



Lead and Copper: Sample Site Tiering and Tap Sample Site Plan

Wyoming Association of Rural Water Systems
2024 Mini-Conference

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EPA Region 8 Drinking Water Program

1

Who does this apply to?

- PWS Types:
 - Community Water Systems (serve same people year-round)
 - Non-Transient Non-Community Systems (serve same people for longer than 6 months)
- Does this apply to consecutive systems?
 - Yes!

Lead and Copper Tap Sample Site Plan Region 8 – Wyoming and R8 Tribal

THE NUMBER OF LEAD/COPPER SAMPLE SITES REQUIRED IS BASED ON THE POPULATION OF THE PWS
AS SUMMARIZED BELOW

PWS ID: _____	SYSTEM TYPE: <input type="checkbox"/> CWS <input type="checkbox"/> NTNC
SYSTEM NAME: _____	POPULATION: <input type="checkbox"/> >100,000
ADDRESS: _____	<input type="checkbox"/> 10,001 to 100,000
CONTACT PERSON: _____	<input type="checkbox"/> 3,301 to 10,000
PHONE NUMBER: _____	<input type="checkbox"/> 501 to 3,300
EMAIL ADDRESS: _____	<input type="checkbox"/> 101 to 500
	<input type="checkbox"/> ≤ 100

2

Minimum Number of Samples Required

Minimum Number of Tap Sample Sites Required for the Lead and Copper Rule

System Population	Minimum Number of Tap Sample Sites	
	Standard Monitoring	Reduced Monitoring
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
Less than 101	5	5

3

Monitoring and Reporting Requirements for the Calendar Year 2024

February 17, 2024

SAMPLE, TOWN OF

PWS ID#: WY560XXXX (C/GW)

Lead and Copper (LCR)

You are required to monitor for lead and copper annually. Collect five sets of lead and copper samples between June 1 and September 30, 2024. Collect samples at taps normally used for drinking in the distribution system in accordance with the tiering criteria set forth in 40 C.F.R. Sect. 141.86(a) of the Lead and Copper Rule.

You are required to deliver the Lead Consumer Notice to the individual consumers where the samples were collected from within 30 days of receiving your lead and copper results from the laboratory.

You are required to submit a copy of one of the Lead Consumer Notices and the Consumer Notice Certification page to EPA within 90 days of the end of each monitoring period.

You are required to perform Lead Consumer Notice distribution of receipt of your lead and copper results. You are required to provide a copy of a Lead Consumer Notice as distributed to the consumer and a copy of the Consumer Notice distribution to the EPA within 90 days of the end of each monitoring period.

Specific
Locations
from Your
TSSP

FACILITY CODE	FACILITY DESCRIPTION	SAMPLE POINT CODE	SAMPLE POINT DESCRIPTION
DIST	TOWN OF SAMPLE	DIST	DISTRIBUTION SYSTEM

4

Where Do I Collect Lead and Copper Samples?

Collect at locations particularly susceptible to high lead or copper concentrations.

- LCR establishes a tiering system for prioritizing sampling sites.
- Water systems to develop Tap Sample Siting Plan (TSSP) before monitoring.
 - Monitor at taps that can be used for human consumption (e.g., kitchen or bathroom taps). (40 CFR 141.86(a))

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5

5

Requirements from Water Systems

Reporting Requirements: 40 CFR 141.90

Systems shall report all of the information including site tiering information to EPA

Monitoring Requirements: 40 CFR 141.86

Systems are required to sample from sites that meet the tiering criteria

Systems that fail to submit tiering info or fail to collect from sites according to tiering requirements may result in monitoring and reporting violations.

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6

6

Materials Evaluation: Sources of Information That You Should Review

Survey records for materials used to construct and repair your distribution system and buildings connected to your distribution system. 40 CFR 141.86(a).

