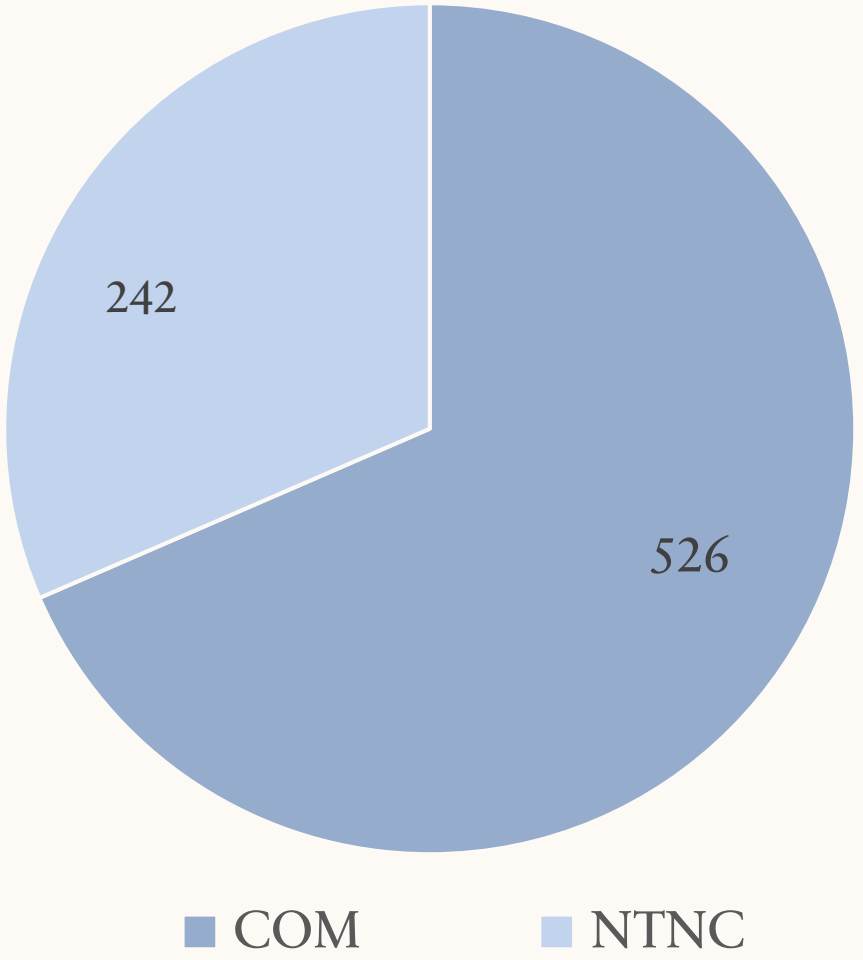
DEVELOPING YOUR SERVICE LINE INVENTORY

February 26, 2024

MA PWS SUBJECT TO THE LCR/LCRR/LCRI

Poll Question



WHAT ARE THE TIMELINES TO COMPLY WITH THE LCR/LCRR/LCRI?

LCR

Effective until October 16, 2024:

-LCR monitoring: Continue with your LCR sampling frequency for **this year** (refer to latest version of your 2023-2025 Water Quality Sampling Schedule) using your CURRENT LCR SAMPLING PLAN.

- Request the LCR-MOD-LOC form from your DEP Regional Office contact if sampling plan changes are needed.

-Lead Action Level (AL) still 15 parts per billion (ppb).

-Remember, under the LCR, any change in treatment can trigger standard monitoring.

LCRR

Compliance Starts October 16, 2024:

- Initial Service Line Inventories (SLI) due.

- Lead service line replacement plans (LSLRP)due if LCRI is not published. MassDEP DWP still recommends you develop your LSLRP even if the LCRI is published.

-Consumer notification due for households with lead, galvanized requiring replacement (GRR) and unknowns 30 days after submitting your SLI.

- 24-hour Tier 1 public notice for lead 90th percentile exceedances after October 16, 2024.

LCRI

If published by October 16, 2024:

- Pause the LCRR monitoring requirements. PWS will continue to comply with LCR until 2027.
- **PWS will still need to comply with SLI requirements, LSL/GRR/Unknown SL notification and the 24-hour PN.**
- Compliance date will be three years after final publication, estimated October 2027.

In the proposed LCRI

- AL lowered to 10 ppb
- LSLR in 10 years
- Another SLI (baseline inventory) requires identification of connectors (goosenecks/pigtails)

Scenario 1: LCRI NOT published by October 16, 2024

Required 2024 -

Ongoing Lead and Copper Sampling as required in your current LCR Sampling Plan.

Recommended NOW

Starting TODAY, apply to our Service Line Inventory (SLI) Technical Assistance Programs

Develop your SLI

Recommended by April 1st, 2024:

Submit a draft SLI to MassDEP via program.director-dwp@mass.gov. Your SLI will be reviewed by MassDEP staff. You will be contacted with feedback and advised if any Technical Assistance is recommended, before the October 16th, 2024, deadline.

Required by October 16th, 2024, PWS must submit:

1. A Service Line Inventory: make it publicly available and submit it to MassDEP
2. Lead Service Line Replacement Plans (LSLRP)
3. If your system does NOT have ANY LSL, GRR, or Unknown Service Lines, the system should submit the NONLSL Certification Form with their SLI. MassDEP Requirement
4. Compile a list of all schools and early education and care facilities in your distribution system
5. PN-24 hr for PWS exceeding the 90th percentile lead AL (15 ppb)

Required 30 days after submitting your SLI:

1. Notify customers with LSL, GRR or unknowns.

Scenario 1: LCRI NOT published by October 16, 2024

<u>Required</u> 2025 –

All PWS that submit SLIs with any LSLs, GRR, and/or UNKs will need to be on a standard monitoring schedule starting 2025. If a PWS will be moving from reduced to standard monitoring, this means 2x the sampling locations, and a semi annual (6 month) sampling frequency. Offering sampling for schools and early education and care facilities.

PWS with no LSL, GRR or unknows that have monitored according to the LCRR between 2021 and 2024 are eligible to stay on reduced monitoring.

Trigger level (10 ppb)

Scenario 2: LCRI published by October 16, 2024

Required 2024 -

Ongoing Lead and Copper Sampling as required in your current LCR Sampling Plan.

Recommended NOW

Starting TODAY, apply to our Service Line Inventory (SLI) Technical Assistance Programs

Develop your SLI

Recommended by April 1st, 2024:

Submit a draft SLI to MassDEP via program.director-dwp@mass.gov.

Required by October 16th, 2024, PWS must submit:

1. A Service Line Inventory: make it publicly available and submit it to MassDEP
2. If your system does NOT have ANY LSL, GRR, or Unknown Service Lines, the system should submit the NONLSL Certification Form with their SLI. MassDEP Requirement

Recommended by October 16, 2024

Submit your LSLRP

Required 30 days after submitting your SLI:

1. Notify customers with LSL, GRR or unknowns.

Staring 2025:

Continue implementing the LCR until 2027. If a PWS fails the 90th% AL for lead of 15 ppb= 24 hr PN REQUIRED

DEVELOPING YOUR SERVICE LINE INVENTORY

? Poll Question

What Should Be Included?

All service lines connected to the public water distribution system, regardless of ownership status.

- Systems must include all service lines, regardless of the actual or intended use. These include:
  - Service lines with non-potable applications such as for fire suppression or those designated for emergency use. These service lines could be repurposed in the future for a potable or non-emergency use.
  - Service lines connected to vacant or abandoned buildings, even if they are unoccupied and the water service is turned off.

How should service lines be classified?

1. Lead Service Lines (LSL)
2. Galvanized lines requiring replacement (Galvanized Service Lines that are or were Downstream from an LSL or downstream of a lead-status unknown line)
3. Lead Status Unknown Service Lines
4. Non-lead Service lines

- Lead connectors (i.e., goosenecks or pigtails) are recommended to be included in the inventory, if records exist.

Exhibit 2-3: Classifying Service Line Materials When Ownership is Split According to the LCRR 40 CFR §141.84(a)(4)

System-Owned Portion	Customer-Owned Portion	Classification for Entire Service Line
Lead	Lead	Lead
Lead	Galvanized Requiring Replacement	Lead
Lead	Non-lead	Lead
Lead	Lead Status Unknown	Lead
Non-lead	Lead	Lead
Non-lead and never previously lead	Non-lead, specifically galvanized pipe material	Non-lead
Non-lead	Non-lead, material other than galvanized	Non-lead
Non-lead	Lead Status Unknown	Lead Status Unknown
Non-lead, but system is unable to demonstrate it was not previously Lead	Galvanized Requiring Replacement	Galvanized Requiring Replacement
Lead Status Unknown	Lead	Lead
Lead Status Unknown	Galvanized Requiring Replacement	Galvanized Requiring Replacement
Lead Status Unknown	Non-lead	Lead Status Unknown
Lead Status Unknown	Lead Status Unknown	Lead Status Unknown

How should service lines be classified?

[Guidance for Developing and Maintaining a Service Line Inventory (epa.gov)]

Public Service Line Inventory

For the first time EPA will require systems to develop a PUBLIC SL inventory (*including public and private side*) with a location identifier. The inventory must be posted online for Large Systems.

