

Selecting Lead & Copper Drinking Water Sample Sites

This guidance will help community public water systems meet sampling requirements for the [Lead and Copper Rule](https://www.epa.gov/dwreginfo/lead-and-copper-rule) (<https://www.epa.gov/dwreginfo/lead-and-copper-rule>) of the Safe Drinking Water Act.

To create a lead and copper sample pool, a system must use sites from Tier 1 first. Once a system has exhausted Tier 1 sites, it may complete its sample pool with Tier 2 sites, then Tier 3 sites, then Tier 4 sites.

If a system serves homes with lead service lines, these *must* comprise at least 50% of the sample pool. A home is considered to have a lead service line if it has a full lead service line, a partial lead service line, a lead gooseneck, and/or a lead pigtail.

The Minnesota Department of Health (MDH) recommends that systems keep documentation that describes efforts used to find volunteers from priority sites (events, mailings, newspaper ads, etc.).

Do not include: Sample sites cannot include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants.

Plumbing materials: Each of the tiers below lists possible plumbing materials that may be located in the sample site. Knowing the plumbing materials and when the sample site was constructed will help you identify which tier the site belongs in.

You should also identify the plumbing materials so that you can maintain and update your plumbing materials inventory. Plumbing materials can change over time and with new residents.

Knowing the plumbing materials can help you provide technical assistance to customers. For example, a home that has a lead service line removed but has galvanized iron plumbing can still be at risk for lead. Lead can build up in the iron pipescale. It can then be released if it is disturbed during service line replacement or home improvements.

You should also identify if the sample site uses on-site water softening, as home water treatments may affect lead and copper results and site selection. Contact MDH if you have questions.

Tier 1

Single-family homes that:

- a) contain copper pipes with lead solder installed in 1983, 1984, or 1985, or
- b) contain lead pipes, and/or
- c) are served by a lead service line.

Multifamily homes: When multi-family homes make up at least 20% of the house stock, the system may include them in its Tier 1 sample pool. If there is one meter for the building, it is considered multi-family. If each resident has a separate meter, it is considered single-family.

Plumbing materials may include:

- Lead service lines
- Lead pipe
- Copper pipe with lead soldering

Tier 2

Buildings, including multi-family homes, that:

- a) contain copper pipes with lead solder installed in 1983, 1984, or 1985, or
- b) contain lead pipes, and/or
- c) are served by a lead service line.

Plumbing materials may include:

- Lead service lines
- Lead pipe
- Copper pipe with lead soldering

Tier 3

Single-family homes that contain copper pipes with lead solder that were installed before 1983.

Plumbing materials may include:

- Copper pipe with lead soldering installed before 1983

Tier 4

If there are not enough Tier 1, Tier 2, or Tier 3 sample sites, a system must complete its sample pool with representative sites throughout the distribution system (Tier 4). A representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

This may include homes with a water softener, manufactured homes with PVC or plastic pipe, homes with galvanized pipes, and homes built after 1986.

Plumbing materials may include:

- Copper & galvanized pipe
- Copper pipe
- Copper with silver solder
- Galvanized & plastic pipe
- Galvanized pipe
- Galvanized pipe & soft water
- Mixed material
- Other materials
- Plastic or PVC pipe
- PEX
- Plastic pipe & soft water
- Plastic stainless steel
- PVC & copper pipe
- PVC & galvanized pipe
- PVC pipe (HDPE)
- PVC pipe & soft water
- Softened water

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