



Liberty Utilities – Lynwood/Rancho Dominguez (PWS No. CA1910161)

Verification of Lead Status Unknown

November 8, 2023

Acronyms

LCRR	Lead and Copper Rule Revision
LSL	Lead Service Line
PWS	Public Water System
SL	Service Line

Table of Contents

Background	1
Step 1: Identification of all service lines of unknown material.....	3
Step 2: Identification of the Number of Service Lines to be Physically Inspected.....	4
Step 3: Random Selection of Service Lines for Physical Inspection.....	5
Step 4: Physical inspection of the service lines.....	6
Step 5: Record of the physical inspection process.....	7
Step 6: Results input of unknown service lines into the inventory.....	8
Step 7: Retention of Identification Records.....	9
References	10
Appendix A: Random Set of Service Lines for Physical Inspection	11
Appendix B: LSL Field Investigation Sheet – Single Site	26
Appendix C: LSL Field Investigation Recordkeeping Spreadsheet.....	27

Background

The Lead and Copper Rule Revision (LCRR) requires the PWS to develop an inventory to identify the materials of service lines connected to the public water distribution system (40 CFR §141.84(a)). The PWS must also review sources of information to identify service line materials for the initial inventory. The water system may use sources of information if approved by the State (40 CFR §141.84(a)(3)) such as any identification method to assess service lines materials (40 CFR §141.84(a)(3)(iv)).

One identification method or verification strategy is a statistical approach. The statistical approach allows for completing a service line inventory with a 95% level of statistical confidence (with ±5% margin of error and 50% sample proportion).

A key factor in the success of the strategy mentioned above is the use of a randomly generated list of unknown service lines to be physically inspected. If ANY service line is found to be an LSL (either through the initial records review or the verification process), then this framework will not be used, and an alternate process will be discussed with the State. If NO service line is found to be lead through the records review and verification process, then the remaining unknown service lines will be classified as non-lead, and the submitted inventory will be final (e.g., containing all non-lead service lines). If, in the future, an LSL is found, then the water system will contact the state within 30 days to discuss a path forward. **Since Liberty acquired Liberty Utilities – Lynwood/Rancho Dominguez in January 2016, Liberty has not encountered any lead service lines.**

Known service lines are defined as service lines where the pipe materials are classified using records⁽¹⁾. Records that can be used to classify a SL are mentioned in 40 CFR §141.84 (a)(3)(i),(ii),(iii),(iv). Records showing that service lines were installed after the state lead ban (or local ordinance with an earlier lead ban) and service lines >2 inches (diameter allowance depends on state) will be considered known and classified as non-lead.

Unknown service lines are defined as a service line of unknown material with no/low confidence documented material history⁽¹⁾.

Identification methods or verification strategies are based on system size. The verification strategies for the identification of unknown service lines are:

- ✓ Interpolation: Best for small systems with less than 1,500 unknown service connections. For the interpolation method, the PWS must physically verify at least 20% of the total number of unknown service lines.
- ✓ Stratified Random Sampling: Best for medium systems (1,500 to 10,000 unknown service connections); for large systems (more than 10,000 unknown service connections.) For the stratified random sampling, the PWS must physically verify enough lines to reach a minimum 95% confidence level.

Identification Process

Before using the statistical approach to identify unknown service lines, Liberty completed the initial inventory using approved methodologies, such as the ones mentioned in 40 CFR §141.84 (a)(3), as well as

post-1986 construction and larger pipe diameters, to categorize service lines. Based on the applied methodologies, no LSLs were found. Therefore, it is appropriate to use the statistical approach.

The statistical method includes the following steps:

- ✓ Step 1: Identification of all service lines of unknown material.
- ✓ Step 2: Identification of the number of service lines to be physically inspected.
- ✓ Step 3: Random selection of service lines for physical inspection.
- ✓ Step 4: Physical inspection of the service lines.
- ✓ Step 5: Record of the physical inspection process.
- ✓ Step 6: Results input of unknown service lines into the inventory.
- ✓ Step 7: Retention of identification records.

Step 1: Identification of all service lines of unknown material.

Table 1 shows the total of service connections in Liberty Utilities – Lynwood/Rancho Dominguez (PWS. No. CA1910161).

Table 2 presents the total number of all the water service lines that could not be categorized using the approved methodologies shown in 40 CFR §141.84 (a)(3) for Liberty Utilities – Lynwood/Rancho Dominguez (PWS No. CA1910161).

Table 1: Total of Service Connections

System Name	Total of Service Connections
Liberty Utilities – Lynwood/Rancho Dominguez	4,412

Table 2: Service Lines with unknown materials

Category		Number of Service Lines
Public Side	Private Side	
Unknown	Unknown	100
Known (non-lead)	Unknown	4,054
Unknown	Known (non-lead)	10
Total		4,164

Step 2: Identification of the Number of Service Lines to be Physically Inspected.

Liberty Utilities – Lynwood/Rancho Dominguez has more than 1,500 unknown service lines, so the Stratified Random Sampling method is appropriate. Using the Stratified Random Sampling method, the PWS must physically verify an amount of the total number of unknowns maintaining a minimum of 95 percent level of statistical confidence. To ensure that the confidence level in the results is higher, Liberty is proposing the verification of 50% more than the minimum number required.

Table 3 presents the minimum and proposed number of unknown service lines to be physically verified.

Table 3: Minimum and Proposed Number of Unknown SLs to be Physically Verified

Statistical Approach	Total of Unknown SLs	Number of SLs to Verify (Minimum)	Number of SLs to Verify (Minimum x 1.5) (Proposed)
Stratified Random Sampling	4,164	352	528

The Stratified Random Sampling method considers the following:

- ✓ Buildings built between 1950 and 1986, very little to no lead was used on private property.
- ✓ Buildings built between 1900 and 1950, splitting the system up by decades depending on how many buildings fit in each decade would be important.
- ✓ Buildings built prior to 1900, lead is likely to be found.