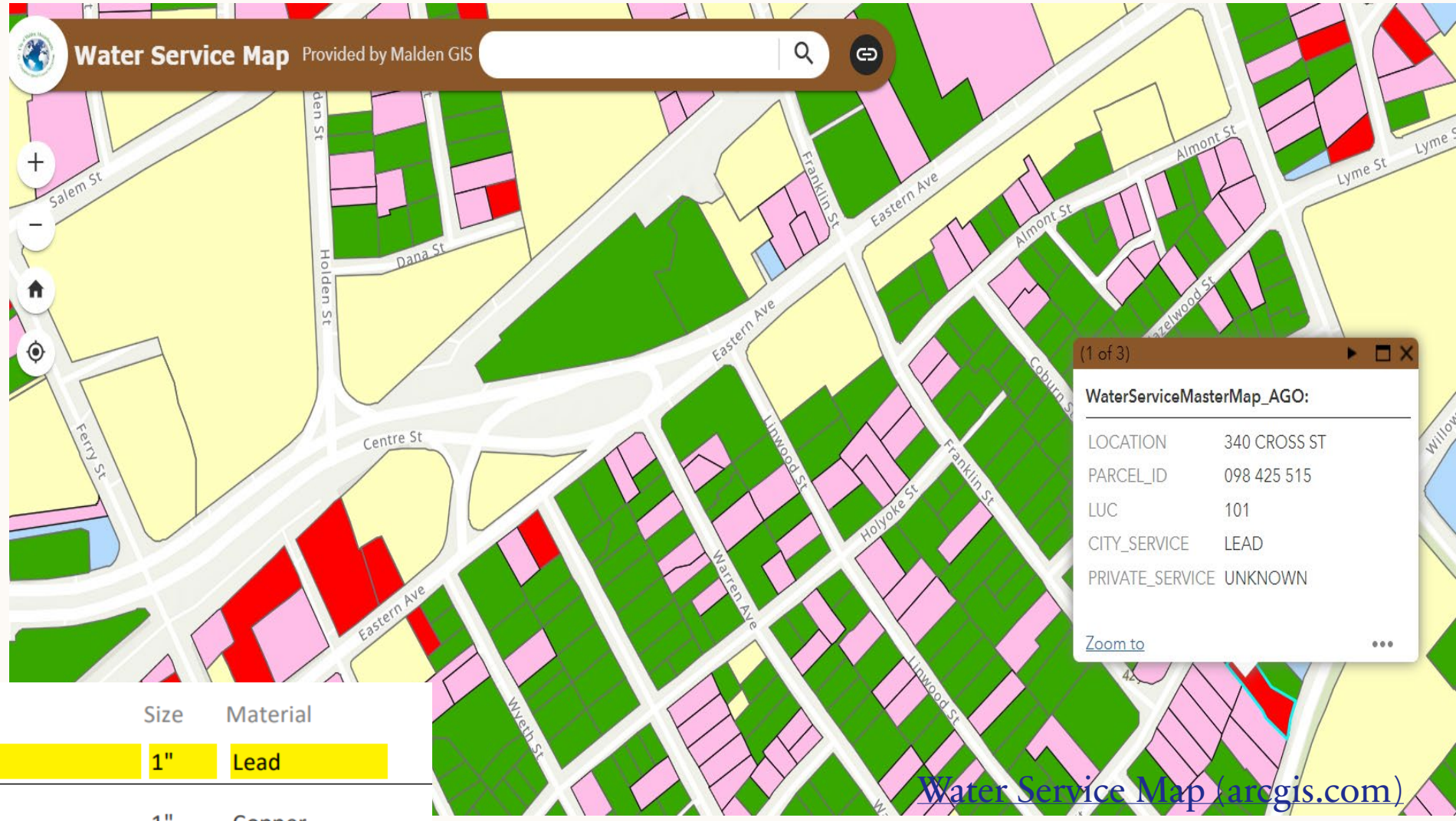
Public Accessibility: Make the inventory publicly available and include a locational identifier for LSLs and GRR.
MA will require unknowns to be included with a locational identifier.
Water systems serving more than 50,000 people must provide inventories online.

Possible location identifiers:

- street address
- intersection
- landmark
- a block
- GPS coordinates
- an alternate indicator (such as water meter location).

NO census tract or zip code

Public SLI



Water Service Map (arcgis.com)

Street Number	Street Name	Size	Material
8-6	Acorn Street	1"	Lead
9-11	Acorn Street	1"	Copper
10	Acorn Street	1"	Copper
13-15	Acorn Street	1"	Copper
16-18	Acorn Street	1"	Lead

rptWebLed (cambridgema.gov)

NOTE: Non-lead systems can provide a statement they have no LSLs/GRRs/Unknowns including a general description of how they made that determination.

How to submit the Inventory?

Submit as a CSV to MassDEP (by email to program.director-dwp@mass.gov) your SLI using MassDEP's SLI spreadsheet or, your own database that contains all MA required fields for submission.

If your system has any LSL, GRR or unknown, you must also fill out the online LSLRP located at Lead Service Line Replacement Plan (LSLRP) Summary (smartsheet.com).

If your SLI doesn't contain LSL, GRR or unknowns, you should submit the NON-Lead certification form along with your inventory. The form is located at https://www.mass.gov/doc/lcrr-certification-of-non-lead-service-lines-request-for-approval/.

Once you have submitted your inventory to MassDEP, we will contact you with the SLI Certification Form Approval.

What happens after submission?

1. PWS must notify all persons served by the water system at the service connection with a lead, GRR, or lead status unknown service line within 30 days of completing their service line inventory.
2. Under the LCRR the initial number of LSL in the inventory is used for LSLR. NOTE: unknowns count toward LSLR.
3. COM should include in their annual CCR a statement that they have prepared a service line inventory and instructions on how to access the inventory. Non lead COM must also include a statement they have no LSLs in their CCR.

How often should it be updated?

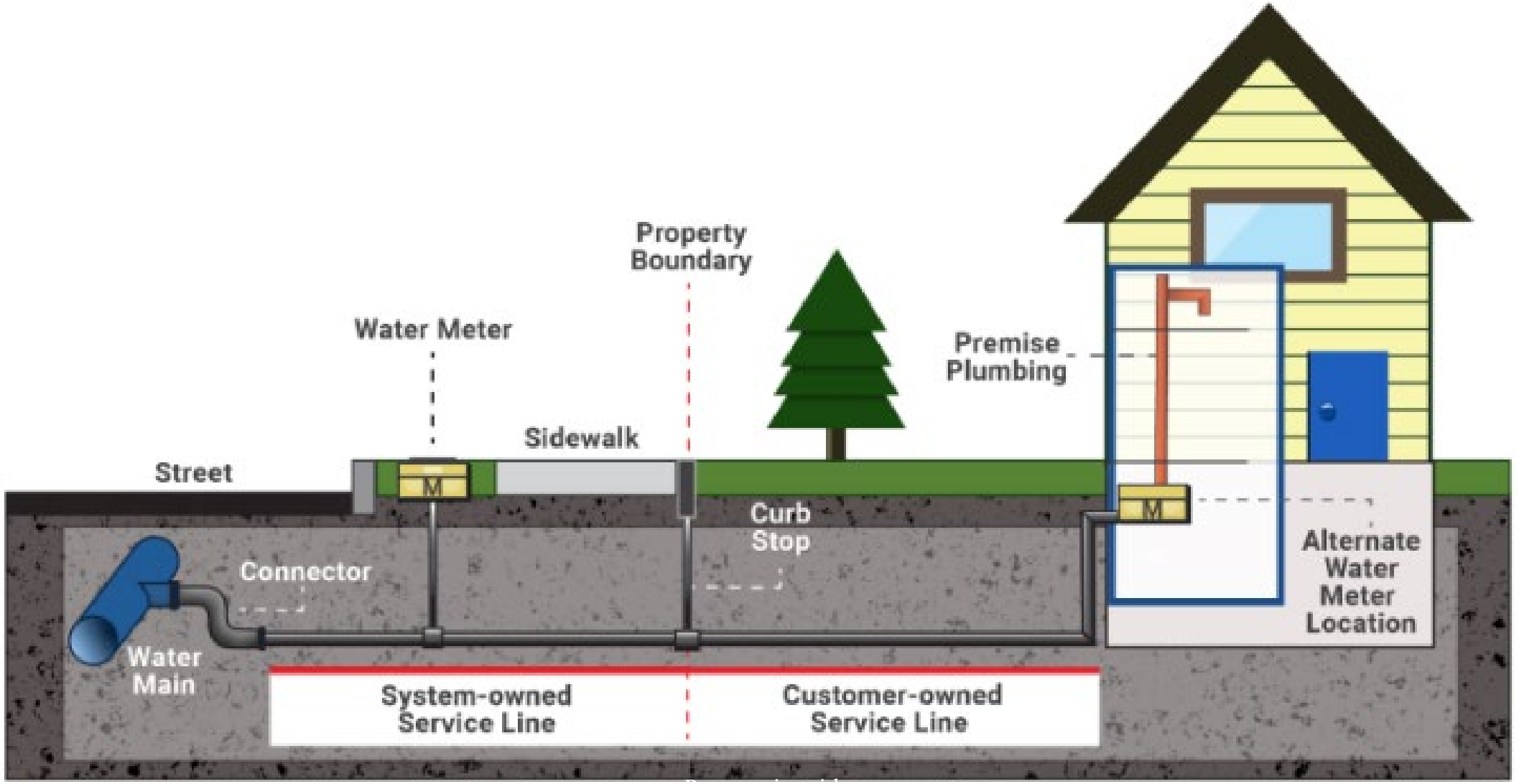
The Inventory is a LIVING DOCUMENT!!!

Under LCRR submit the inventory to MassDEP annually or every three years if your system is on reduced monitoring. No updates necessary if your PWS does not have any LSL/GRR/Unknowns unless an LSL or GRR is discovered.

