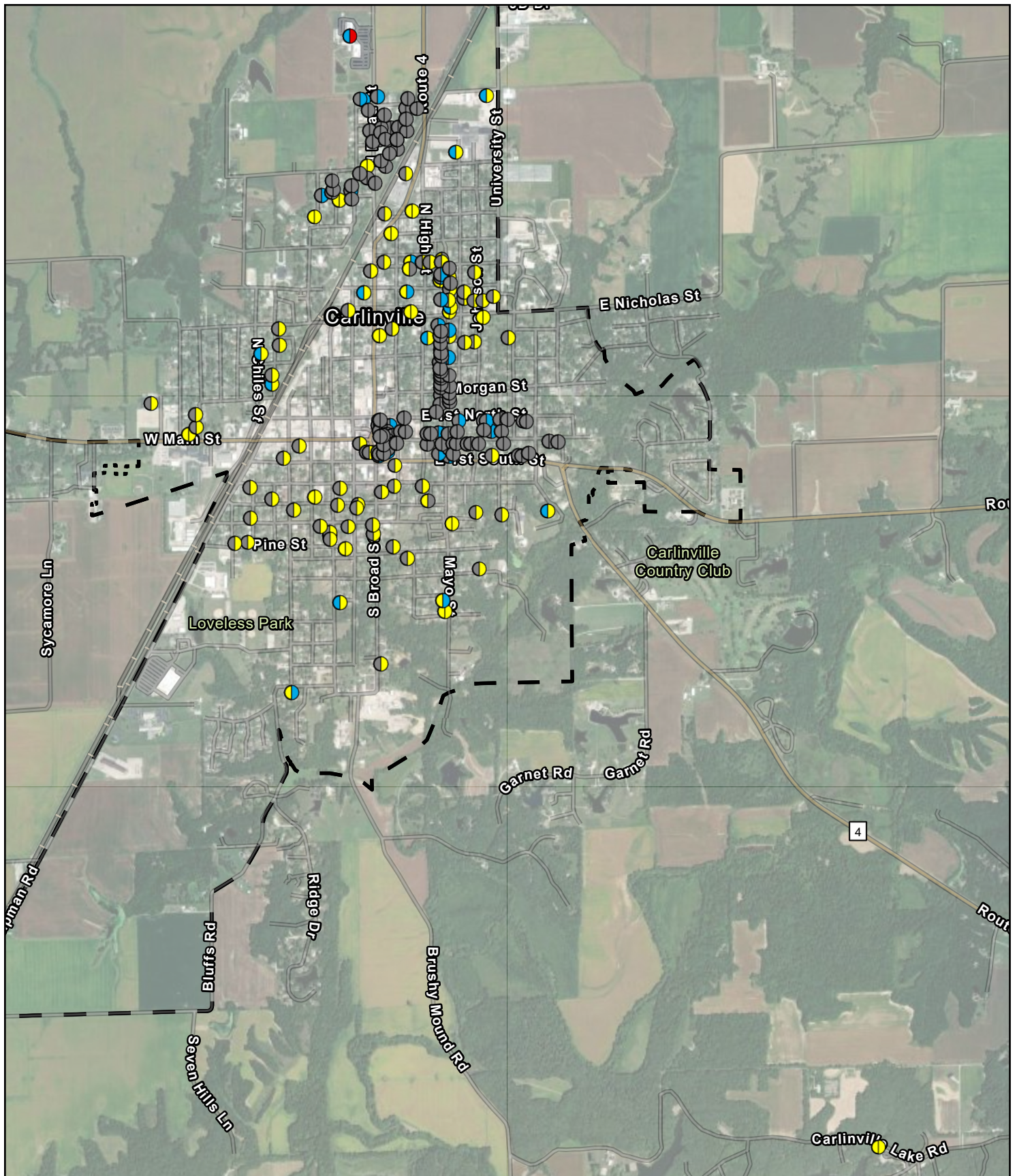


Project #: 0234802.00
Map Created: November 2024

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:** City of Carlinville, IL

**APPENDIX B: LEAD SERVICE LINE INVENTORY MAP – PHASES 3
REPLACEMENTS**

Figure Exported: 2/24/2025 By: KStrickler Using: \\woodardcurran.net\shared\Projects\0234802.01 Carlinville IL Lead Service Line Replacement\wp\GIS\SL\Carlinville_ILSLR.aprx Layout: Individuals