Table 4 shows the proposed SLs to be verified and classified by built date.

Table 4: Proposed Number of Unknown SLs to be Physically Verified Classified by Built Date

Built Date	Number of SLs to Verify (Proposed)	Percentage of Number of SLs to Verify (Proposed)
Prior 1900s	1	0.2%
1900 to 1950	432	81.8%
1951 to 1986	92	17.4%
After 1986	3	0.6%
Total	528	100%

Step 3: Random Selection of Service Lines for Physical Inspection.

From the number of unknown service lines identified in Step 1 and the proposed number from Step 2, Liberty randomly selected service lines to be physically inspected as determined in Step 2. The selection was uniformly random and not based on any specific criteria, which could introduce bias.

The generation of the uniformly random set of service lines for inspection was created using a Microsoft Excel spreadsheet utilizing the RAND function. The RAND function in Excel is one of the functions specially designed for generating random numbers ⁽²⁾.

The list of the random set of service lines for physical inspection is presented in Appendix A. The locations were separated by built date.

Step 4: Physical inspection of the service lines.

The type of service line verification method that Liberty will use is:

- ✓ **Private Side:** Meter Pit Inspection.

At least one point of verification will be conducted for the portion of the unknown service line. The verification method includes meter pit inspection. If one or more of the original randomly selected sites cannot be verified, the next available location from the random number generation will be used. For example, if a system has 2,000 unknowns and has to verify 322 SLs but is only able to verify 312 SLs, then the next 10 SLs will be taken from the original random number list (e.g., 323 to 333).

Appendix B shows the LSL Field Investigation Sheet for a single site that Liberty will use in the verification process.

Step 5: Record of the physical inspection process.

Liberty will use a Microsoft Excel spreadsheet to enter the service line category and materials observed at each point. The four service line category types shown in 40 CFR §141.84 (4) are lead, non-lead, galvanized requiring replacement, and unknown. Liberty will use subclassification categories (e.g., copper, plastic) to capture the various material types for Liberty's records.

Appendix C shows the recordkeeping spreadsheet that will be used to record the findings.

Step 6: Results input of unknown service lines into the inventory.

For unknown service lines that will be inspected for the statistical sampling, Liberty will record the water system material identification method (physical inspection – meter pit inspection). Liberty will list the exact line material type in the inventory spreadsheet found in Appendix C.

For unknown service lines not needing to be inspected, Liberty will record the material identification method as “*statistical*” and service line material as *non-lead*.

Step 7: Retention of Identification Records.

Liberty will retain all the documentation of all service line identification efforts and will be available to the Division of Drinking water (DDW) if requested.

References

(1) Oregon Health Authority. Statistical Guidance for Evaluating Unknown Service Lines. March 2023.

(2) Cheusheva, Svetlana. How to generate random numbers in Excel: RAND and RANDBETWEEN functions. Available at: <https://www.ablebits.com/office-addins-blog/random-number-generator-excel/>

Appendix A: Random Set of Service Lines for Physical Inspection

Prior 1900

Location	Year Built	Material on the Public Side	Material on the Private Side
4716 E Compton Blvd	1890	Non-Lead	Unknown