- ☐ Plumbing Codes
- ☐ 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
- ☐ Permits
- ☐ Existing Water Quality Data
- ☐ Interviews with Senior Personnel, Building Inspectors, and Retirees
- ☐ Community Survey

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7

7

Developing Tap Sample Site Plan (TSSP)

- ☐ Can you sample from the same locations repeatedly?
- ☐ Can you gain access to the sites or have homeowners take the samples on a consistent basis?
- ☐ Do you have any back-up sites in case participants drop-off?
- ☐ If your system contains lead service lines, then, if possible, half of the required sampling sites should be served by a lead service line
- ☐ Don't select any site that have softeners or point-of-use or point-of-entry treatment

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8

8

What Information Do We Need?

EPA requires the following information on the TSSP form:

- Specific location information such as address, building #, residence name, etc.
- Tiers for each location
- Regular sample site or Back-up sample site
- Plumbing Material
- Construction Year

No	Site Name & Address	Tier 1, 2, 3, Other	(R)egular sample site or (B)ack-up site	Plumbing Material	Date of Construction/Notes
1	Jane Smith 123 Main St.	1	R	lead pipe	1983
2	Bill Anderson 100 Maple St.	1	R	LSL	1984
3	High School 101 Main St.	2	R	lead pipe	2000
4					

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9

Developing Tap Sample Site Plan (TSSP): CWS

- Water systems must identify the highest priority (Tier) sites to sample.
- Community public water systems must sample at all Tier 1 sites if they have enough Tier 1 sites to choose from

Tier #1 sites – Single Family Structures⁽¹⁾ that:

- Contain or are serviced by copper pipes with lead solder installed between 1983 and 1988 or
- Contain or are serviced by lead pipes (including goosenecks or pigtails) and/or served by a lead service line (LSL)⁽²⁾.

(1) If multiple family residences comprise at least 20% of the structures served by a system they can be counted as Tier 1.

(2) If the PWS has LSLs, then it must collect 50% of the samples from the LSL. If there are not enough LSLs for 50%, the PWS must sample at all sites with LSLs.

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10

10

What if the CWS does not have enough Tier 1 Sites?

➤ Choose from Tier 2 sites to sample

- **Tier 2: Buildings** (i.e. apartment buildings, schools, hospitals) that:
 - Contains or is serviced by copper pipes with lead solder installed between 1983 and 1988 or
 - Contains or is serviced by lead pipes (including goosenecks or pigtails) and/or served by a lead service line (LSL).

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11

11

What if there aren't enough Tier 1 or Tier 2 Sites?

➤ Choose from Tier 3 sites to sample

- **Tier 3: Single Family Structure** that:
 - Contains copper pipes having lead solder installed *before* 1983
 - Do not skip Tier 1 or Tier 2 (if available)

What about Tier Other?

- Only when all Tier 1, Tier 2, and Tier 3 sites have been exhausted can Tier "Other" sites be counted for compliance.
- Notify EPA if you cannot sample from the highest Tier locations.

Failure to follow the Tiering Criteria may result failure to monitor violation

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12

12

Developing Tap Sample Site Plan (TSSP): NTNC

- Water systems must identify the highest priority (Tier) sites to sample.
- Non-Transient Non-Community (NTNC) public water systems must sample at all Tier 1 sites if they have enough Tier 1 sites to choose from

Tier #1 sites – Buildings (i.e., apartment buildings, schools, hospitals) that:

- Contain or are serviced by copper pipes with lead solder installed between 1983 and 1988 or
- Contain or are serviced by lead pipes (including goosenecks or pigtails) and/or served by a lead service line (LSL).

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13

13

What if the NTNC system does not have enough Tier 1 Sites?

- Choose from Tier 2 sites to sample
 - **Tier 2: Buildings** that:
 - copper pipes with lead solder installed *before* 1983.
- Only when all Tier 1 and Tier 2 sites have been exhausted can Tier “Other” sites be counted for compliance.
- Notify EPA if you cannot sample from the highest Tier locations.

