



FACT SHEET - MATERIAL EVALUATION & SAMPLE LOCATION IDENTIFICATION

(Ver 2, March 2018)

Introduction

Community Water Systems (CWS) and Non-Transient Non-Community Water Systems (NTNC) shall complete a distribution system Materials Evaluation (ME) to identify a pool of sampling sites that is large enough to ensure that the system can collect the required number of lead and copper tap samples. A summary of the ME, including the resources used to identify materials and a summary of the potential sites, must be included in the Lead and Copper Sampling Plan (LCSP). NTNCs must use the Materials Evaluation Survey for Non-Community Water Systems (BWSE – 17) to assist in completing the ME.

STEP 1: Identify Piping and Plumbing Materials

Relevant information concerning piping and plumbing materials utilized throughout the distribution system and within housing can be attained through the following sources:

- Plumbing Codes
- Permitting Files
- Community Survey
- Distribution Maps and Drawings
- Plumbing Permits
- Existing Water Quality Data
- Township Construction Records
- Water Main Break Records
- Meter Installation Records
- Standard Operating Procedures
- Inspection and Maintenance Records
- Interviews with senior personnel, building inspectors, and retirees
- In the course normal operations (i.e. checking service line materials when reading water meters, performing maintenance activities, or conducting repair operations).
- NTNCs may have a licensed plumber evaluate the plumbing materials of the distribution system.

STEP 2: Classify the Categories of Piping and Plumbing Materials

Identify whether the following materials are present in the distribution system and/or household plumbing:

- Lead from piping, solder, caulking, interior lining of distribution mains, alloys and building plumbing;
- Copper from piping and alloys, in service lines, and building plumbing;
- Galvanized piping in service lines, and building plumbing; and/or
- Ferrous piping materials, such as cast iron and steel.

Inspection and/or verification of plumbing within homes does not need to be conducted for inclusion in the sampling pool. It may be listed as a site solely based on other means of investigation (Step 1).

STEP 3: Identify the Tier Level and Category for Available Locations:

Tier	Community Water Systems	Category
1	Single-family structures:	
	• Served by a lead service line (including goosenecks); and/or	i
	• Containing copper pipes with lead solder installed <u>after</u> 1982 and before 1987*;	ii
	• Or Containing lead pipes.	iii
2	Multiple-family residences**:	
	• Served by a lead service line (including goosenecks); and/or	iv
	• Containing copper pipes with lead solder installed <u>after</u> 1982 and before 1987*;	v
	• Or Containing lead pipes.	vi
3	Non-residential buildings:	
	• Served by a lead service line (including goosenecks); and/or	x
	• Containing copper pipes with lead solder installed <u>after</u> 1982 and before 1987*;	xi
	• Or Containing lead pipes.	xii
	Single family structures that contain copper pipes with lead solder installed <u>before</u> 1983.	vii
N	Does not meet Tier 1, 2, or 3 criteria:	
	• Single family structure	viii
	• Multiple-family residence	ix
	• Non-residential building	xiv
	Non-residential building containing copper pipes with lead solder installed <u>before</u> 1983.	xiii



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STEP 3: Identify the Tier Level for Available Locations (Continued):

Tier	Nontransient Noncommunity Water Systems	Category
1	Buildings:	
	• Served by a lead service line; and/or	x
	• Containing copper pipes with lead solder installed <u>after</u> 1982 and before 1987*; or	xi
	• Containing lead pipes.	xii
2	Buildings that contain copper pipes with lead solder installed <u>before</u> 1983.	xiii
N	Structures with other plumbing materials	xiv

STEP 3 Notes:

*Though the effective date for the lead ban in NJ was 1987, there is still a possibility of lead solder being used in construction after this date. Systems are advised to carefully consider the Tier level of structures built during this time.

**When multiple-family residences comprise at least 20% of the structures served by a water system, Tier 2 multiple-family residences may be included as Tier 1 sites. These sites will be designated as Tier 1 but with the appropriate multi-family category.

- Building age alone may not provide enough information to classify a location. If plumbing repairs/replacement has taken place the location may need to be reclassified.
- The key characteristic to look for is lead – either piping or solder. More recent copper piping should not have lead solder.

STEP 4: Create a Sampling Pool

The sampling pool must target high risk sites using the process below. Stop when you have a sufficiently large enough sampling pool to meet the required number of tap samples. Systems with lead service lines shall, at a minimum, collect 50% of samples from sites served by lead service lines.

Community Water Systems:

1. First, select all Tier 1 sites served by lead service lines
2. Second, select all other Tier 1 sites
3. Third, select all Tier 2 sites served by lead service lines
4. Fourth, select all other Tier 2 sites
5. Fifth, select all Tier 3 sites
6. Sixth, select Non-Tier sites. If all available sites are non-tier they should be evenly distributed throughout the distribution system.

Maintain documentation if the system must sample from a lesser Tier (i.e. sampled Tier 2 site because Tier 1 sites not willing to participate in sampling event).

Non-Transient Non-Community Water Systems:

Select interior taps most commonly used for drinking/consumption (i.e. kitchen, drinking water fountain, breakroom, etc.) from

1. First, select from Tier 1 building(s)
 2. Second, select from Tier 2 building(s)
 3. Third, select from Non-Tier building(s). If all available sites are non-tier they should be evenly distributed throughout the distribution system.
- If the water flows through a higher Tier building(s) before entering the lesser Tier building(s), the lesser Tier building(s) are to be sampled.
 - If the water system contains more than one building that meets the appropriate tier criteria, samples should be collected from more than one building.
 - If the water system contains only plastic plumbing, but the faucets and fittings contain lead, the system should collect tap samples at these locations.

Additional Lead and Copper Rule Guidance is available at: <http://www.nj.gov/dep/watersupply/dwc-lead-public.html>

For further assistance, please contact the Bureau of Water System Engineering at 609-292-2957 or watersupply@dep.nj.gov