1900 – 1950

Location	Year - Built	Material on the Public Side	Material on the Private Side
Atlantic Ave/Compton Blvd	1941	Non-Lead	Unknown
14721 S Frailey Ave	1946	Non-Lead	Unknown
4117 Mcmillan St	1946	Non-Lead	Unknown
4213 E Rosecrans Ave	1950	Non-Lead	Unknown
15319 Washington Ave	1939	Non-Lead	Unknown
4617 E Linsley St	1947	Non-Lead	Unknown
14907 S Williams Ave	1946	Non-Lead	Unknown
4227 E Linsley St	1946	Non-Lead	Unknown
12335 Millrace Ave	1947	Non-Lead	Unknown
12441 Waldorf Dr	1947	Unknown	Unknown
4820 E San Luis St	1948	Non-Lead	Unknown
15503 S Lime Ave	1915	Unknown	Unknown
14722 S Gibson Ave	1937	Non-Lead	Unknown
16611 Thorson Ave	1940	Non-Lead	Unknown
5136 Clark St	1947	Non-Lead	Unknown
1600 S Stoneacre Ave	1950	Non-Lead	Unknown
12834 Atlantic Ave	1947	Non-Lead	Unknown
15117 S Frailey Ave	1946	Non-Lead	Unknown
15513 S White Ave	1948	Non-Lead	Unknown
4308 Carlin Ave	1938	Non-Lead	Unknown
16511 Caress Ave	1940	Non-Lead	Unknown
15114 S Williams Ave	1948	Non-Lead	Unknown
5259 Clark St	1940	Non-Lead	Unknown
12433 Waldorf Dr #B	1940	Non-Lead	Unknown
1500 S Stoneacre Ave	1950	Non-Lead	Unknown
4154 Josephine St	1946	Non-Lead	Unknown
15715 1/2 S White Ave	1928	Unknown	Unknown
16424 S Muriel Ave	1938	Non-Lead	Unknown
5506 Pelleur St	1940	Non-Lead	Unknown
1602 N Castlegate Ave	1948	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
14641 S Lime Ave	1946	Non-Lead	Unknown
15302 S Lime Ave	1949	Non-Lead	Unknown
14922 S White Ave	1945	Non-Lead	Unknown
12601 Waldorf Dr	1940	Non-Lead	Unknown
12820 S Frailey Ave	1948	Non-Lead	Unknown
15128 S Williams Ave	1924	Non-Lead	Unknown
14513 S Cookacre St	1940	Non-Lead	Unknown
12404 Atlantic Ave	1947	Non-Lead	Unknown
5236 Alvada St	1941	Non-Lead	Unknown
5412 Pelleur St	1940	Non-Lead	Unknown
12803 Cookacre Ave	1934	Non-Lead	Unknown
4241 Saunders St	1941	Non-Lead	Unknown
12425 Atlantic Ave Unit #1	1916	Non-Lead	Unknown
14613 S Cookacre St	1940	Non-Lead	Unknown
803 S Butler Ave	1935	Non-Lead	Unknown
5332 Clark St	1940	Non-Lead	Unknown
15515 Washington Ave	1924	Non-Lead	Unknown
16512 S Bradfield Ave	1940	Non-Lead	Unknown
4523 Olanda St	1949	Non-Lead	Unknown
14526 S Butler Ave	1941	Non-Lead	Unknown
1623 S Stoneacre Ave	1950	Non-Lead	Unknown
16618 Cuzco Ave	1940	Unknown	Unknown
14528 Atlantic Ave	1943	Non-Lead	Unknown
4917 San Marcus St	1931	Non-Lead	Unknown
15616 1/2 S Butler Ave	1928	Non-Lead	Unknown
1100 S Castlegate Ave	1949	Non-Lead	Unknown
4846 Mcmillan St	1939	Non-Lead	Unknown
12608 S Harris Ave	1942	Non-Lead	Unknown
12905 S Harris Ave	1929	Non-Lead	Unknown
14646 S Lime Ave	1946	Non-Lead	Unknown
12530 Manette Pl	1947	Unknown	Unknown
14822 S White Ave	1941	Non-Lead	Unknown
4252 Josephine St	1949	Non-Lead	Unknown
12204 Thorson Ave	1934	Non-Lead	Unknown
5444 Fertile St	1939	Non-Lead	Unknown
4902 Wilbarn St	1939	Non-Lead	Unknown
1203 S Castlegate Ave	1949	Non-Lead	Unknown
14704 S Gibson Ave	1947	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
3719 E Bennett St	1940	Non-Lead	Unknown
2200 San Vincente St	1946	Non-Lead	Unknown
15402 S Butler Ave	1948	Non-Lead	Unknown
1111 S Castlegate Ave	1949	Non-Lead	Unknown
2110 E San Mateo St	1948	Non-Lead	Unknown
1408 S Castlegate Ave	1948	Non-Lead	Unknown
918 N Locust Ave	1948	Non-Lead	Unknown
1315 S Castlegate Ave	1948	Non-Lead	Unknown
12838 Atlantic Ave	1946	Non-Lead	Unknown
5218 Lavinia Ave	1941	Non-Lead	Unknown
4614 Bales St	1943	Non-Lead	Unknown
1315 S Stoneacre Ave	1948	Non-Lead	Unknown
12423 Waldorf Dr	1940	Non-Lead	Unknown
516 S Harris Ave	1935	Non-Lead	Unknown
1100 S Stoneacre Ave	1949	Non-Lead	Unknown
14602 S White Ave	1940	Non-Lead	Unknown
3832 E Pauline St	1939	Non-Lead	Unknown
14902 Castlegate Ave	1931	Non-Lead	Unknown
15317 S Gibson Ave	1918	Non-Lead	Unknown
4917 Wilbarn St	1939	Non-Lead	Unknown
2204 E San Luis St	1948	Non-Lead	Unknown
4513 E Compton Blvd	1946	Non-Lead	Unknown
4625 Cardwell St	1947	Non-Lead	Unknown
5160 Lavinia Ave	1942	Non-Lead	Unknown
16333 S Essey Ave	1939	Non-Lead	Unknown
4919 San Carlos St	1947	Non-Lead	Unknown
14808 S Butler Ave	1946	Non-Lead	Unknown
1624 S Butler Ave	1943	Non-Lead	Unknown
5515 Fertile St	1939	Non-Lead	Unknown
3724 E Pauline St	1939	Non-Lead	Unknown
14517 S Cookacre St	1940	Non-Lead	Unknown
14827 S Williams Ave	1928	Non-Lead	Unknown
4203 Mcmillan St	1939	Non-Lead	Unknown
14517 S White Ave	1940	Non-Lead	Unknown
4914 San Rafael St	1947	Non-Lead	Unknown
12420 S Harris Ave	1943	Non-Lead	Unknown
16614 S Harris Ave	1945	Non-Lead	Unknown
1520 S Stoneacre Ave	1950	Non-Lead	Unknown
5526 Pelleur St	1940	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
1220 S Castlegate Ave	1949	Non-Lead	Unknown
14814 S Cookacre St	1939	Non-Lead	Unknown
16331 S Harris Ave	1950	Non-Lead	Unknown
4737 Carlin Ave	1947	Non-Lead	Unknown
5447 Rayborn St	1940	Non-Lead	Unknown
1208 S Stoneacre Ave	1949	Non-Lead	Unknown
12523 Waldorf Dr	1939	Non-Lead	Unknown
707 N Thorson Ave	1947	Non-Lead	Unknown
15300 S Frailey Ave	1933	Non-Lead	Unknown
14634 S Frailey Ave	1946	Non-Lead	Unknown
4612 E Myrrh St	1941	Non-Lead	Unknown
715 N Locust Ave	1947	Non-Lead	Unknown
5170 Clark St	1947	Non-Lead	Unknown
15402 S White Ave	1924	Non-Lead	Unknown
15812 S Lime Ave	1939	Non-Lead	Unknown
14645 S Frailey Ave	1947	Non-Lead	Unknown
16625 Cuzco Ave	1940	Non-Lead	Unknown
16619 Cuzco Ave	1940	Non-Lead	Unknown
14907 Atlantic Ave	1947	Non-Lead	Unknown
14906 S Frailey Ave	1947	Non-Lead	Unknown
4106 San Vincente St	1946	Non-Lead	Unknown
12532 Waldorf Dr	1939	Non-Lead	Unknown
14431 S Harris Ave	1944	Non-Lead	Unknown
3724 Duma St	1940	Non-Lead	Unknown
14913 S Cookacre St	1946	Non-Lead	Unknown
1611 S Stoneacre Ave	1950	Non-Lead	Unknown
4625 Mcmillan St	1947	Non-Lead	Unknown
1200 S Stoneacre Ave	1949	Non-Lead	Unknown
4932 San Carlos St	1938	Non-Lead	Unknown