Lead Service Line Inventory

Phase 3

Carlinville, IL

0 500 1,000 2,000 Feet

Legend

- Galvanized Requiring Replacement | Galvanized Requiring Replacement
- Galvanized Requiring Replacement | Non-Lead
- Galvanized Requiring Replacement | Unknown
- Non-Lead | Lead
- Non-Lead | Galvanized Requiring Replacement
- Unknown | Galvanized Requiring Replacement
- Unknown | Non-Lead
- Unknown | Unknown
- Census Tracts (3)

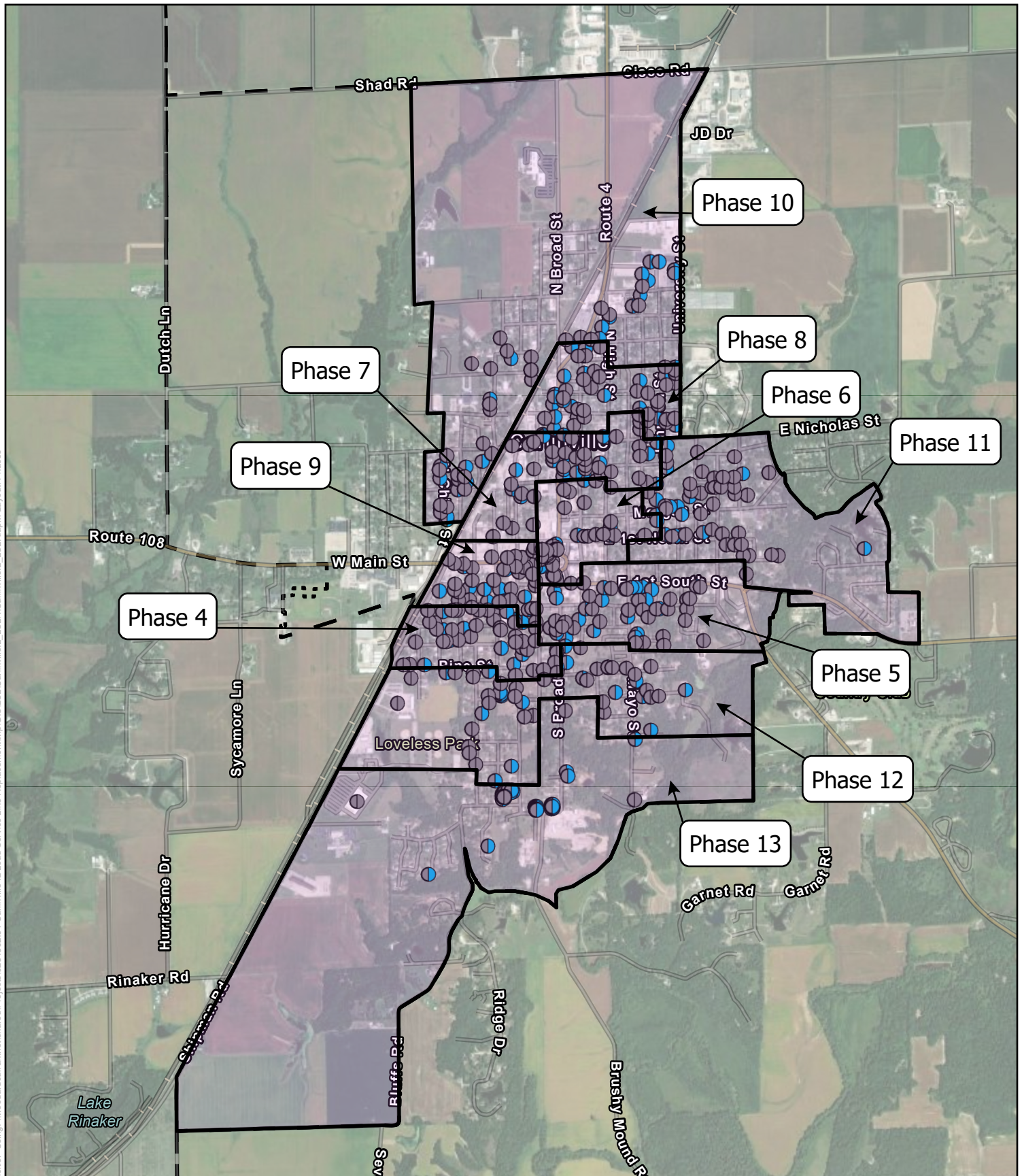


Project #: 0234802.03
Map Created: February 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. Data Sources: City of Carlinville, IL