Failure to follow the Tiering Criteria may result failure to monitor violation

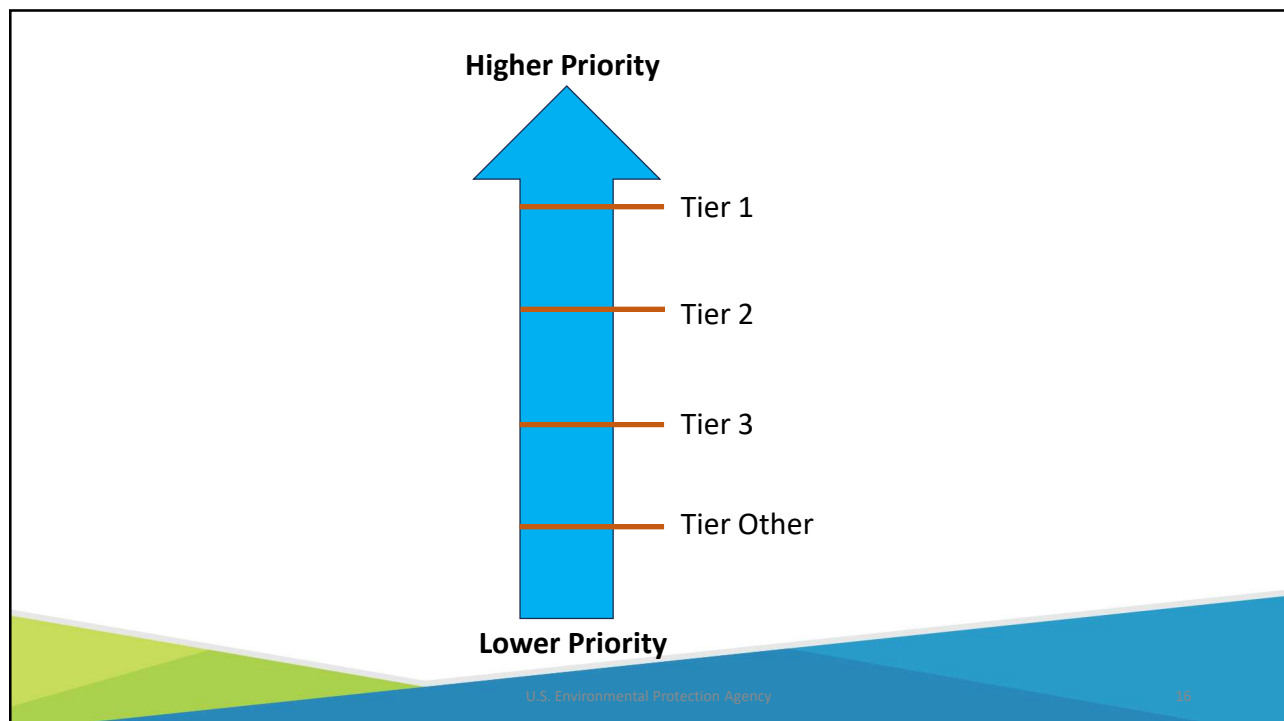
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14

14

Tiering Classification	
<i>If you are a Community Water System (CWS)</i>	<i>If you are a Non-Transient-Non Community Water System (NTNC)</i>
Tier 1: sampling sites are single family structures: <ul style="list-style-type: none"> ✓ With copper pipes with lead solder installed <u>between</u> 1983-1988, <i>or</i> ✓ Contain lead pipes, lead goosenecks or pigtails; and/or ✓ that are served by a lead service line Note: When multiple-family residences (MFRs) comprise at least 20% of the structures served by a water system, the system may count them as Tier 1 sites.	Tier 1: sampling sites consist of buildings: <ul style="list-style-type: none"> ✓ with copper pipes with lead solder installed after 1982 (<i>but before the effective date of your state's lead ban</i>) or contain lead pipes; and/or ✓ that are served by a lead service line.
Tier 2: sampling sites consist of buildings (i.e. apartments, schools, hospitals): <ul style="list-style-type: none"> ✓ With copper pipes with lead solder installed <u>between</u> 1983-1988, <i>or</i> ✓ Contain lead pipes and/or served by a lead service line. 	Tier 2: sampling sites consist of buildings with copper pipes with lead solder installed before 1983.
Tier 3: sampling sites are single-family structures with copper pipes having lead solder installed <u>before</u> 1983.	Tier 3: Not applicable.
Tier Other: all other structures with plumbing materials that are commonly found throughout the distribution system. Sites with copper plumbing installed <u>after</u> 1988 are preferred.	Tier Other: representative sites throughout the distribution system. A representative site is a site in which the plumbing materials used are commonly found at other sites served by the water system

15



16

TSSP Blank Form

Can be accessed from the Region 8 Water Ops webpage
or Ask Us!