16518 Caress Ave	1940	Non-Lead	Unknown
14414 S Gibson Ave	1918	Non-Lead	Unknown
12907 Atlantic Ave	1946	Non-Lead	Unknown
5222 Alvada St	1941	Non-Lead	Unknown
4617 E Rosecrans Ave	1943	Non-Lead	Unknown
4339 Mcmillan St	1949	Non-Lead	Unknown
12800 S Harris Ave	1930	Non-Lead	Unknown
5526 Rayborn St	1940	Non-Lead	Unknown
16506 Pannes Ave	1940	Non-Lead	Unknown
4233 Mcmillan St	1939	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
4924 San Miguel St	1948	Unknown	Unknown
15517 S Williams Ave	1927	Non-Lead	Unknown
12127 Duncan Ave	1942	Non-Lead	Unknown
S Butler Ave	1949	Non-Lead	Unknown
5406 Rayborn St	1940	Non-Lead	Unknown
3733 E Bennett St	1940	Non-Lead	Unknown
4323 E Rosecrans Ave	1940	Non-Lead	Unknown
14512 S Butler Ave	1945	Non-Lead	Unknown
4626 E San Luis St	1949	Non-Lead	Unknown
12420 Cookacre Ave Unit #4	1947	Non-Lead	Unknown
4323 E Palmerstone St	1939	Non-Lead	Unknown
12535 S Harris Ave	1946	Non-Lead	Unknown
1316 S Castlegate Ave	1948	Non-Lead	Unknown
1320 S Castlegate Ave	1948	Non-Lead	Unknown
15721 S Lime Ave	1947	Non-Lead	Unknown
2204 Bales St	1949	Non-Lead	Unknown
15115 Washington Ave	1948	Non-Lead	Unknown
16515 S Harris Ave	1945	Non-Lead	Unknown
12709 Gibson Ave	1947	Non-Lead	Unknown
5407 Fertile St	1939	Non-Lead	Unknown
4621 E Linsley St	1940	Non-Lead	Unknown
14435 S Cookacre St	1940	Non-Lead	Unknown
4933 San Juan St	1939	Non-Lead	Unknown
11803 S 4th Ave	1946	Non-Lead	Unknown
14402 S Butler Ave	1941	Non-Lead	Unknown
4220 E Rosecrans Ave	1940	Non-Lead	Unknown
1420 S Stoneacre Ave	1950	Non-Lead	Unknown
920 N Bradfield Ave	1948	Non-Lead	Unknown
15201 S White Ave	1948	Non-Lead	Unknown
15604 S White Ave	1947	Non-Lead	Unknown
4233 Agnes St	1937	Non-Lead	Unknown
4922 San Mateo St	1941	Non-Lead	Unknown
16603 S Muriel Ave	1939	Non-Lead	Unknown
4600 E Compton Blvd	1947	Non-Lead	Unknown
12900 Cookacre Ave	1922	Non-Lead	Unknown
14803 1/2 S Cookacre Ave	1948	Non-Lead	Unknown
800 N Essey Ave	1947	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
14917 S White Ave	1945	Non-Lead	Unknown
2136 E San Luis St	1949	Non-Lead	Unknown
14627 S Lime Ave	1945	Non-Lead	Unknown
5144 Lavinia Ave	1940	Non-Lead	Unknown
12515 Wright Rd	1947	Non-Lead	Unknown
1008 S Stoneacre Ave	1949	Non-Lead	Unknown
14708 S Lime Ave	1948	Non-Lead	Unknown
4520 Cardwell St	1949	Non-Lead	Unknown
14703 S Frailey Ave	1948	Non-Lead	Unknown
1715 N Stoneacre Ave	1948	Non-Lead	Unknown
916 Thorson Ave	1950	Non-Lead	Unknown
14809 1/4 S Cookacre Ave-House Meter	1940	Non-Lead	Unknown
4101 E Compton Blvd	1949	Non-Lead	Unknown
4111 San Vincente St	1926	Non-Lead	Unknown
15628 S Frailey Ave	1947	Non-Lead	Unknown
16614 1/2 Thorson Avenue	1940	Non-Lead	Unknown
16733 Thorson Ave	1944	Non-Lead	Unknown
14801 S Cookacre Ave	1931	Non-Lead	Unknown
14603 S Castlegate Ave	1940	Non-Lead	Unknown
14403 S Lime Ave	1943	Non-Lead	Unknown
12727 Waldorf Dr	1940	Non-Lead	Unknown
4623 Arlington Ave	1949	Non-Lead	Unknown
14527 S Lime Ave	1943	Non-Lead	Unknown
16507 Pannes Ave	1940	Non-Lead	Unknown
15006 S Lime Ave	1940	Non-Lead	Unknown
4943 San Carlos St	1942	Non-Lead	Unknown
15622 S Butler Ave	1920	Non-Lead	Unknown
3822 Wymore St	1940	Non-Lead	Unknown
4152 Carlin Ave	1945	Non-Lead	Unknown
14707 S Cookacre St	1948	Non-Lead	Unknown
4303 E Myrrh St	1939	Non-Lead	Unknown
4104 E San Luis St	1950	Non-Lead	Unknown
12733 S Harris Ave	1938	Non-Lead	Unknown
1312 S Butler Ave	1948	Non-Lead	Unknown
15217 S White Ave	1946	Non-Lead	Unknown
15701 Washington Ave	1947	Non-Lead	Unknown
15123 S Gibson Ave	1940	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
16611 Caress Ave	1941	Non-Lead	Unknown
15609 S Lime Ave	1940	Unknown	Unknown
14634 S Gibson Ave	1930	Non-Lead	Unknown
1015 S Stoneacre Ave	1949	Non-Lead	Unknown
12810 S Waldorf Dr	1940	Non-Lead	Unknown
12831 S Frailey Ave	1949	Non-Lead	Unknown
4925 San Rafael St	1932	Non-Lead	Unknown
918 N Pannes Ave	1948	Non-Lead	Unknown
16502 Pannes Ave	1940	Non-Lead	Unknown
15408 Washington Ave	1949	Non-Lead	Unknown
12737 Waldorf Dr	1939	Non-Lead	Unknown
14518 Atlantic Ave	1943	Non-Lead	Unknown
4234 Agnes St	1940	Non-Lead	Unknown
5203 Alvada St	1942	Non-Lead	Unknown
12817 S Butler Ave	1925	Non-Lead	Unknown
1619 N Castlegate Ave	1948	Non-Lead	Unknown
15422 S Lime Ave	1934	Non-Lead	Unknown
4111 Mcmillan St	1946	Non-Lead	Unknown
16612 Caress Ave	1942	Non-Lead	Unknown
4527 Cardwell St	1947	Non-Lead	Unknown
2121 E San Marcus St	1946	Non-Lead	Unknown
14520 S Cookacre St	1940	Non-Lead	Unknown
3704 E Iva St	1940	Non-Lead	Unknown
12301 Edgebrook Ave	1940	Non-Lead	Unknown
4307 Carlin Ave #2	1946	Non-Lead	Unknown
4245 Agnes St	1937	Non-Lead	Unknown
15213 S Williams Ave	1924	Non-Lead	Unknown
3732 E Bennett St	1940	Non-Lead	Unknown
905 N Pannes Ave	1949	Non-Lead	Unknown
15224 S Butler Ave	1939	Non-Lead	Unknown
14528 S Castlegate Ave	1941	Non-Lead	Unknown
520 S Harris Ave	1938	Non-Lead	Unknown
4927 San Juan St	1946	Non-Lead	Unknown
4908 Mcmillan St	1939	Non-Lead	Unknown
14721 S Butler Ave	1946	Non-Lead	Unknown
708 S Harris Ave	1944	Non-Lead	Unknown
14819 Castlegate Ave	1945	Non-Lead	Unknown
1011 N Locust Ave	1947	Non-Lead	Unknown
4950 1/2 San Juan St	1938	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
15317 S Frailey Ave	1942	Non-Lead	Unknown
4533 Carlin Ave	1947	Non-Lead	Unknown
12630 Wright Rd	1939	Non-Lead	Unknown
16520 Thorson Ave	1940	Non-Lead	Unknown
14629 Cookacre Ave	1949	Non-Lead	Unknown
15514 S Williams Ave	1947	Non-Lead	Unknown
16322 Pannes Ave	1939	Non-Lead	Unknown
12924 S Thorson Ave	1938	Non-Lead	Unknown
5445 Mcmillan St	1939	Non-Lead	Unknown
4239 E Linsley St	1947	Non-Lead	Unknown
15702 S White Ave	1920	Non-Lead	Unknown
5400 Pelleur St	1940	Non-Lead	Unknown
4115 E San Mateo St	1949	Non-Lead	Unknown
11821 S 4th Ave	1950	Non-Lead	Unknown
15808 Atlantic Ave	1950	Non-Lead	Unknown