**APPENDIX C: LEAD SERVICE LINE INVENTORY MAP – PHASES 4 - 13
REPLACEMENTS**

Figure Exported: 2/24/2025 By: KStrickler Using: \\woodardcurran.net\shared\Projects\0234802.03_Carlinville_IL_Lead_Service_Line_Replacement\wp\GIS\SL_Carlinville_IL_SLR.aprx Layout: Phases



**Lead Service
Line Replacement**
Phases 4 - 13
Carlinville, IL

Legend

-  Unknown | Non-Lead
-  Unknown | Unknown
-  Census Tracts
-  Phase Zones



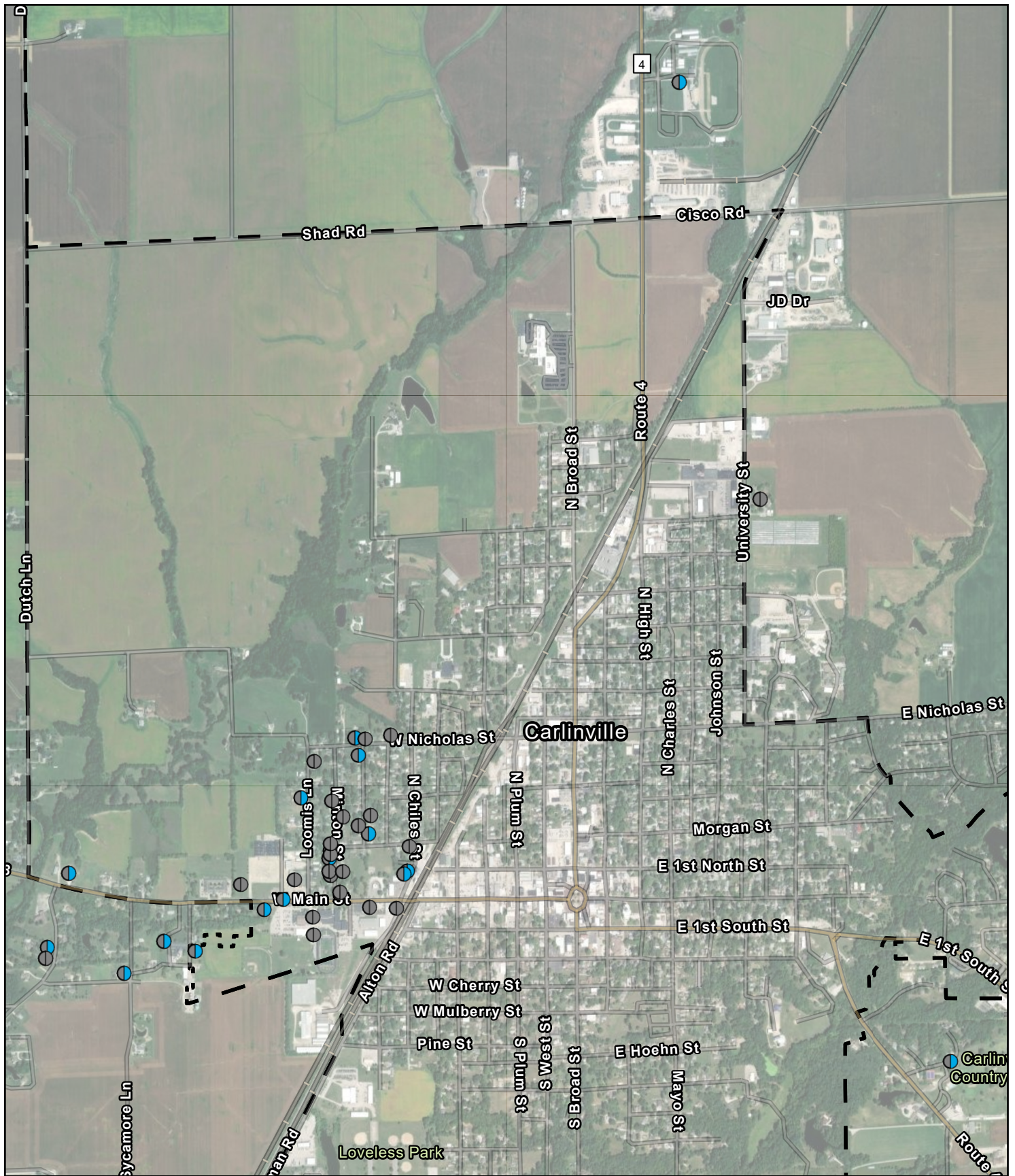
Project #: 0234802.03
Map Created: February 2025

