

LEAD AND COPPER SAMPLING PLAN GUIDANCE

Lead and Copper Monitoring Requirements

The frequency of sampling and the number of samples required per monitoring period are based on a water system’s population served and prior lead and copper results. Some systems are required to sample lead and copper in two six-month periods every year (January 1 – June 30 and July 1 – December 31), usually after a water source or treatment change or after a lead or copper action level exceedance. Systems on reduced monitoring sample every year or every three years between June 1 and September 30. Systems with varied seasonal use and occupancy may apply to sample between February 1 and May 31 when eligible for reduced monitoring. For updated requirements for a specific water system, visit the system’s monitoring schedule at <https://anrweb.vt.gov/DEC/DWGWP> or contact the Division. For general information on the Lead and Copper Rule go to <http://dec.vermont.gov/water> and search for “lead and copper”.

Sample Site Selection and Plumbing Materials

The Lead and Copper Rule (40 CFR §141 Subpart I) requires sample sites to be selected according to the age and metal content of pipes and plumbing components. The Rule considers solder relative to 1983 to reflect the newest lead solder and relative to the 1986 ban on lead in solder. Review your own water system records, including water system inventories completed in the 1990s, older sampling plans, and lead and copper results. Gather information from municipal records such as building permits. Ask other public works and private utility staff and homeowners. Identify your information sources on the Lead and Copper Sampling Plan. Sample sites must be prioritized based on tier rankings according to the tables on the next page. Fill your Sampling Plan with Tier 1 sites first, followed by Tier 2 sites if needed, then Tier 3, then Other. Sample from all possible Tier 1 sites on your plan first, then Tier 2 sites, etc. Small water systems with uniform construction dates may not have a wide variety of tiers. Provide information on your sampling plan such as plumbing construction dates to explain your tier assignments.

Your Lead and Copper Sampling Plan may need to be updated as service lines are replaced, homes are renovated, water treatment systems are installed, property owners change, etc. To encourage homeowner participation in sampling or providing access for you to sample, let them know that you are required to share results with them. You may offer other incentives such as a credit on a water bill as long as you follow the sampling tier requirements.

Minimum Number of Sample Sites to Include on Plan

Samples should be collected from occupied sites under normal operation (not vacant sites, sites under construction, or sites without access to indoor taps). Sampling should be repeated at previously sampled sites where possible, but a Sampling Plan should include extra locations with similar plumbing characteristics in case a previously used site is unavailable for some reason. Even if your system is on reduced monitoring, include additional sampling locations on the plan in case a lead or copper action level exceedance occurs, a source water change is needed, a site tier changes, or the site is unavailable. Then you can still sample according to your plan without requiring a change approval from the Division. For example, a system that serves 200 users and has had low lead and copper results may have gone from sampling 10 samples every six months to 5 samples every three years, but should still try to include 10 sites on the Plan. If your system has fewer than 5 taps, contact the Division for further instructions.

System Population	Minimum Number of Sampling Sites to Include on Plan
10,001 – 100,000	60
3301 – 10,000	40
501 – 3,300	20
101 – 500	10
≤100	5

Lead and Copper Sampling Plan Guidance – Tier Rankings

Community Water System (CWS)	
Tier ranking on plan	Building Type, Plumbing Characteristics, and Age
First fill the sampling plan from Tier 1 sites in the water system	Single-household residence (one living unit, detached home or condo/townhouse serving one family each) <ul style="list-style-type: none"> * Service line made of lead pipe -or- * Service line contains a lead “gooseneck” or “pigtail” or other fitting -or- * Residence contains lead pipe -or- * Residence contains copper pipes with solder containing lead installed 1983-1986 or installed after 1986 with confirmation of lead in solder
Then if you need more sites, add Tier 2 sites	Other buildings including multi-household residences (e.g. apartment building) <ul style="list-style-type: none"> * Service line made of lead pipe -or- * Service line contains a lead “gooseneck” or “pigtail” or other fitting -or- * Building contains lead pipe -or- * Building contains copper pipes with solder containing lead installed 1983-1986 or installed after 1986 with confirmation of lead in solder
Then Tier 3	Single-household residence <ul style="list-style-type: none"> * Residence contains copper pipes with solder containing lead installed before 1983
Then Other	Structures with other plumbing materials, representative of the rest of the system <ul style="list-style-type: none"> * Copper pipes with lead-free solder installed after 1986 -or- * Plastic plumbing materials (PVC, PEX, etc.)

Non-Transient Non-Community System (NTNC)	
Tier ranking on plan	Building Type, Plumbing Characteristics, and Age
First fill the sampling plan from Tier 1 sites in the water system	Address or specific tap: <ul style="list-style-type: none"> * Service line made of lead pipe -or- * Service line contains a lead “gooseneck” or “pigtail” or other fitting -or- * Contains lead pipe -or- * Contains copper pipes with solder containing lead installed 1983-1986 or installed after 1986 with confirmation of lead in solder
Tier 2	Address or specific tap: <ul style="list-style-type: none"> * Contains copper pipes with solder containing lead installed before 1983
Tier 3	Not applicable for NTNC - skip
Other	Address or specific tap: <ul style="list-style-type: none"> * Copper pipes with lead-free solder installed after 1986 -or- * Plastic plumbing materials (PVC, PEX, etc.)

This form and related environmental information are available electronically at <http://dec.vermont.gov/water>
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