15216 S White Ave	1942	Non-Lead	Unknown
12908 S Williams Ave	1950	Non-Lead	Unknown
14810 S Gibson Ave	1939	Non-Lead	Unknown
4229 E Palmerstone St	1946	Non-Lead	Unknown
12026 S 3rd Ave	1949	Non-Lead	Unknown
15715 S Atlantic Ave	1943	Non-Lead	Unknown
15221 S Gibson Ave	1948	Non-Lead	Unknown
14908 S Williams Ave	1947	Non-Lead	Unknown
5433 Olanda St	1940	Non-Lead	Unknown
4127 San Vincente St	1938	Non-Lead	Unknown
2131 E Compton Blvd	1930	Non-Lead	Unknown
4331 Mcmillan St	1948	Non-Lead	Unknown
4941 Wilbarn St	1939	Non-Lead	Unknown
5285 Clark St	1940	Non-Lead	Unknown
4618 E Rosecrans Ave	1943	Non-Lead	Unknown
4830 Mcmillan St	1939	Non-Lead	Unknown
2115 E San Luis St	1949	Non-Lead	Unknown
16620 Caress Ave	1940	Non-Lead	Unknown
5426 Clark St	1940	Non-Lead	Unknown
14805 1/4 S Cookacre Ave	1950	Non-Lead	Unknown
12921 S Harris Ave	1925	Non-Lead	Unknown
2504 E Adana St	1948	Non-Lead	Unknown
14630 S Lime Ave	1945	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
4215 Saunders St	1940	Non-Lead	Unknown
1305 S Butler Ave	1948	Non-Lead	Unknown
12227 Atlantic Ave	1946	Non-Lead	Unknown
1417 S Castlegate Ave	1948	Non-Lead	Unknown
4258 Lavinia Ave	1938	Non-Lead	Unknown
12425 Atlantic Ave Unit #2	1933	Non-Lead	Unknown
16411 Thorson Ave	1940	Unknown	Unknown
1517 S Butler Ave	1948	Non-Lead	Unknown
2516 E Adana St	1948	Non-Lead	Unknown
12540 Manette Pl	1950	Non-Lead	Unknown
1019 S Stoneacre Ave	1949	Non-Lead	Unknown
14826 S Williams Ave	1947	Non-Lead	Unknown
14709 S Gibson Ave	1944	Non-Lead	Unknown
3828 E Bennett St	1940	Non-Lead	Unknown
12801 S Stoneacre Ave	1940	Non-Lead	Unknown
15714 S Lime Ave	1928	Non-Lead	Unknown
14805 1/2 S Cookacre Ave	1950	Non-Lead	Unknown
4250 E San Luis St	1947	Non-Lead	Unknown
4848 Olanda St	1947	Non-Lead	Unknown
14523 S Butler Ave	1941	Non-Lead	Unknown
4119 E Compton Blvd	1943	Non-Lead	Unknown
1024 S Stoneacre Ave	1949	Non-Lead	Unknown
15117 S Williams Ave	1948	Non-Lead	Unknown
15729 S Frailey Ave	1942	Non-Lead	Unknown
1801 N Castlegate Ave	1948	Non-Lead	Unknown
5162 Niland St	1942	Non-Lead	Unknown
14922 S Cookacre St	1946	Non-Lead	Unknown
12811 S Harris Ave	1932	Non-Lead	Unknown
4236 E Rosecrans Ave	1940	Non-Lead	Unknown
15124 S Frailey Ave	1929	Non-Lead	Unknown
12016 S 2nd Ave	1947	Non-Lead	Unknown
4720 Carlin Ave	1947	Non-Lead	Unknown
14308 S Cookacre St	1941	Non-Lead	Unknown
12225 Virginia Ave	1942	Non-Lead	Unknown
5275 Niland St	1940	Non-Lead	Unknown
4131 Saunders St	1941	Non-Lead	Unknown
4233 E Linsley St	1946	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
12028 Thorson Ave	1938	Non-Lead	Unknown
15628 Washington Ave	1944	Non-Lead	Unknown
5446 Mcmillan St	1939	Non-Lead	Unknown
1023 S Castlegate Ave	1949	Non-Lead	Unknown
4733 Olanda St	1947	Non-Lead	Unknown
4707 E Compton Blvd	1942	Non-Lead	Unknown
2136 E San Mateo St	1941	Non-Lead	Unknown
5437 Rayborn St	1940	Non-Lead	Unknown
15320 S Lime Ave	1949	Non-Lead	Unknown
12915 S Williams Ave	1950	Non-Lead	Unknown
16328 S Bradfield Ave	1939	Non-Lead	Unknown
4609 Olanda St	1947	Non-Lead	Unknown
15814 S Butler Ave	1950	Non-Lead	Unknown
4721 Carlin Ave	1947	Non-Lead	Unknown
4944 Wilbarn St	1939	Non-Lead	Unknown
14648 S Frailey Ave	1948	Non-Lead	Unknown
5500 Pelleur St	1940	Non-Lead	Unknown
16433 Thorson Ave	1940	Non-Lead	Unknown
1027 S Castlegate Ave	1949	Non-Lead	Unknown
4301 E Rosecrans Ave	1942	Non-Lead	Unknown
3720 E Iva St	1940	Non-Lead	Unknown
15729 S Atlantic Ave	1948	Non-Lead	Unknown
4310 E Myrrh St	1948	Non-Lead	Unknown
4716 E Mcmillan St	1946	Non-Lead	Unknown
12720 S Harris Ave	1941	Non-Lead	Unknown
4300 Agnes St	1941	Non-Lead	Unknown
5139 Niland St	1940	Non-Lead	Unknown
4816 Mcmillan St	1939	Non-Lead	Unknown
1820 E Rosecrans Ave	1950	Non-Lead	Unknown
1015 S Castlegate Ave	1949	Non-Lead	Unknown
4208 Addington St	1947	Unknown	Unknown
Atlantic Ave	1942	Non-Lead	Unknown
12508 S Harris Ave	1946	Non-Lead	Unknown
15721 1/2 S White Ave	1943	Unknown	Unknown
12901 S Frailey Ave	1948	Non-Lead	Unknown
14625 S Cookacre St	1940	Non-Lead	Unknown
4626 Arlington Ave	1948	Non-Lead	Unknown
4338 E Rosecrans Ave	1940	Non-Lead	Unknown
5453 Rayborn St	1940	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
15615 Washington Ave	1936	Non-Lead	Unknown
5322 Clark St	1940	Non-Lead	Unknown
1027 S Stoneacre Ave	1949	Non-Lead	Unknown
15722 S Butler Ave	1939	Non-Lead	Unknown
16702 Thorson Ave	1940	Non-Lead	Unknown
16608 S Harris Ave	1941	Non-Lead	Unknown
5501 Olanda St	1940	Non-Lead	Unknown
1501 S Butler Ave	1948	Unknown	Unknown
1223 S Stoneacre Ave	1949	Non-Lead	Unknown
14523 S Castlegate Ave	1940	Non-Lead	Unknown
904 Thorson Ave	1949	Non-Lead	Unknown
2101 San Vincente St	1947	Non-Lead	Unknown
5157 Clark St	1941	Non-Lead	Unknown
12316 Thorson Ave	1928	Non-Lead	Unknown
4126 E San Marcus St	1947	Non-Lead	Unknown
12740 S Harris Ave	1941	Non-Lead	Unknown
12808 S Lime Ave	1947	Non-Lead	Unknown
1608 S Stoneacre Ave	1950	Non-Lead	Unknown
4307 E Linsley St	1947	Non-Lead	Unknown
4203 Saunders St	1941	Non-Lead	Unknown
12719 S Gibson Ave	1943	Non-Lead	Unknown
5255 Niland St	1940	Non-Lead	Unknown
802 N Locust Ave	1948	Non-Lead	Unknown
14603 S Cookacre St	1940	Non-Lead	Unknown
1512 S Stoneacre Ave	1950	Non-Lead	Unknown
4223 Agnes St	1944	Non-Lead	Unknown
4936 San Mateo St	1946	Non-Lead	Unknown
12800 S Williams Ave	1948	Non-Lead	Unknown
14715 S Williams Ave	1947	Non-Lead	Unknown
1215 S Stoneacre Ave	1949	Non-Lead	Unknown
4921 E Rosecrans Ave	1939	Non-Lead	Unknown
14616 S Castlegate Ave	1940	Non-Lead	Unknown
15320 1/2 S Butler Ave	1939	Non-Lead	Unknown
3707 Duma St	1940	Non-Lead	Unknown
14912 S Frailey Ave	1946	Non-Lead	Unknown
5263 Clark St	1940	Non-Lead	Unknown
16704 Caress Ave	1946	Non-Lead	Unknown
14523 Atlantic Ave	1941	Non-Lead	Unknown
1718 N Castlegate Ave	1948	Non-Lead	Unknown

