



OKLAHOMA DRINKING WATER

LEAD TESTING

IN PUBLIC SCHOOLS & CHILD CARE FACILITIES



OKLAHOMA
Environmental
Quality

Understanding the Results

The only way to know if there is lead in your drinking water is to TEST. Lead is colorless, odorless- and harmful to human health. DEQ's Lead Testing in Schools program is a *voluntary* program for schools and childcare facilities to receive assistance in reducing lead in their drinking water to maintain a healthy learning environment for Oklahoma's students.

1. Outlet Inventory

Before a sampling event can take place, DEQ staff meets with school officials to create an 'outlet inventory' of all drinking outlets in a facility. This step is important because it allows our staff a chance to create maps, investigate sources of drinking water, and create an accurate sampling plan to send to our laboratory.

We have created codes for types of drinking water outlets we often encounter while touring schools.

Drinking water outlet codes

- BF – Bathroom Faucet
- CF – Classroom Faucet
- DW – Drinking Water Fountain
- IM – Ice Machine
- KF – Kitchen Faucet
- NS – Nurse's Office Sink
- OF – Outdoor Faucet
- WC – Water Cooler



Example: Outlet 'A' would be recorded as a Water Cooler (WC).

Outlet 'B' would be recorded as a Drinking Water Fountain (DW).

Sample ID Breakdown Example

Our staff uses these 'Drinking water outlet codes' combined with other location identifiers, to create a unique 'Sample ID' for each location.

| Sample ID | Building | Floor | Room | Outlet Type |
|--------------|----------|-------|------|-------------|
| 1-2-43-CF1 | 1 | 2 | 43 | CF |
| 2-1-GYM-WC2 | 2 | 1 | GYM | WC |
| 3-1-CONC-KF1 | 3 | 1 | CONC | KF |

- The first sample: **1-2-43-CF1**, is in the main building, on the second floor, in Room #43- and is a sample of a ‘Classroom Faucet’
- The second Sample ID is **2-1-GYM-WC2**. This means that it is in the second building of the school, on the first floor, in the gym- and is a sample of a “Water Cooler.”
- The final example, **3-1-CONC-KF1**, is in building 3 on the first floor. CONC is used to mark that this “Kitchen Faucet” fixture is in the Concessions Stand.

Below is an example of an outlet inventory. We utilize this resource to be better able to communicate with schools and our laboratory about samples, results, and suggested remediation actions.

| Name of School/Facility: Example | | | | Grade/Age Levels: Pre-K through 5th | | | | | | | | | |
|----------------------------------|------------|---------|--------|-------------------------------------|--|------------------------------|---------------------------|---|---|----------------------------|-------------------|--|--------------|
| Order # | Building # | Floor # | Room # | Outlet Type Code | If outlet is a water cooler (WC), list make and model. | Room Name Common Description | Comments | Is a filter in use at this outlet? (Y/N) ² | *If yes, complete the following section | | | | Sample Point |
| | | | | | | | | | Filter Brand, Make and Model | Date Installed or Replaced | Replace Frequency | NSF Certified for Lead Reduction (Y/N) | |
| 1 | 1 | 1 | HALL | WC1 | Elkay w/bottle filler LEFT | Outside 3rd grade | LEFT | Y | | | | | 1-1-HALL-WC1 |
| 2 | 1 | 1 | HALL | WC2 | BOTTLE FILLER LEFT | Outside 3rd grade | BOTTLE FILLER | Y | | | | | 1-1-HALL-WC2 |
| 4 | 2 | 1 | KIT | KF1 | N/A | Kitchen | Sink by window in kitchen | N | | | | | 2-1-KIT-KF1 |
| 5 | 2 | 1 | KIT | KF2 | N/A | Kitchen | Sink by door- small | N | | | | | 2-1-KIT-KF1 |

2. Sampling Events

After scheduling a sampling event with facility staff, our program coordinators will send the completed ‘outlet inventory’ document to our laboratory staff. They will then prepare a sampling kit. Each sampling kit comes with two (250 ml) bottles for each outlet to be tested and Sample ID labels for each bottle.

How samples are taken

Our staff takes two (2) samples at each outlet: a First Draw Sample, and a Flush sample. If lead is found in the sample- these two samples will help us determine the possible sources of contamination (i.e. fixture issue, interior plumbing issue, etc.)



First Draw Sample

Sample taken first thing in the morning. Water sat in pipes for 8-18 hours



Flush

Fixture is run for 30 seconds of continuous water.



Flush Sample

Second sample taken after running the water.