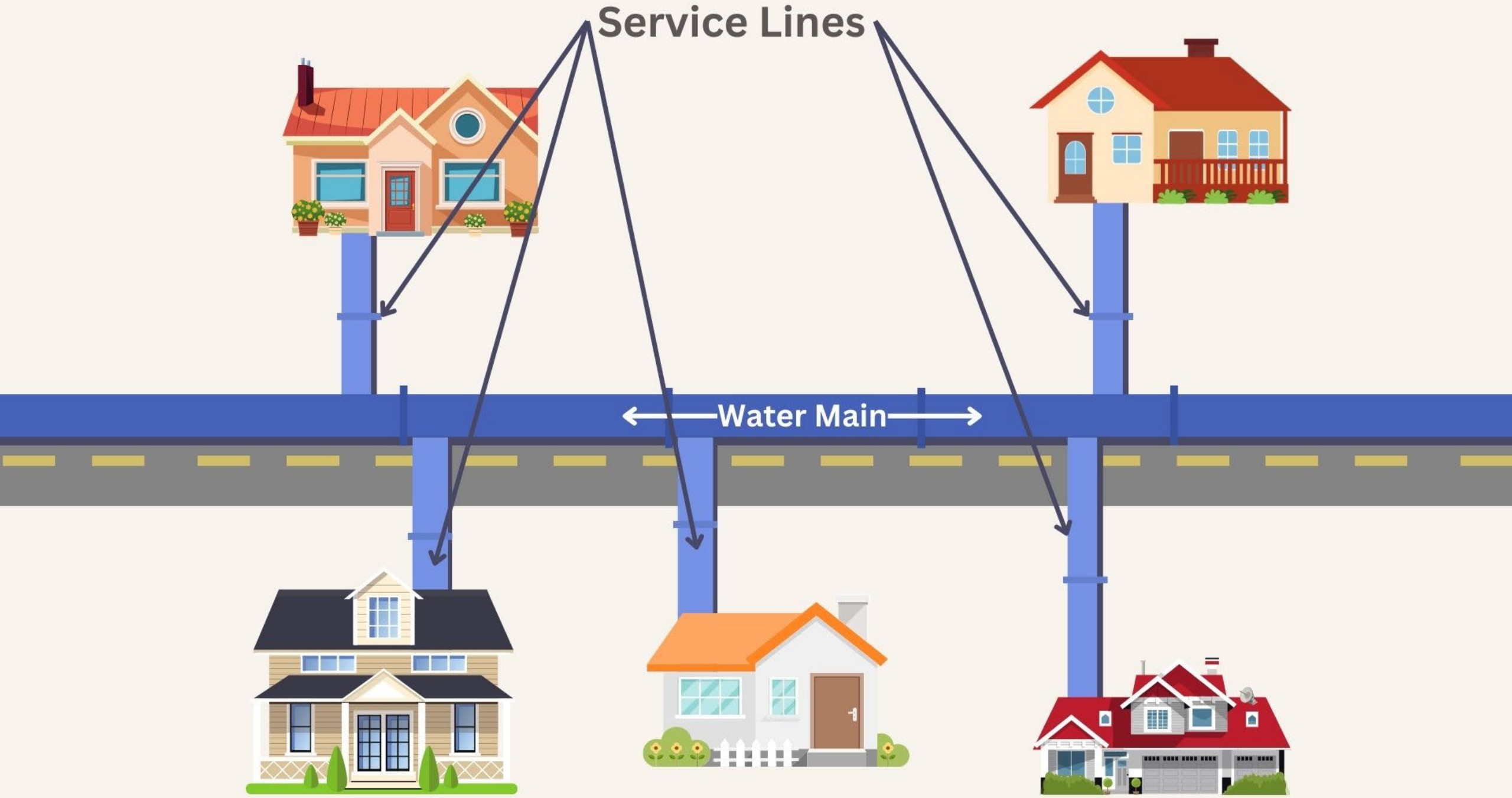
IDENTIFYING SERVICE LINES

? Poll Question

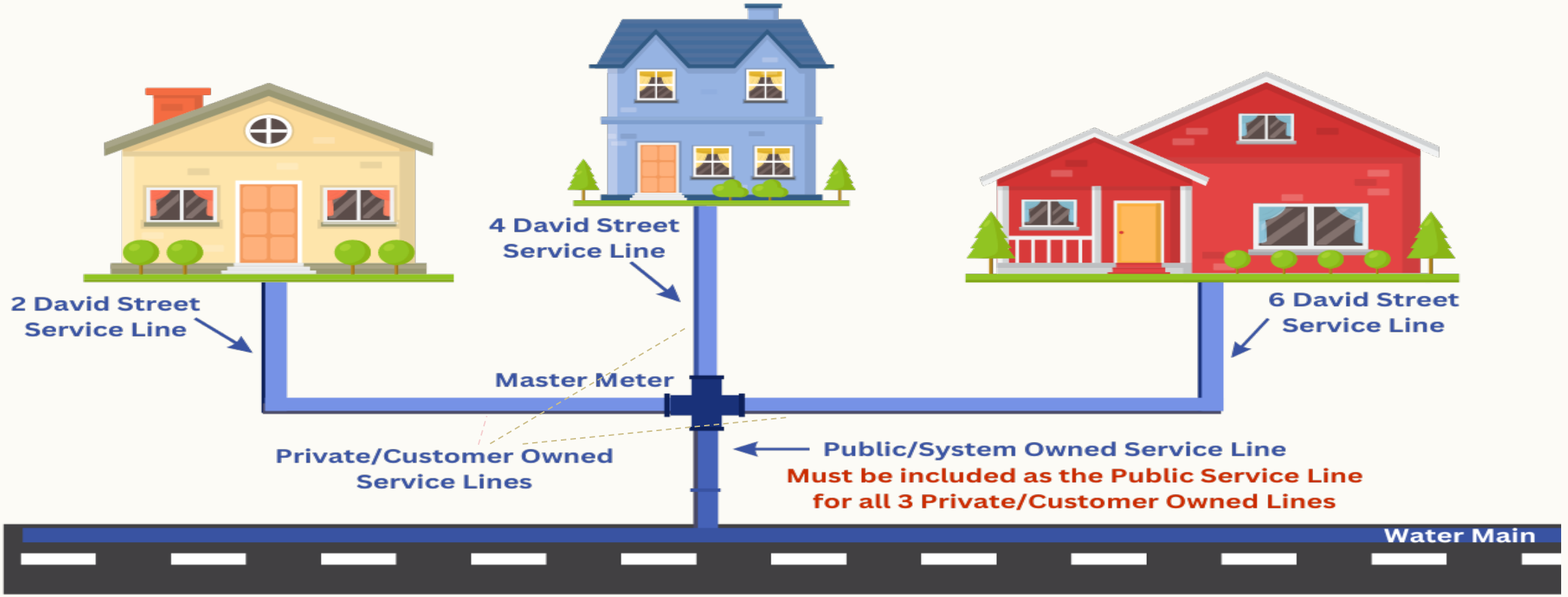
Exhibit 2-2: Example of Service Line Ownership Distinction between the Water System and Customer



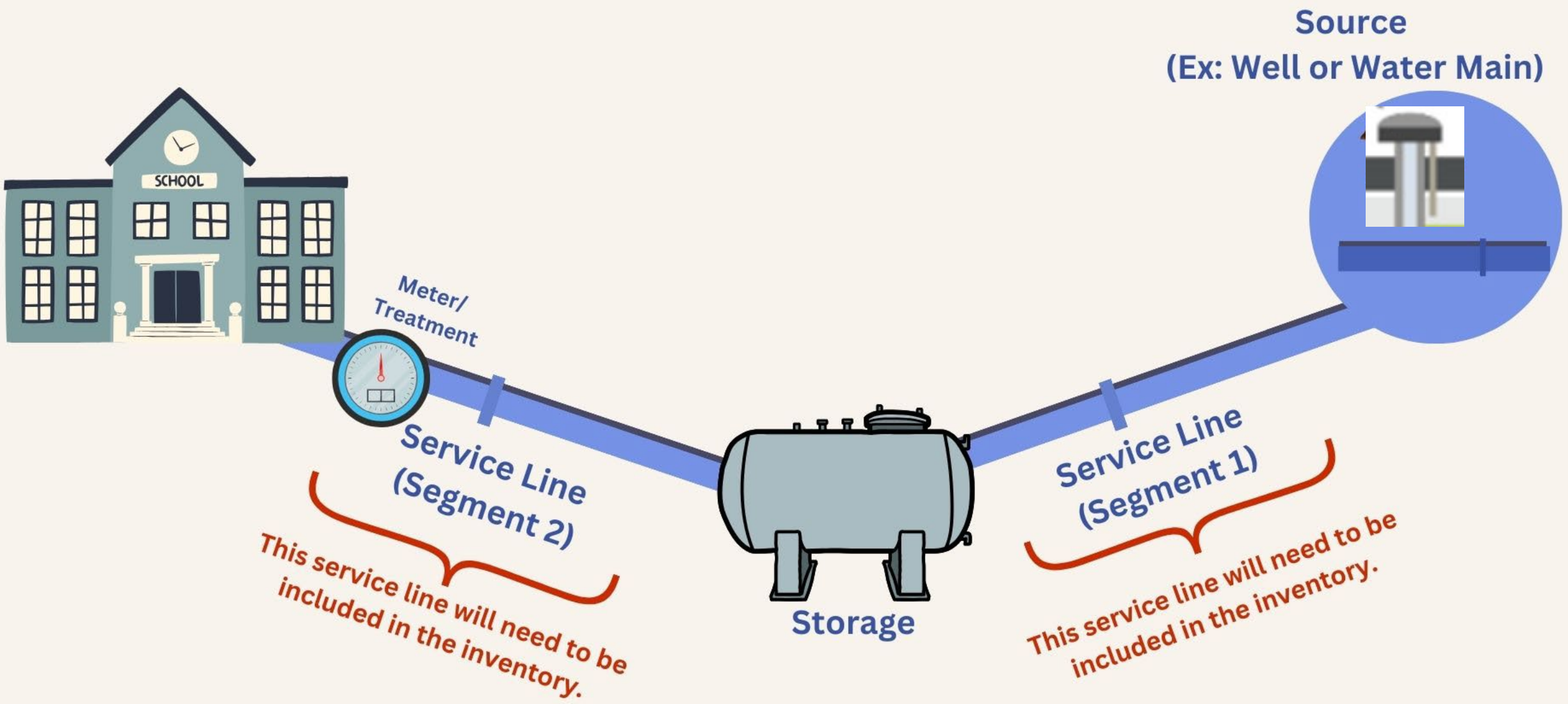
https://www.epa.gov/system/files/documents/2023-06/Final%20Small%20System%20Entity%20Inventory%20Guide_508.pdf