1900 – 1950 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
14414 S Harris Ave	1941	Non-Lead	Unknown
12837 S Gibson Ave	1948	Non-Lead	Unknown
901 Thorson Ave	1950	Non-Lead	Unknown
14625 S Gibson Ave	1937	Non-Lead	Unknown
5161 Niland St	1941	Non-Lead	Unknown
15709 S Williams Ave	1927	Non-Lead	Unknown
15813 S Frailey Ave	1924	Non-Lead	Unknown
15125 S Butler Ave	1948	Non-Lead	Unknown
4236 E San Luis St	1950	Non-Lead	Unknown
14826 S Butler Ave	1941	Non-Lead	Unknown
4612 E Linsley St	1947	Non-Lead	Unknown
515 S Butler Ave	1924	Non-Lead	Unknown
800 N Thorson Ave	1950	Non-Lead	Unknown
4519 Blount Pl	1949	Non-Lead	Unknown
12837 S Harris Ave	1933	Non-Lead	Unknown
4206 Agnes St	1950	Non-Lead	Unknown
4616 E Myrrh St	1941	Non-Lead	Unknown
15308 S White Ave	1924	Non-Lead	Unknown
5224 Lavinia Ave	1942	Non-Lead	Unknown
4256 E San Luis St	1947	Non-Lead	Unknown