0 500 1,000 2,000
Feet

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:** City of Carlinville, IL

**APPENDIX D: LEAD SERVICE LINE INVENTORY MAP – PHASE 14
REPLACEMENTS**

Figure Exported: 2/24/2025 By: KStrickler Using: \\woodardcurran.net\shared\Projects\0234802.01 Carlinville IL Lead Service Line Replacement\wpGIS\SL\Carlinville_ILSLR.aprx Layout: Individuals



Lead Service Line Inventory

Phase 14

Carlinville, IL

Legend

- Unknown | Non-Lead
- Unknown | Unknown
- Census Tracts

0 400 800 1,600 Feet



Project #: 0234802.03
Map Created: February 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. Data Sources: City of Carlinville, IL

APPENDIX E: LSLR REQUIRED NOTIFICATIONS TO THE PUBLIC



Drinking Water Lead Service Replacement NOTICE

This notice contains important information about your drinking water. Have someone translate it for you or speak with someone who understands it.

Este aviso contiene información importante sobre su agua potable. Pídele a alguien que te lo traduzca o habla con alguien que lo entienda.



Dear Water Customer,

As part of the Lead and Copper Rule Improvements (40CFR Parts 141 and 142, October 2024) water systems are required to document all water service materials in their system and identify any lead or lead containing materials that may be in the system.

The City of Carlinville (City) is continuing the lead service line replacement program. As part of this program, we are investigating all services and notifying customers if and when a lead service line is encountered. Ownership of the service line varies by water system, but in Carlinville, the service line from the water main to the meter / curb stop is the responsibility of the City and from the meter / curb stop into the building is the responsibility of the property owner. In accordance with the Lead and Copper Rule Revisions, the entire service line – all materials containing lead – must be replaced.

Our most recent service line inventory indicates that some or all of the water service materials between the water main and your property may contain lead. The City will be conducting a series of construction contracts focused on replacing lead service lines (if present) at various locations throughout the City both within the roadway and on private property.

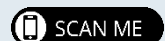
The City has committed to a lead service line removal and replacement program that has no cost to individual residents for the City's contractor to replace a lead service line as required by the Illinois Environmental Protection Agency (IEPA). Funding sources for this work could vary by phase of the replacement program but will generally be sources from the IEPA Public Water Supply Loan Program State Revolving Fund.