Service Lines
Water Main

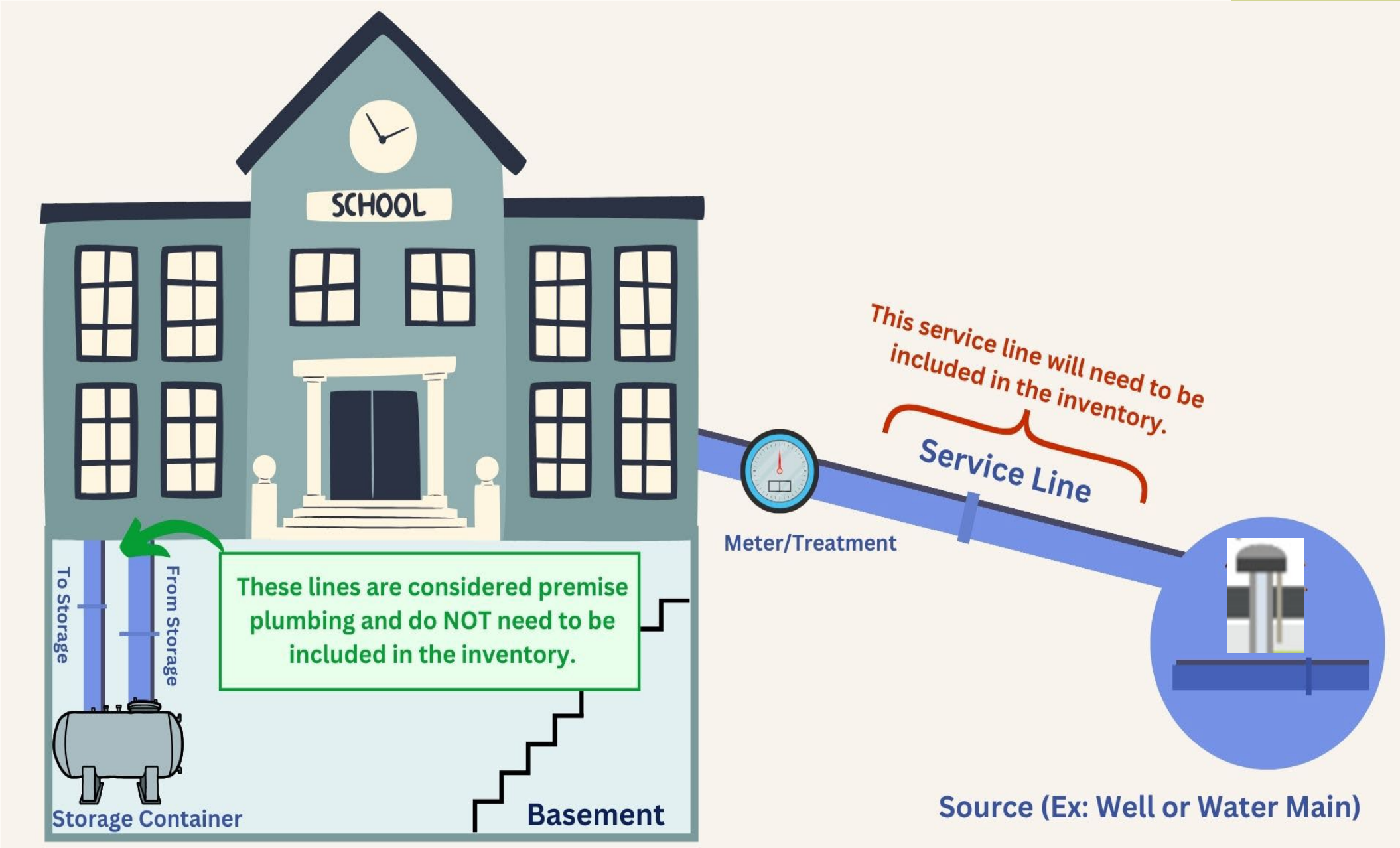
Scenario: Three Locations with a “shared” public service line.

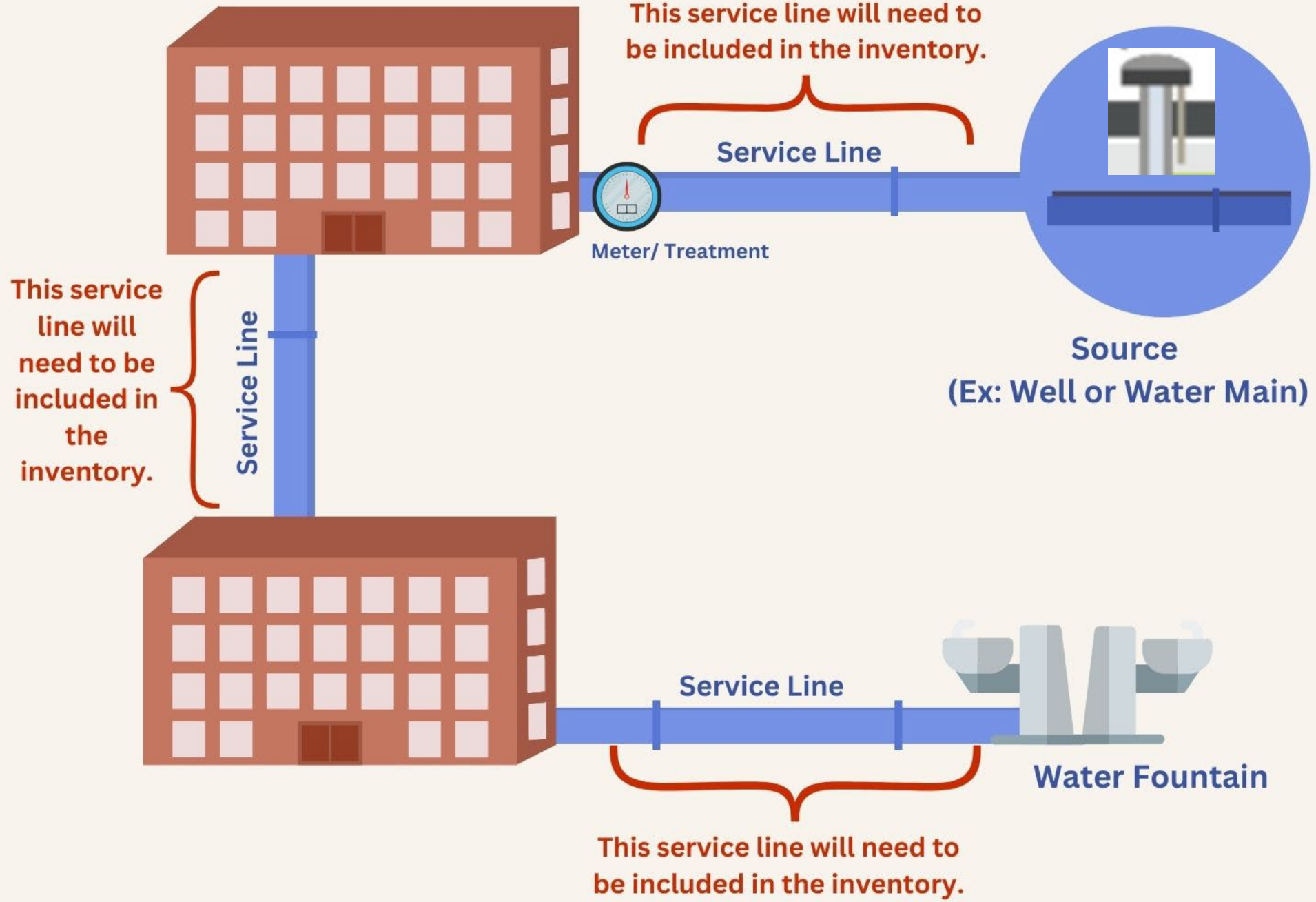


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	SITE ID	LOCATIONAL IDENTIFIER	LCR SAMPLING LOCATION?	CONNECTOR (GOOSENECK / PIGTAIL) CURRENTLY PRESENT?	CONNECTOR (GOOSENECK /PIGTAIL) MATERIAL	CURRENT PUBLIC SERVICE LINE MATERIAL	WAS PUBLIC SERVICE LINE MATERIAL EVER PREVIOUSLY LEAD?	PUBLIC SERVICE LINE SIZE (inches)	PUBLIC SERVICE LINE INSTALL DATE (YYYY)	CURRENT PRIVATE SERVICE LINE MATERIAL	PRIVATE SERVICE LINE SIZE (inches)	PRIVATE SERVICE LINE INSTALL DATE (YYYY)	ENTIRE SERVICE LINE CLASSIFICATION	VERIFICATION METHOD	OTHER MASSDEP APPROVED VERIFICATION METHOD	BUILDING TYPE
Scenario B:	3	2 David Street	NO	NO		PVC	YES	1"	1998	C	1"	1990S	NON-LEAD	V		SF
	4	4 David Street	NO	NO		PVC	YES	1"	1998	C	1"	2000	NON-LEAD	V		SF
	5	6 David Street	NO	NO		PVC	YES	1"	1998	PVC	1"	2005	NON-LEAD	V		SF


Source
(Ex: Well or Water Main)
SCHOOL
Meter/
Treatment
Service Line
(Segment 2)
This service line will need to be
included in the inventory.
Storage
Service Line
(Segment 1)
This service line will need to be
included in the inventory.

Storage tank within the building




This service line will need to be included in the inventory.
Service Line
Meter/ Treatment
Source
(Ex: Well or Water Main)
This service line will need to be included in the inventory.
Service Line
Service Line
Water Fountain
This service line will need to be included in the inventory.