1951 – 1986

Location	Year - Built	Material on the Public Side	Material on the Private Side
11802 S 2nd Ave	1953	Non-Lead	Unknown
14636 Castlegate Ave	1955	Non-Lead	Unknown
4806 E Compton Blvd Apt#A	1962	Non-Lead	Unknown
4342 E Queensdale St	1957	Non-Lead	Unknown
12612 Manette Pl	1957	Non-Lead	Unknown
4202 E San Luis St	1951	Non-Lead	Unknown
14914 Atlantic Ave	1962	Non-Lead	Unknown
12727 S Harris Ave	1956	Non-Lead	Unknown
15720 S Frailey Ave	1956	Non-Lead	Unknown
2000 N Castlegate Ave	1951	Non-Lead	Unknown
12435 Cookacre Ave	1958	Non-Lead	Unknown
4604 Pelleur St	1954	Non-Lead	Unknown

1951 – 1986 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
5214 Clark St	1954	Non-Lead	Unknown
12514 S Harris Ave	1953	Non-Lead	Unknown
14819 S Gibson Ave	1957	Non-Lead	Unknown
4200 Lavinia Ave	1965	Non-Lead	Unknown
14710 Atlantic Ave	1951	Non-Lead	Unknown
4719 E Rosecrans Ave Apt B	1955	Non-Lead	Unknown
12619 Wright Rd	1957	Non-Lead	Unknown
4153 Carlin Ave	1953	Non-Lead	Unknown
4267 Carlin Ave	1961	Non-Lead	Unknown
4549 Mcmillan St	1983	Non-Lead	Unknown
15421 Atlantic Ave	1951	Non-Lead	Unknown
4723 E Rosecrans Ave	1960	Non-Lead	Unknown
2202 E Rosecrans Ave	1955	Unknown	Unknown
15524 S Butler Ave	1956	Non-Lead	Unknown
12606 Manette Pl	1957	Non-Lead	Unknown
12629 Halo Dr	1958	Non-Lead	Unknown
4335 Lavinia Ave	1958	Non-Lead	Unknown
11824 S Harris Ave	1951	Non-Lead	Unknown
5114 Clark St	1962	Non-Lead	Unknown
15404 1/2 S Frailey Ave	1960	Non-Lead	Unknown
14705 Atlantic Ave	1978	Non-Lead	Unknown
14624 S Lime Ave	1954	Non-Lead	Unknown
4713 E Rosecrans Ave	1956	Non-Lead	Unknown
4924 San Carlos St	1955	Non-Lead	Unknown
12723 Cookacre Ave	1960	Non-Lead	Unknown
14408 Atlantic Ave	1957	Non-Lead	Unknown
4401 E Compton Blvd	1960	Non-Lead	Unknown
4721 Arlington Ave	1957	Non-Lead	Unknown
15121 Washington Ave	1956	Non-Lead	Unknown
12906 S Lime Ave	1953	Non-Lead	Unknown
12820 S Williams Ave	1955	Non-Lead	Unknown
12407 Cookacre Ave	1952	Non-Lead	Unknown
12100 Thorson Ave	1957	Non-Lead	Unknown
12415 Waldorf Dr	1963	Unknown	Unknown
4536 Arlington Ave	1953	Non-Lead	Unknown
4314 Josephine St	1952	Non-Lead	Unknown
4236 E Linsley St	1955	Non-Lead	Unknown
12605 Halo Dr	1957	Non-Lead	Unknown