Reporting Results to EPA Region 8



- [Reporting Public Water System Results](#)
- [Reporting Forms](#)
- [Public Notification](#)
- [Consumer Confidence Reports](#)

Regulations and Compliance



- [Regulations Guidance](#)
- [New and Revised Rules](#)
- [Revised Total Coliform Rule \(RTCR\)](#)
- [Lead Service Line Inventories \(LSLI\)](#)
- [Regulated Analytes List](#)
- [Tips to Stay in Compliance](#)

LEAD AND COPPER RULE Lead and Copper Tap Sample Site Plan Region 8 – Wyoming and R8 Tribal

Click to Submit Form

*** Be sure to save a copy for your record ***

THE NUMBER OF LEAD/COPPER SAMPLE SITES REQUIRED IS BASED ON THE POPULATION OF THE PWS
AS SUMMARIZED BELOW

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Minimum Number of Tap Sample Sites Required for the Lead and Copper Rule

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Less than 101	5	5

LEAD AND COPPER TAP SAMPLE SITES

Include enough tap sample sites for Standard Monitoring plus backups. Add rows to this form as needed.

No	Site Name & Address	Tier 1, 2, 3, Other	(Regular sample site or (Backup site	Plumbing Material	Date of Construction/Notes
1					
2					
3					
4					
5					

17

TSSP Instructions Sheet

Can be accessed from the Region 8 Water Ops webpage
or Ask Us!

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Instructions for Lead and Copper Tap Sample Site Plans

50% of the samples must be from taps served by lead service lines (if any exist), and 50% from sites with copper pipes with lead solder (if any exist).

The use of lead solder was banned in all homes and buildings connected to a public water system in June 1988. Construction dates of homes and buildings can be verified by searching the address as real estate sites will list the age of the building.

Community Systems	Non-Transient Non-Community Systems
<p>Tier 1 sampling sites are single family structures:</p> <ul style="list-style-type: none"> • having copper pipes with lead solder installed between 1983 and 1988, or • having lead pipes, including lead goosenecks or pigtail; and/or • being served by a lead service line. <p>If multiple-family residences comprise at least 20% of the structures served by a system, they can be counted as Tier 1.</p> <p>If all Tier 1 sites are exhausted, you may complete the sampling pool with Tier 2 sites.</p> <p>Tier 2 sampling sites consist of buildings (i.e., apartment buildings, schools, hospitals):</p> <ul style="list-style-type: none"> • with copper pipes with lead solder installed between 1983 and 1988, or • contain lead pipes; and/or • served by a lead service line. <p>If all Tier 1 and Tier 2 sites are exhausted, you may complete the sampling pool with Tier 3 sites.</p> <p>Tier 3 sampling sites are single family structures with copper pipes having lead solder installed before 1983.</p> <p>If all Tier 1, 2, and 3 sites are exhausted you may complete the sampling pool with 'Other' sites.</p> <p>Tier Other sampling sites are all other structures with plumbing materials that are commonly found throughout the distribution system. Sites with copper plumbing installed after 1988 are preferred.</p>	<p>Tier 1 sampling sites consist of buildings:</p> <ul style="list-style-type: none"> • having copper pipes with lead solder installed between 1983 and 1988, or • having lead pipes, including lead goosenecks or pigtail; and/or • being served by a lead service line. <p>If all Tier 1 sites are exhausted, you may complete the sampling pool with Tier 2 sites.</p> <p>Tier 2 sampling sites consist of buildings with copper pipes with lead solder installed before 1983.</p> <p>If all Tier 1 and Tier 2 sites are exhausted, you may complete the sampling pool with 'Other' sites.</p> <p>Tier Other are representative sites throughout the distribution system. A representative site is a site in which the plumbing materials used are commonly found at other sites served by the water system.</p>

18

Can I Change Sample Sites?