Scenario: A location with multiple service lines on the property.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	SITE ID	LOCATIONAL IDENTIFIER	LCR SAMPLING LOCATION?	CONNECTOR (GOOSENECK / PIGTAIL) CURRENTLY PRESENT?	CONNECTOR (GOOSENECK /PIGTAIL) MATERIAL	CURRENT PUBLIC SERVICE LINE MATERIAL	WAS PUBLIC SERVICE LINE MATERIAL EVER PREVIOUSLY LEAD?	PUBLIC SERVICE LINE SIZE (inches)	PUBLIC SERVICE LINE INSTALL DATE (YYYY)	CURRENT PRIVATE SERVICE LINE MATERIAL	PRIVATE SERVICE LINE SIZE (inches)	PRIVATE SERVICE LINE INSTALL DATE (YYYY)	ENTIRE SERVICE LINE CLASSIFICATION	VERIFICATION METHOD	OTHER MASSDEP APPROVED VERIFICATION METHOD	BUILDING TYPE
Scenario A:	1	10 Smith Road - a	NO	NO		HDPE	NO	1"	1995	C	1"	2012	NON-LEAD	V		SCH/CC
	2	10 Smith Road - b	NO	NO		HDPE	NO	1"	1995	PVC	1"	2012	NON-LEAD	V		SCH/CC

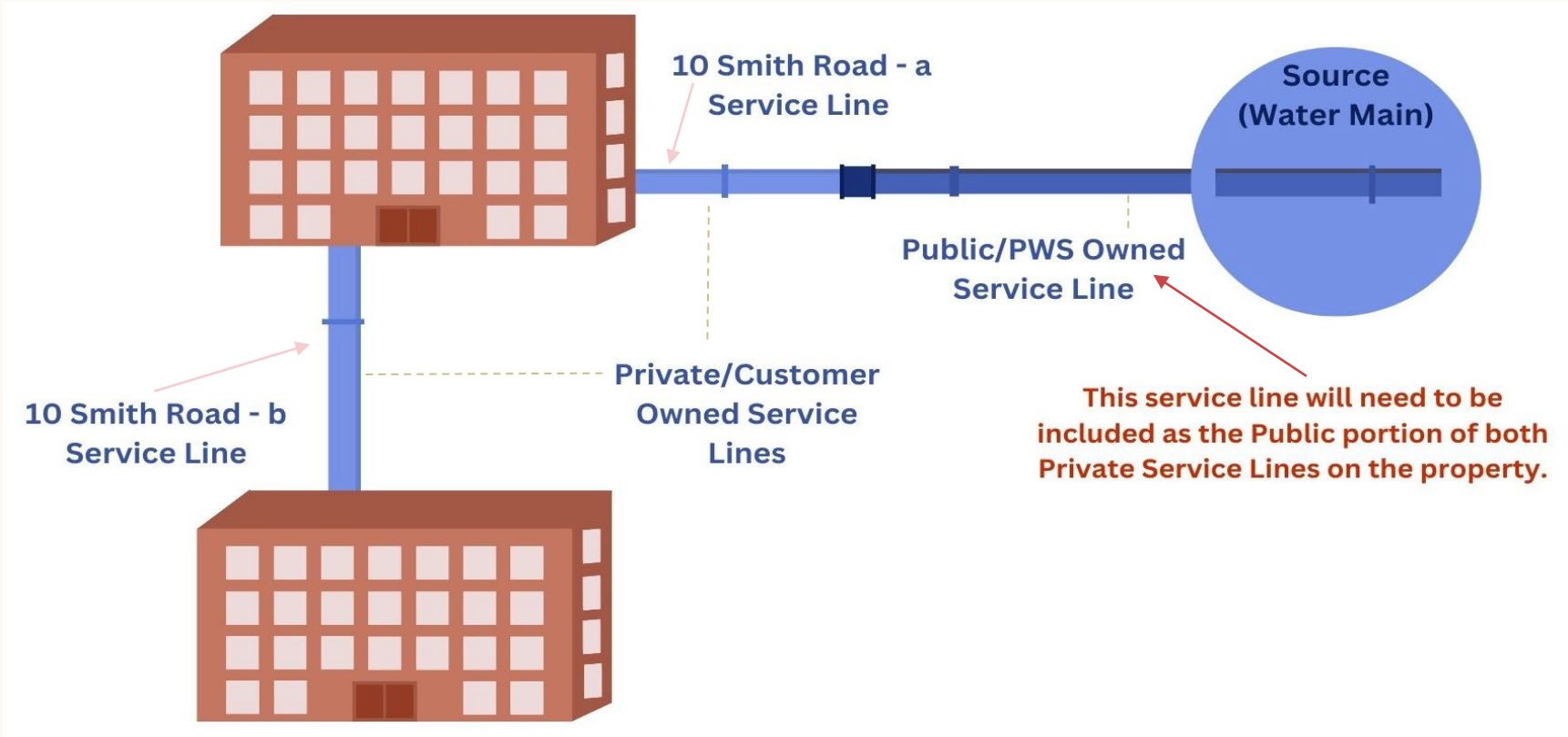
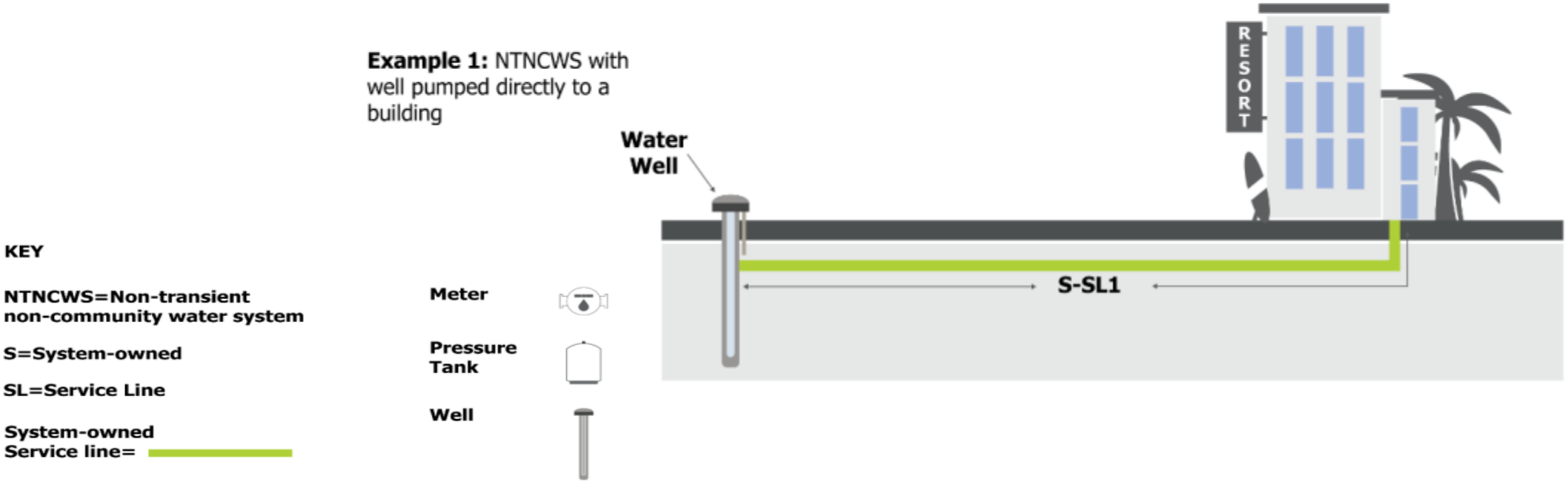


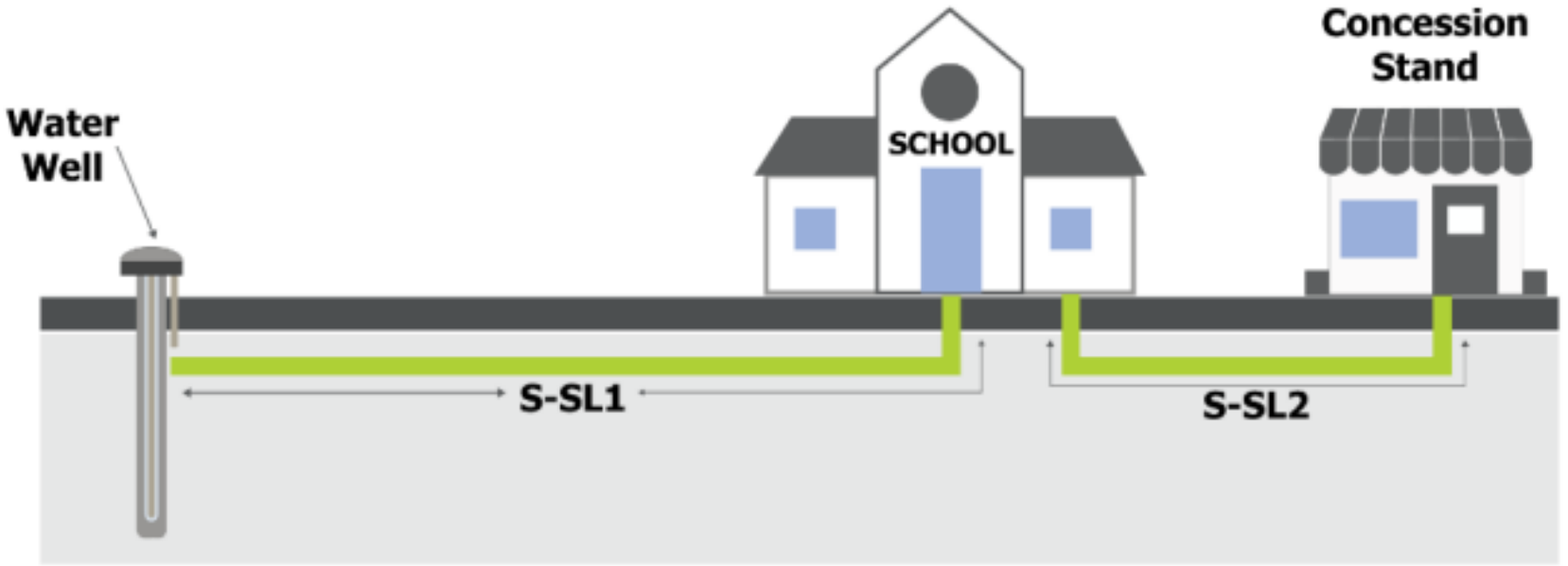
Exhibit 4: Examples of a Non-transient Non-community Water System (NTNCWS) Service Configurations (Profile View)