This work will require your consent, as well as access to the water service connection in your basement. Prior to your service line replacement, the City's contractor will provide a property access consent form for your signature and schedule a time for the replacement. Additional information pertaining to lead service lines including procedures for checking whether your home has a lead water service can be found at the resources provided.



Carlinville Lead Service Line Replacement Program

<https://cityofcarlinville.com/public-works/>



USEPA Protect Your Tap Tool

<https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead>



Drinking Water Lead Service Replacement

CONSENT FORM

☐

Yes, I will allow the Water Department Staff and its Contractors to investigate, document and replace my water service, and I understand the following:

- Work will entail excavation on my property along with access to my water service line where it enters the dwelling near the water meter.
- Restoration on my property will be limited to topsoil, seed, and pavement.
- With this replacement, the City does not assume ownership of this water service line.
- This City's Contractor will contact me with the proposed replacement date.
- Work could involve the removal and reattachment of the ground / bonding jumper that may be present on the existing water service.

☐

No, I will not allow the Water Department Staff and its Contractors to investigate, document, and replace my water service.

Print Name: _____

Cell Phone: _____

Email Address: _____

Property Physical Address:

Owner Address (if different):

Water Service Account Number (if known): _____

Signature: _____

Date: _____



Lead Service Line Replacement Program

REPLACEMENT GUIDE

Replacement Contractor: _____ Scheduled Replacement Date: _____



This notice contains important information about your drinking water. Have someone translate it for you or speak with someone who understands it.

Este aviso contiene información importante sobre su agua potable. Pídele a alguien que te lo traduzca o habla con alguien que lo entienda.

Dear Water Customer,

You are receiving this notice because the lead water service line to your home, property, or business is in the process of being fully replaced. The City of Carlinville (City) has committed to a lead service line removal and replacement program that has no cost to individual residents for the City's contractor to replace a lead service line as required by the Illinois Environmental Protection Agency (IEPA). Please follow the procedures as described below to ensure proper replacement.

Pre-Replacement (Approx. 1 day prior to replacement)

- Locate where your water service line enters your home (typically located in the basement at the foundation wall facing the road) and remove all personal items within a 10-foot radius.
- Remove obstructions from your front yard. Examples include trash cans, yard waste, garden decorations, etc.
- Prepare to be without water the following day for at least 4 hours.

During Replacement

- Plan to have at least one representative home during the replacement. This is needed because the contractor performing the replacement will need access to your basement throughout the installation.

Immediately After Replacement

- Your new service will be flushed by the replacement contractor at an outside spigot, but you will also need to flush your interior plumbing. Please use the following steps to ensure proper flushing of interior plumbing.
 - 1) Turn off or bypass any water softener or filtration system.
 - 2) Remove all aerators or screens, including shower heads from all faucets and clean debris with vinegar solution if necessary.
 - 3) Do not use any hot water.
 - 4) Turn on cold-water faucets in the basement (or lowest floor), including laundry tubs, hose-bibs, bathtubs, and showers. Leave all faucets running at the highest rate that the drain will allow, using only cold water.

Continued on reverse →

- 5) After all faucets are open on the lowest floor, open the faucets on the next highest floor of the house. Continue until faucets are open on all floors.
- 6) Record the order in which the faucets were turned on.
- 7) Leave water running for at least 30 minutes.
- 8) Turn off the faucets in the same order they were turned on and reattach aerators / screens.

After Day of Replacement

- Residential Customers: Utilize the provided lead removal pitcher and filter including 6-month supply of filter replacement cartridges.

Health Effects of Lead

- Exposure to lead in drinking water may cause serious health effects in all age groups. Infants and children may have decreases in IQ and attention span. Lead exposure may lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy may have increased risk of these adverse health effects. Adults may have increased risks of heart disease, high blood pressure, kidney or nervous system problems. The replacement of your lead or galvanized service line will mitigate these risks.



Lead Service Line Replacement Program

FILTER NOTICE

This notice contains important information about your drinking water. Have someone translate it for you or speak with someone who understands it.