3. Results Breakdown

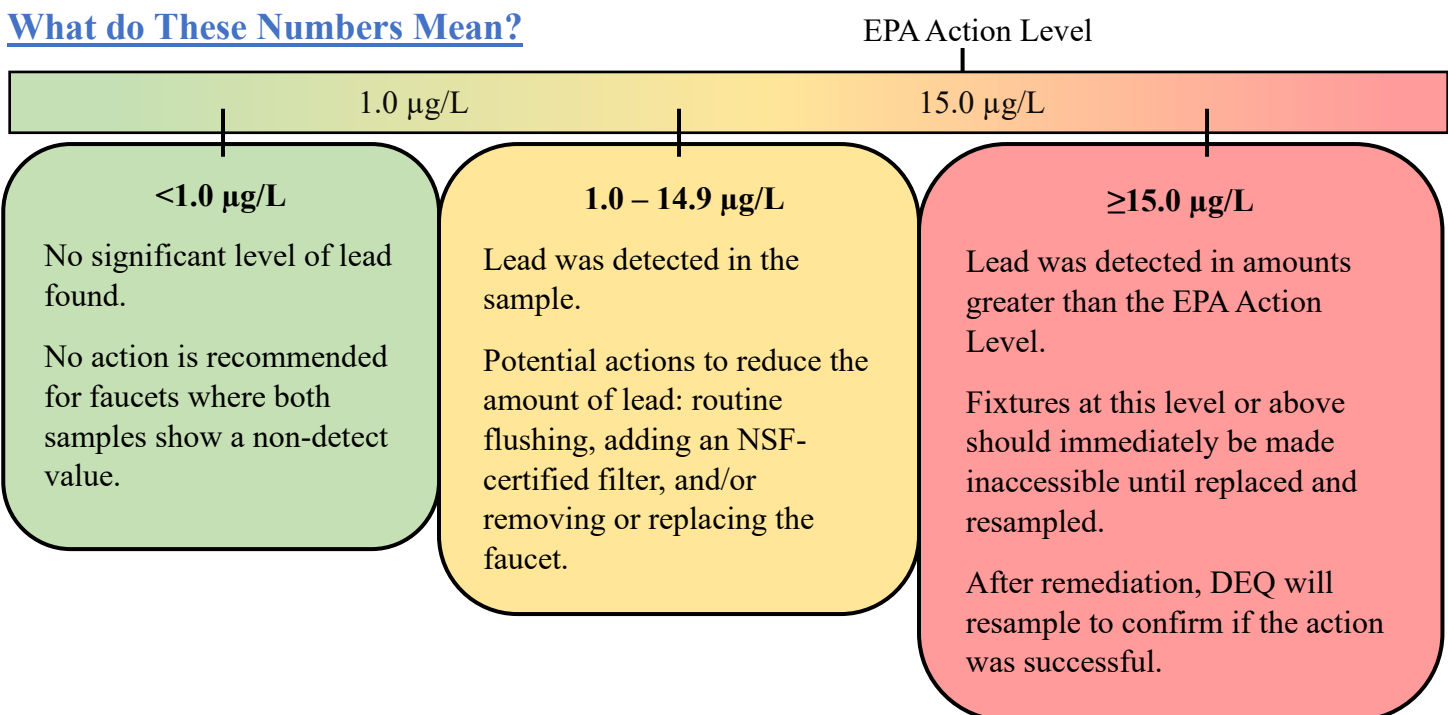
After receiving the samples- our laboratory analyzes them and generates a report. Our program staff then organizes this report to make the data more digestible. We organize sample results into three categories: Non-Detect (<1.0 µg/L), Low Detection (1.0 – 14.9 µg/L), and High Detection (≥15.0 µg/L).

Below is an example of a results report at a location which has had multiple sampling events (note: micrograms per liter (µg/L) is also known as: parts per billion (ppb)).

| Sample ID | Description | First Draw (µg/L) | Flush (µg/L) | Remedial Action | First Draw (µg/L) | Flush (µg/L) |
|--|---|-------------------|--------------|-----------------|-------------------|--------------|
| | | Initial Sampling | | | Resampling | |
| Non-Detect (<1.0 µg/L) | | | | | | |
| 1-2-43-CF | Classroom Faucet in art room (Room 43) | <1.0 | <1.0 | N/A | | |
| Low Detection (1.0 – 14.9 µg/L) | | | | | | |
| 2-1-GYM-WC | Bottle filler on Elkay water cooler in basketball gym | 2.8 | <1.0 | Flush | <1.0 | <1.0 |
| High Detection (≥15.0 µg/L) | | | | | | |
| 3-1-CONC-KF | Kitchen faucet in concessions stand near football field | 20.9 | 16.7 | Replaced | <1.0 | <1.0 |



What do These Numbers Mean?



4. Remediation

After receiving results from our laboratory, DEQ staff will communicate with facility staff to create a remediation plan. Each location is unique- and remediation plans can range from: no recommended action at this time, to replacing faucets, to larger-scale interior plumbing replacements. After recommended remediation actions are completed- schools have the option to resample to confirm if the actions were successful at reducing lead levels at that location.

To view results for participating schools and childcare facilities, click [here](#)

For more information on DEQ's program, click [here](#)