Example 1: NTNCWS with well pumped directly to a building



https://www.epa.gov/system/files/documents/2023-06/Final%20Small%20System%20Entity%20Inventory%20Guide_508.pdf

Example 3: NTNCWS with well connected to a building connected to another building



KEY

NTNCWS=Non-transient non-community water system

S=System-owned

SL=Service Line

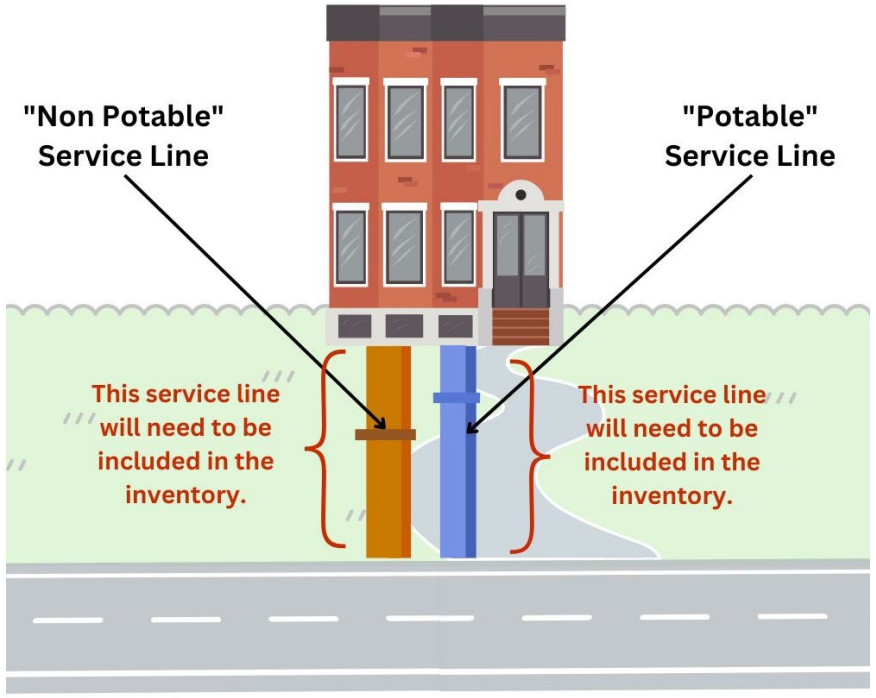
System-owned Service line=

Meter

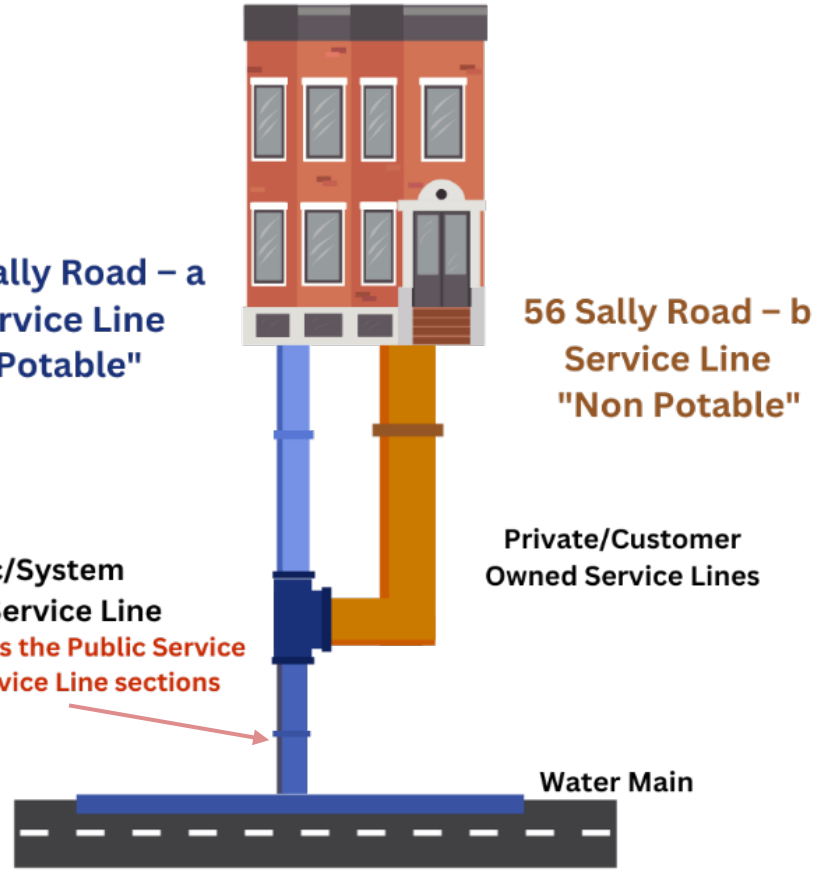
Pressure Tank

Well

https://www.epa.gov/system/files/documents/2023-06/Final%20Small%20System%20Entity%20Inventory%20Guide_508.pdf



Both potable AND non-potable service lines will need to be included in your service line inventory.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	SITE ID	LOCATIONAL IDENTIFIER	LCR SAMPLING LOCATION?	CONNECTOR (GOOSENECK / PIGTAIL) CURRENTLY PRESENT?	CONNECTOR (GOOSENECK /PIGTAIL) MATERIAL	CURRENT PUBLIC SERVICE LINE MATERIAL	WAS PUBLIC SERVICE LINE MATERIAL EVER PREVIOUSLY LEAD?	PUBLIC SERVICE LINE SIZE (inches)	PUBLIC SERVICE LINE INSTALL DATE (YYYY)	CURRENT PRIVATE SERVICE LINE MATERIAL	PRIVATE SERVICE LINE SIZE (inches)	PRIVATE SERVICE LINE INSTALL DATE (YYYY)	ENTIRE SERVICE LINE CLASSIFICATION	VERIFICATION METHOD	OTHER MASSDEP APPROVED VERIFICATION METHOD	BUILDING TYPE	P
Scenario D:	7	56 Sally Road -a	NO	NO		HDPE	NO	1"	1990S	C	1.5"	1990S	NON-LEAD	V		MF	
	8	56 Sally Road -b	NO	NO		HDPE	NO	3"	1990S	HDPE	3"	1990S	NON-LEAD	V		MF	

PREPARING THE INVENTORY

Validate the Inventory

There are some options to verify your inventory:

- Records Validation
- Field Inspection
- Profile Sampling/Sequential monitoring
- Statistical Analysis
- Homeowner Verification

RECORDS REVIEW

- Tap/tie cards
- Assessors Database
- Building Permits
- Plumbing Codes and Plumbing Permits
- Distribution Maps and Drawings
- Inspection and Maintenance Records
- Meter Installation Records
- Capital Improvement and Master Plans
- Standard Operating Procedures
- Operation and Maintenance Manuals
- Permit Files
- Existing Water Quality Data
- Field/visual inspection with or without full excavation
- Interviews with Senior Personnel, Building Inspectors, and Retirees
- Community Survey
- Others (specify)

FIELD INSPECTIONS

- This is considered the most accurate verification method that uses a physical and visual inspection by a trained staff person. Typically, at the time of meter replacement, service line replacement, or special inspections such as pot holing and vacuum excavation.

CUSTOMER SELF-IDENTIFICATION

- This verification method uses information collected from building occupants, and typically includes photos of the service line.

SEQUENTIAL MONITORING

- This verification method can be used if the physical inspections, records review or statistical analysis are not feasible.
- This method employs a process of, for example, taking five 1-liter samples and analyzing the samples for lead to determine if the service line is likely lead.
- Sequential monitoring should take into consideration size of the service line and configuration of the building.
- Case by case!

STATISTICAL ANALYSIS

- Before using a statistical approach to identify unknown service lines, **the PWS must first use other MassDEP/EPA approved methodologies** to categorize service lines.
- If the PWS still has unknown service lines in their inventories **after using other MassDEP/EPA approved methodologies**, a statistical approach may be used.

Predictive models using borrowed records data (from other PWSs) to train the model will NOT be accepted by MassDEP.
MassDEP may also require PWS that use predictive modeling to submit a long-term compliance plan using other methods to confirm identification for all service lines initially identified by predictive modeling.

OTHER MASSDEP-APPROVED METHOD

Alternative methods.
Examples – electrical resistance acoustic wave, eddy current, other technologies that may be developed. MassDEP will review these approaches for validity and accuracy.

THANK YOU

- Any Questions?