Este aviso contiene información importante sobre su agua potable. Pídele a alguien que te lo traduzca o habla con alguien que lo entienda.



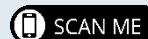
Dear Water Customer,

You are receiving this notice because the lead water service line to your property is in the process of being replaced. The City of Carlinville (City) has committed to a lead service line removal and replacement program that has no cost to individual residents for the City's contractor to replace a lead service line as required by the Illinois Environmental Protection Agency (IEPA). The City is supplying you with a National Sanitation Foundation certified lead removal pitcher and filter, including a supply of filter replacement cartridges estimated to last for 6 months.

You should begin using your pitcher and filter for all water consumption immediately **after** your lead service line is replaced. This precautionary measure is intended to mitigate any potential, temporary lead concentration in your drinking water following your lead service line replacement. Please follow the instructions below as well as the manufacturer's instructions for proper flushing and filter cartridge removal and replacement, to ensure proper use and removal of lead.

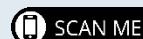
LEAD REMOVAL PITCHER AND FILTER INSTRUCTIONS:

- 1) Use this pitcher filter for all water that you consume for drinking, cooking, and making baby formula for 6 months following your lead service line replacement.
- 2) Each time you fill the pitcher, fill it with cold fresh tap water after allowing the water to run for at least 5 minutes.
- 3) Follow the manufacturer's instructions for filters.
- 4) Clean faucet aerators / screens every 3 to 4 weeks.



Carlinville Lead Service Line Replacement Program

<https://cityofcarlinville.com/public-works/>



USEPA Protect Your Tap Tool

<https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead>

CUSTOMER FLUSHING AFTER LEAD SERVICE LINE REPLACEMENT

The replacement of lead service lines may temporarily increase lead concentrations in drinking water due to the release of metal from scale on pipes in the home that have not been replaced. The lead concentration should decrease after time. The contractor has flushed the new service line to your home. It is strongly recommended that the interior plumbing also be flushed now that the new service line is installed. See the flushing procedure below that is recommended by the American Water Works Association.

INSTRUCTIONS FOR CUSTOMER FLUSHING OF INTERIOR PLUMBING

1. Find all the faucets that will drain, including the basement and all floors in your house.
2. Remove aerators and screens whenever possible, including the shower heads, from all faucets you plan to flush.
3. Include the laundry tubs, hose-bibs, bathtubs, and showers as flushing points.
4. After all the aerators are off, open the faucets in the basement or lowest floor in the house. Leave all faucets running at highest rate possible, using cold water.
5. After the faucets are all open in lowest floor, open the faucets on next highest floor of the house. Continue until faucets are open on all floors.
6. After all faucets are opened, leave the water running for at least 30 minutes.
7. After 30 minutes, turn off the first faucet you opened and continue to turn off other faucets in the same order you turned them on.
8. Clean aerators/screens at each faucet. You may need to replace screens/aerators if too old or worn.

WATER TESTING FOLLOWING REPLACEMENT

Approximately one month after service line replacement, collection of a sample for lead testing is recommended. The sample should be a first-draw sample after water has not been used for at least 6 hours. The sample must be collected from a tap used frequently inside the home, preferably from the kitchen. Collect the sample with the aerator on, at maximum flow, and in a wide-mouth sample bottle.

As a precaution, until the sample is collected and analyzed, the customer should do a mini-flush of premise plumbing by running tap water each morning or when the water sits in the pipe for at least 6 hours. Flush for 5 minutes to displace water that has been sitting in the pipes inside the house and in the service line. This could include taking a shower, running the dishwasher, flushing a toilet, collecting water for plants/garden, or running the faucet. The customer should do this before using any water for drinking, cooking, infant formula, and so on. Daily mini-flushes should continue for six months or until lead sample results show the lead level is below the regulatory guideline. The customer should clean debris from aerators and screens once a month for six months. After six months, clean debris twice a year.



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