Great question! Yes

- Just submit Revised TSSP to EPA R8
- Include the reasons why old sites were removed from the sampling plan
- Why would you need to change your sampling locations?
 - ☐ Home is abandoned or demolished
 - ☐ No longer have access
 - ☐ You find a lead service lines not previously known
 - ☐ Other reasons

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19

19

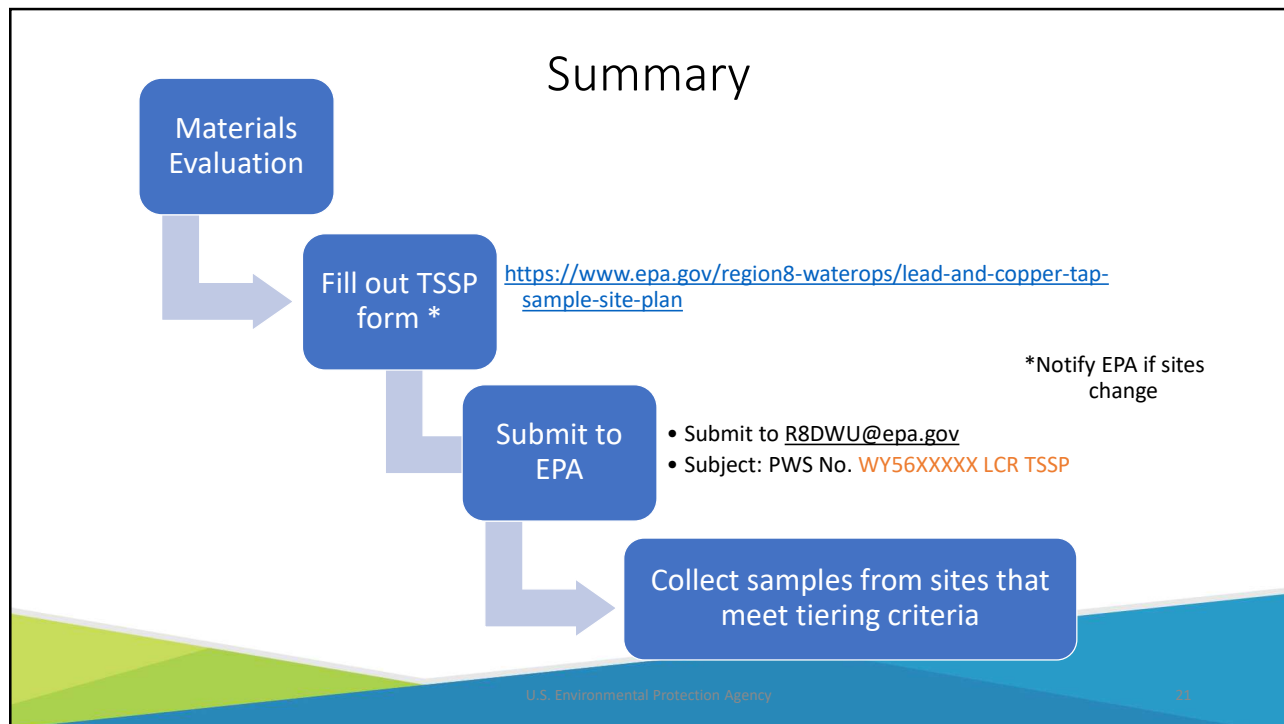
Sampling Procedures

- Suggested Directions for Homeowner Tap Sample Collection Procedures:
<https://www.epa.gov/region8-waterops/lead-and-copper-suggested-directions-homeowner-tap-sample-collection-procedures>
- Cold-Water Taps that are Regularly Used for Consumption
- Single Family Homes –
 - Kitchen or Bathroom Faucet
- Buildings –
 - Break Room
 - Cafeteria/Kitchen
- DO NOT sample from a tap with a filter or softeners
 (i.e. drinking fountains or kitchen taps with filters)
- DO NOT sample from an outside hose bib

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20

20



21

Questions?

<p>LCR Compliance Questions: Bolor Bertelmann Bertelmann.bolor@epa.gov 303-312-6233</p>	<p>LCR ALE & WQP Questions: Chelsea Ransom Ransom.chelsea@epa.gov 303-312-6876</p>
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22