Contact info: Drinking Water Program Director at Program.director-dwp@mass.gov

Acton Water District
Est. 1912

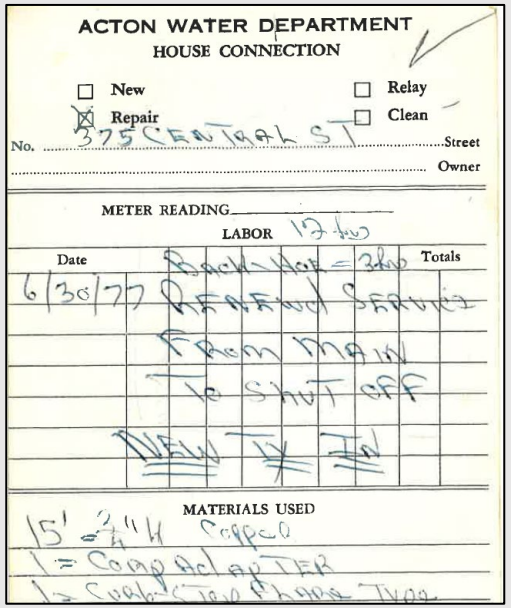
LCRR Service Line Inventory (SLI) Development: Case Study

February 26, 2024

Alexandra Wahlstrom
Environmental Compliance Manager

Acton Water District

- Primary PWS in Acton, MA
- Sources: 24 wells
- 4 Treatment Facilities
- 4 Storage Tanks
- Average Daily Demand: 1.4 MGD
- Population Served: 20,251 people
- ~137 miles of main
- ~6,500 service lines



ACTON WATER DEPARTMENT
HOUSE CONNECTION

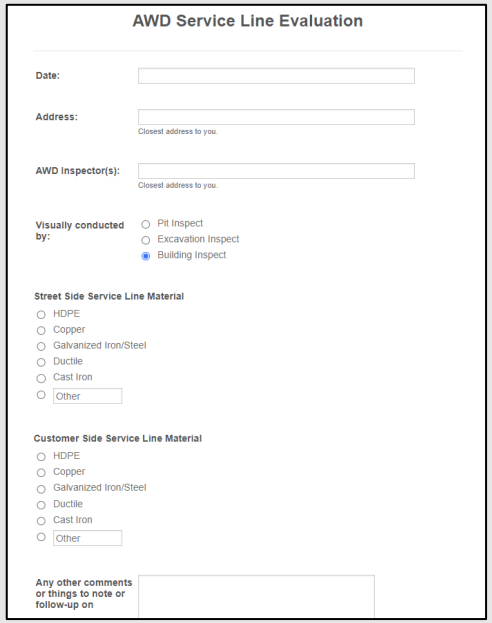
☐ New ☐ Relay
☒ Repair ☐ Clean

No. 375 CENTRAL ST Street
Owner

METER READING
LABOR 17 hrs

Date | Backhoe = 2hrs | Totals
6/30/77 Repaired Service
From Main
To Shut Off
New Tx In

MATERIALS USED
15' - 2" H Copper
1 = Comp Adapter
1 = Curb Stop Shank Type



AWD Service Line Evaluation

Date:

Address:
Closest address to you.

AWD Inspector(s):
Closest address to you.

Visually conducted by:
- Pit Inspect
- Excavation Inspect
- Building Inspect

Street Side Service Line Material
- HDPE
- Copper
- Galvanized Iron/Steel
- Ductile
- Cast Iron
- Other

Customer Side Service Line Material
- HDPE
- Copper
- Galvanized Iron/Steel
- Ductile
- Cast Iron
- Other

Any other comments or things to note or follow-up on

SLI Development

- Began work in earnest in February 2022
- Desktop Review
  - Billing database, AYB from assessor's database, meter replacement records, tie cards, water main plans & specs, DigSafe books, foreman log of GN replacements & leak repairs
- Field Work
  - Began limited potholing in May 2022 in coordination with the Town's paving schedule
  - 85 targeted meter replacements from August 2022 to February 2023
  - Service Evaluation JotForm for use with backflow testing, site visits, repairs, etc.

AWD Service Line Evaluation	
Date:	2/15/24
Address	5 Marian Rd
AWD Inspector(s):	A. Wahlstrom
Visually conducted by:	Building Inspect
Street Side Service Line Material	Copper
Customer Side Service Line Material	Copper
Any other comments or things to note or follow-up on	Copper to and from meter. Self ID request follow up
Include a Picture	IMG_0299.jpeg IMG_0300.jpeg

tomation Forms Connections LCRR_CrowdSourcing_Acton_2002000

Grid View Filter Arial 10

street_address	city_to...	public_water_system	year_of_construction	service_line_m...	material_confi...	confirme...
21 Mohawk Dr	ACTON	ACTON WATER SUPPLY DISTRICT		Copper	☑	Plastic
10 Billings St	ACTON	ACTON WATER SUPPLY DISTRICT	1950	Copper	☑	Copper
26 Captain Browns Lane	ACTON	ACTON WATER SUPPLY DISTRICT	1972	Copper	☑	Copper
7 Agawam Rd,	ACTON	ACTON WATER SUPPLY DISTRICT	1956	Copper	☑	Copper
48 Agawam Rd	ACTON	ACTON WATER SUPPLY DISTRICT	1960	Copper	☐	
4 Betsy Ross Circle	ACTON	ACTON WATER SUPPLY DISTRICT	1959	Copper	☑	Copper
26 Brucewood rd	ACTON	ACTON WATER SUPPLY DISTRICT	1960	Copper	☐	
17 Alcott St	ACTON	ACTON WATER SUPPLY DISTRICT	1961	Copper	☑	Copper
15 Birch Ridge RD	ACTON	ACTON WATER SUPPLY DISTRICT	1964	Copper	☑	Copper
6 Betsy Ross Circle	ACTON	ACTON WATER SUPPLY DISTRICT	1964	I do not know	☑	Copper
36 Alcott St	ACTON	ACTON WATER SUPPLY DISTRICT	1960	Copper	☑	Copper
1 Mohawk Drive	ACTON	ACTON WATER SUPPLY DISTRICT	1955	Copper	☑	Copper
14 Alcott St	ACTON	ACTON WATER SUPPLY DISTRICT	1963	Copper	☑	Copper
50 Alcott St	ACTON	ACTON WATER SUPPLY DISTRICT	1959	I do not know	☑	Copper
5 Brookside Circle	ACTON	ACTON WATER SUPPLY DISTRICT	1964	Copper	☐	
13 Alcott St	ACTON	ACTON WATER SUPPLY DISTRICT	1960	Copper	☐	
27 Mohawk Drive	ACTON	ACTON WATER SUPPLY DISTRICT		Copper	☑	Copper

SLI Development Continued

- Community outreach
  - Began sending MA-LSLI self-identification requests in February 2023 to targeted customers in batches
  - As of January 2024, 588 requests sent and 190 responses received
    - 32% response rate!
  - Dedicated webpage
  - Farmers Market table

SLI Status (as of February 23, 2024)

- 4,184 services AYB </=1985
  - 891 fully known “non-lead”
  - 165 known full or partial iron
  - 1,386 fully unknown
  - 1,642 unknown public/known private
  - 100 known public/unknown private
  - ~270 potential goosenecks
- 2,327 services AYB >/=1986
- ~6,511 total service lines

- What’s next?
  - Vacuum excavation
  - More MA-LSLI Web App requests and appointments
  - Meter replacement program
  - Ongoing records review
  - Re-formatting database to meet MassDEP’s requirements for submittal!

SLI Development Challenges & Considerations

- Time
  - 2 years later…still have a lot of work to do!
  - Juggling multiple demands & priorities
  - Ongoing & future community outreach efforts
  - SLRP development
- Staff availability & buy-in
  - Operations staff are critical!
  - Capitalize on opportunities to document information
- Money
  - Exploratory efforts are costly!
  - Engineering assistance, GIS upgrades, predictive modeling, meter replacement programs, vacuum excavation, etc.
- Moving target
  - No template available when project began
  - LCRR vs LCRI
  - Acceptable methods of identification?

Poll Question

Which resources(s) did the District find useful for developing and refining their SLI?

A. Meter replacement records
B. Water main plans & specs
C. Potholing
D. MA-LSLI Web App
E. All the above

Service Line Inventory and Lead Service Line Replacement Planning (SLI-LSLRP) Small Systems Technical Assistance Program

Lessons Learned

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Small Systems SLI-LSLRP Assistance Program Background

- The LCRR requires that all COM and NTNC PWS develop a Service Line Inventory (SLI) by October 16, 2024
  - SLI must include both the utility- and privately-owned portions of the service lines
- All PWS with lead service lines (LSL), galvanized service lines requiring replacement (GRR), or service lines of "unknown" material must additionally develop a LSLRP
- MassDEP developed this assistance program to help small PWS (<10,000) complete this work
  - Funded by $1.3 million from LSL Drinking Water SRF set asides

Roles and Responsibilities

- MassDEP is partnering with UMass Amherst and two contracted environmental consulting firms to implement this assistance program
  - UMass Amherst Technical Assistance Providers (TAPs) generally help smallest systems with the least service lines (NTNCs and very small COM)
  - The two consulting firms (Weston & Sampson, CEI) generally assist larger COM systems with more service connections

How to Receive Assistance?

Complete the application survey at:
https://www.mass.gov/forms/massdep-service-line-inventory-and-lead-service-line-replacement-plan-technical-assistance-survey

Service Line Inventory Assistance

- Small PWS will be provided with assistance in completing a SLI that will meet both federal and state LCRR requirements.
- Assistance will consist of help with
  - compiling and validating service line records
  - developing a public outreach strategy encouraging customers to report their service line materials and providing general information about lead health effects and lead service lines,
  - filling out MassDEP SLI inventory workbook
  - combining and digitizing inventory records for appropriate submittal to MassDEP, and
  - making the inventory publicly available online.

Lead Service Line Replacement Plan Assistance

- Small PWS will be provided with assistance in establishing a proactive and comprehensive LSLRP. The replacement plan will include but not be limited to:
  - a plan to identify the composition of service lines of unknown material,
  - a procedure for conducting lead service line replacement,
  - a customer outreach strategy,
  - risk management policies,
  - a prioritization strategy for service line replacement, and
  - a funding strategy to accommodate customers unable to replace their portion of the line.