1951 – 1986 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
4303 E San Luis St	1968	Non-Lead	Unknown
12622 Halo Dr	1957	Non-Lead	Unknown
2003 N Stoneacre Ave	1951	Non-Lead	Unknown
4225 E Alondra Blvd	1968	Non-Lead	Unknown
12827 Castlegate Ave	1983	Unknown	Unknown
14825 Atlantic Ave	1959	Non-Lead	Unknown
5509 Fertile St	1973	Non-Lead	Unknown
14719 Atlantic Ave	1956	Non-Lead	Unknown
4408 E Mc Millan St	1984	Non-Lead	Unknown
4607 Pelleur St	1954	Non-Lead	Unknown
15310 S Williams Ave	1972	Non-Lead	Unknown
14622 Atlantic Ave	1954	Non-Lead	Unknown
15318 S Williams Ave	1980	Non-Lead	Unknown
15401 Washington Ave	1952	Non-Lead	Unknown
16732 Pannes Ave	1953	Non-Lead	Unknown
15523 S White Ave	1962	Non-Lead	Unknown
12610 S Gibson Ave	1959	Non-Lead	Unknown
2006 N Castlegate Ave	1951	Non-Lead	Unknown
4205 E Compton Blvd	1955	Non-Lead	Unknown
2211 E Compton Blvd	1952	Non-Lead	Unknown
15310 Washington Ave	1951	Non-Lead	Unknown
4723 E Compton Blvd	1957	Non-Lead	Unknown
12628 Halo Dr	1957	Non-Lead	Unknown
4285 Agnes St	1973	Non-Lead	Unknown
4602 Rayborn St	1954	Non-Lead	Unknown
609 S Butler Ave	1964	Non-Lead	Unknown
12845 S Harris Ave	1951	Non-Lead	Unknown
4252 Agnes St	1965	Non-Lead	Unknown
12106 Thorson Ave	1956	Non-Lead	Unknown
4151 Agnes St	1965	Non-Lead	Unknown
12318 Halo Dr	1954	Non-Lead	Unknown
12342 Halo Dr	1954	Non-Lead	Unknown
15601 S Lime Ave	1952	Non-Lead	Unknown
15412 Washington Ave	1952	Non-Lead	Unknown
12708 Harris Ave	1961	Non-Lead	Unknown
15205 S Butler Ave	1962	Non-Lead	Unknown
12621 Manette Pl	1957	Non-Lead	Unknown
15520 S Frailey Ave	1965	Non-Lead	Unknown
15520 Butler Ave	1956	Non-Lead	Unknown

1951 – 1986 (Continued)

Location	Year - Built	Material on the Public Side	Material on the Private Side
12640 Halo Dr	1959	Non-Lead	Unknown
12804 Cookacre Ave	1965	Non-Lead	Unknown
4002 E Pauline St	1961	Non-Lead	Unknown

After 1986

Location	Year - Built	Material on the Public Side	Material on the Private Side
14637 Castlegate Ave	2006	Unknown	Non-Lead
1160 E Rosecrans Ave	2008	Unknown	Non-Lead
4526 E Alondra Blvd	2000	Unknown	Non-Lead

Appendix B: LSL Field Investigation Sheet – Single Site

LCRR Field Investigation Template

Date of Inspection: _____

Customer Name: _____

Address/Location of Service Line: _____

Meter Number: _____

Description of Meter and/or Location: _____

Material for Public Service Line

- Lead
- Galvanized Requiring Replacement
- Galvanized
- Non-Lead Copper
- Non-Lead Plastic
- Non-Lead – Other

Material for Private Service Line

- Lead
- Galvanized Requiring Replacement
- Galvanized
- Non-Lead Copper
- Non-Lead Plastic
- Non-Lead - Other

Public Side Pipe Diameter

- 5/8 inch ½ inch
- 1 inch ¾ inch
- 1 ½ inch
- 2 inch

Private Side Pipe Diameter

- 5/8 inch ½ inch
- 1 inch ¾ inch
- 1 ½ inch
- 2 inch

Is there a lead connector? (Y) / (N)

Is there a Lead Solder in the Service Line? (Y) / (N)

Describe any other fitting and equipment connected to the service line that contains lead (for example, a backflow preventer or meter containing lead):

Building Type:

- Single Family Home Building
- Multi-Family Home Other: _____

Appendix C: LSL Field Investigation Recordkeeping Spreadsheet.

PWS Name: _____

PWS No. _____

LSL Field Investigation Notes										
Investigation Date	Unique Service Line ID (if any)	Address	City	ZIP Code	Public SL Material Classification (*)	Public SL Material (**)	Private SL Material Classification (*)	Private SL Material (**)	Material Identification Method (***)	Comments

(*) Material classification includes: Non-lead, galvanized requiring replacement, lead, unknown.

(*) Materials include: Copper, plastic, galvanized, lead, other

(***) Meter Pit inspection or Statistical