SLI LSLRP Assistance Program Current Status

- 79 PWS participating
  - 52 COM
  - 27 NTNC
- # Service connections range from 1 - 2,600
- Population served ranges from 5 – 8,900

POLL QUESTION #4

UMass Amherst Experience Completing SLIs

- Useful record types
  - Sanitary surveys
  - Material surveys
  - Site plans
  - Installation / replacement records
  - Town tax assessor's records
  - Hand drawn maps, e.g., after SL repairs
  - PWS operator experience

UMass Amherst TAP Experience with Completing SLIs

- Tips for completing SLI Excel Workbook
  - Refer to the column definitions in the first tab of the workbook
  - UMass mapped DLS property type codes to the SLI building type options to more easily classify building type
  - Refer to visual aids (EPA SL Diagrams) to define public and private service line, specific scenarios
  - Calls/emails/Zoom/in person meetings with PWS operator are useful to review records together and familiarize operators with the SLI Excel workbook

UMass Small System - Case Study 1
Small Mobile Home Park

- Since mobile home parks are "manufactured homes" which are consider "vehicles" they have "certificates of origin", not property cards. Manufactured homes can't be moved, and residents live there all year.
- The public and private SL sections tend to be plastic, without connectors, only corporations that tap into the main.
- Some records are available. However, documents that are submitted to MassDEP contain SL information

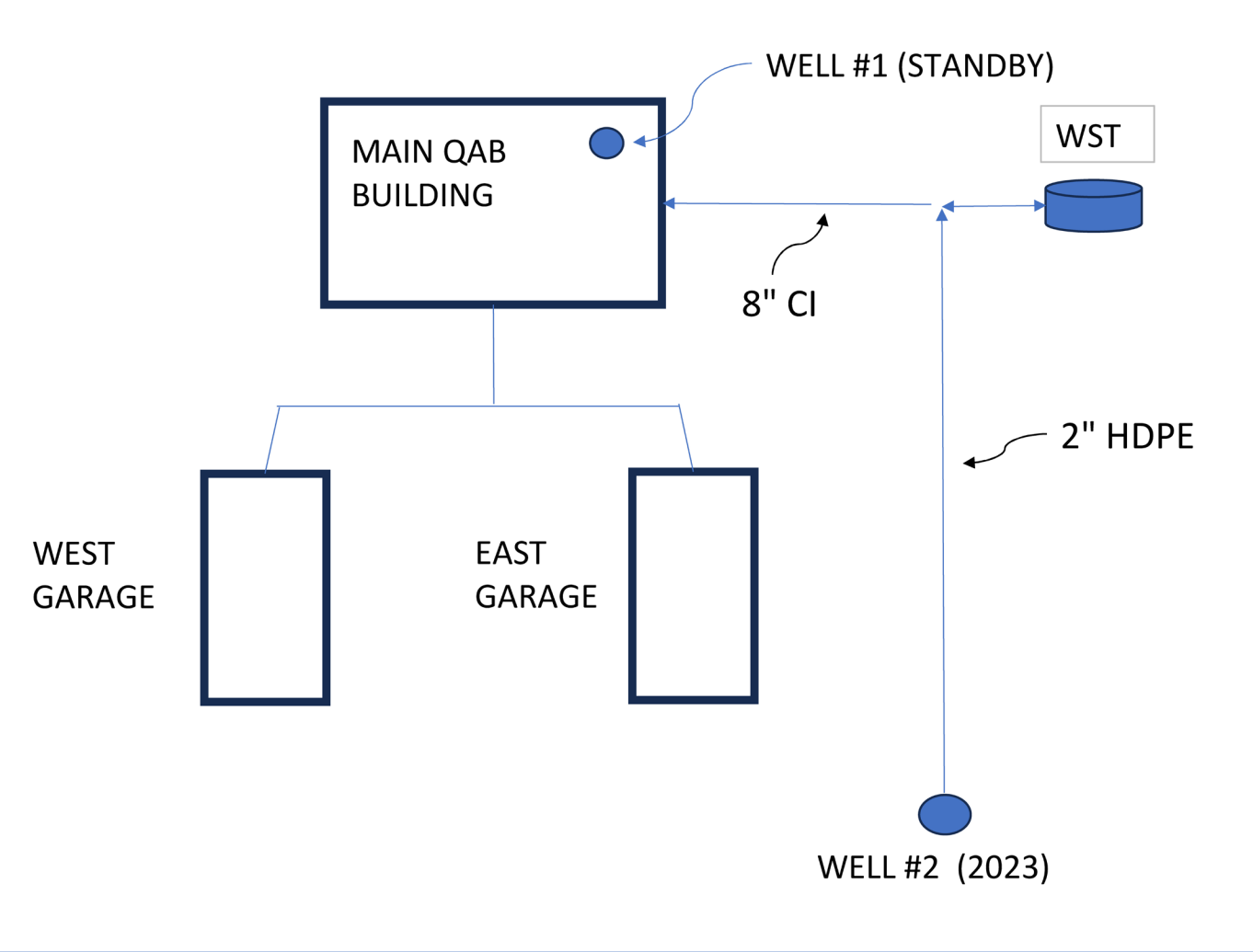
UMass Small System - Case Study 2

Mass. Department of Conservation & Recreation

Quabbin Administration Building

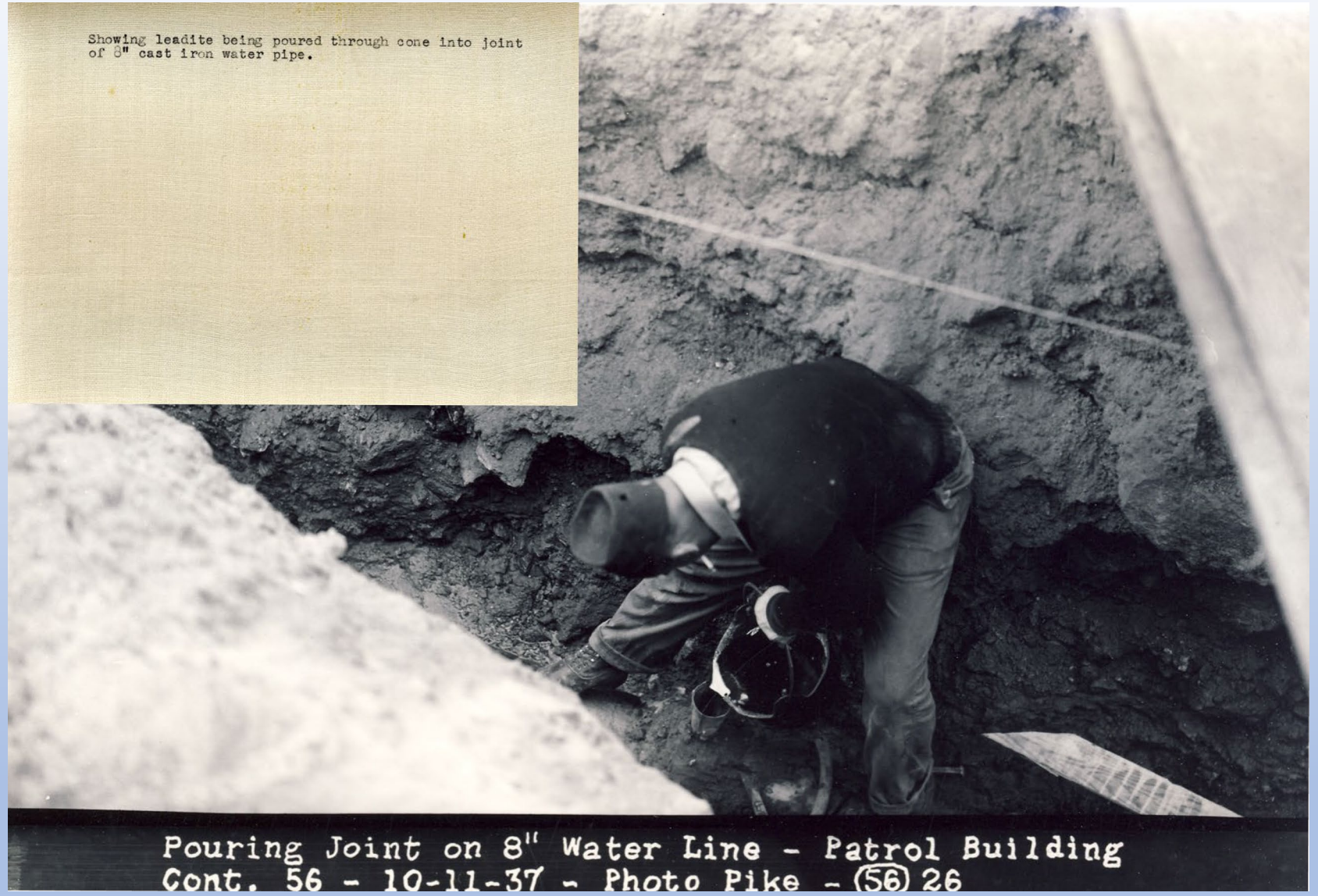
- Steve Mansfield, Civil Engineer, DCR
- Scott Campbell, P.E., DCR
- Jared Whitney, Account Manager, WhiteWater, Inc.
- Eric Lehan, P.E., UMass/MassDEP TAP

Mass. Department of Conservation & Recreation
Quabbin Administration Building



Mass. Department of Conservation & Recreation Quabbin Administration Building

System-Owned Portion	Customer-Owned Portion	Classification for Entire Service Line
Lead	Lead	Lead
Lead	Galvanized Requiring Replacement	Lead
Lead	Non-lead	Lead
Lead	Lead Status Unknown	Lead
Non-lead	Lead	Lead
Non-lead and never previously lead	Non-lead, specifically galvanized pipe material	Non-lead
Non-lead	Non-lead, material other than galvanized	Non-lead



"Showing leadite being poured through cone into joint of 8" cast iron water pipe"

UMass Small System - Case Study 2

Mass. Department of Conservation & Recreation
Quabbin Administration Building

- This NTNC PWS has three service lines
- All are non-lead (despite the leadite)
- Can be certified as a non-lead system

UMass Amherst TAPs – Lessons Learned

- In person TAP site visits are often effective, and may be necessary, for smallest systems with few services
- Once evaluated, many small NTNC systems have no lead service line issues and can safely be certified as non-lead
- Often need to work with multiple PWS representatives (contract operators, owners, etc) to gather records and complete inventory