Clean Water for US Kids Water Section Instructions

Prepared by

Clean Water for US Kids Program
RTI International
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Introduction

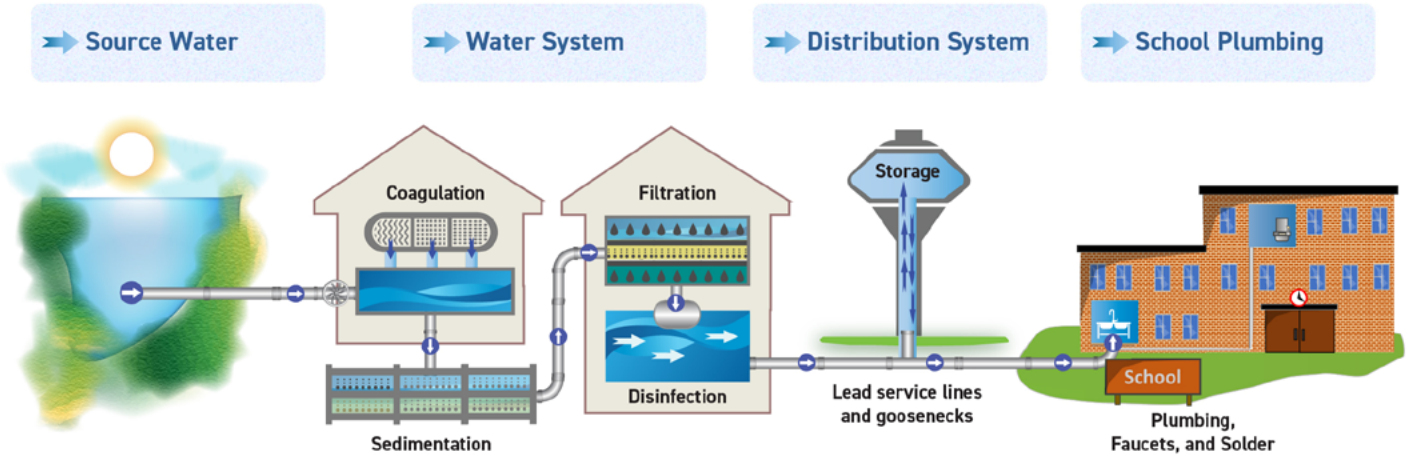
This resource was developed by Clean Water for US Kids. This document provides helpful "how to" tips for lead in water testing and eliminating lead exposure. Click the page numbers within each box to jump to the section you want. The sections include the following:

We have a full video series on how to test for lead in water and eliminate exposure. **If you prefer to watch our videos, click here or search "Clean Water for US Kids" on YouTube**.

PROGRAM OVERVIEW

Overview of Lead Hazards for Young Children

The Legacy of Lead in Drinking Water

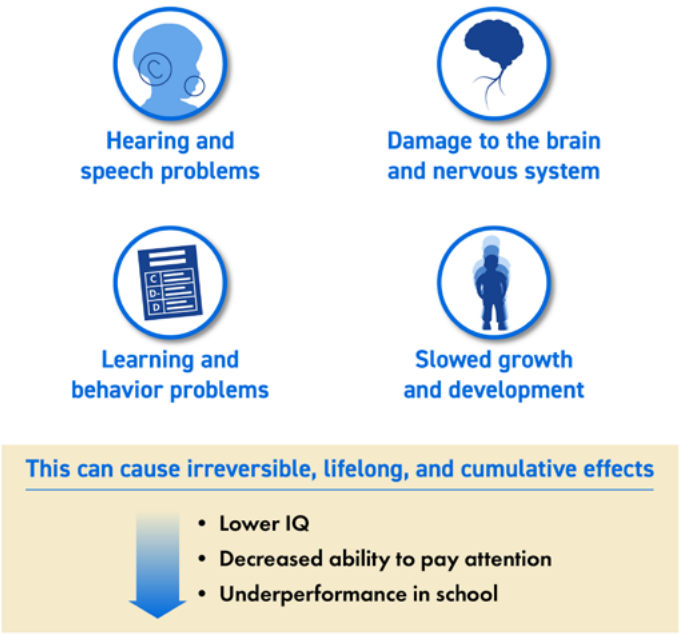


Lead in drinking water is not typically found at the source or in the water system (also known as water utility facility or public water supply plant). Any lead that gets into the water is typically from building plumbing or service lines, or distribution pipes (the pipes that bring water from the utility to your building). If your building is served by a private well, the private well components could also be a source of lead.

Due to its useful chemical properties lead has been used in a variety of industries, including ammunition, batteries, ceramics, paint, gasoline, and plumbing components. Lead is possibly the most notorious toxic chemical in history, yet it is still common where kids live and play. Since the 1970s, environmental levels of lead have declined, largely due to regulations in the U.S. to control lead sources, including gasoline, paint, and plumbing.[1] However, these rules only applied to future installations and don't address lead-based paint or leaded plumbing that was already in place. Because of this, lead in drinking water from leaded-pipes, fixtures, and service lines poses an ongoing health risk, especially for infants and children. Children may be exposed to lead by drinking water at home, schools, and child care centers.

Early Childhood Lead Exposure

Lead is toxic to the brain and the nervous system even at very low levels of exposure. Infants and young children are especially sensitive to chemicals like lead in their environments. Early childhood exposures to lead can result in harmful, lifelong health effects. These effects are often related to children's developing brains and can include IQ loss, learning disabilities, and behavioral disorders.[2,3] It is important to make sure that children's homes, day cares, and schools are free from sources of lead. Potential sources of lead exposure include old paint, drinking and cooking water, toys, or other manufactured products. This document focuses on lead in drinking and cooking water.



1 Dignam, T., Kaufmann, R. B., LeStourgeon, L., & Brown, M. J. (2019). DOI: 10.1097/PHH.0000000000000889

2 Canfield, R. L., Henderson, C. R., Jr., Cory-Slechta, D. A., Cox, C., Jusko, T. A., & Lanphear, B. P. (2003). DOI: 10.1056/NEJMoa022848.

3 Lanphear, B. P., Hornung, R., Khoury, J., et al. (2005). DOI: 10.1289/ehp.7688.

An Overview of Our Steps to Identify and Eliminate Exposure to Lead in Drinking and Cooking Water

The first step to identify and eliminate exposure to lead in drinking and cooking water is to get your water tested. If you do find lead in your water, there are straightforward, cost-effective steps to reduce exposure. You can designate one "clean tap," use water filters, and/or replace old plumbing fixtures. Taking these simple steps can help get lead out of your drinking and cooking water. Importantly, boiling water does NOT remove lead or prevent lead exposures.

In addition to testing your water, we also describe how to check your pipes to identify the material they are made of to help understand your water test results. You can report the results of your check to us. If your pipes are lead or copper and your water test showed high levels of lead, we can help prioritize your location for lead service line replacement to remove the source of lead.

GUIDANCE ON SAMPLING WATER TAPS AT FACILITIES

The following guidance will help your facility identify which water outlets should be sampled under the Clean Water for US Kids™ program. *Note that only taps used for consumption (drinking and cooking) should be sampled.*

TAPS THAT SHOULD BE SAMPLED

KITCHEN/CAFETERIA

Food Preparation Taps

Any taps used for preparing food or beverages for consumption such as filling pots for cooking water, making beverages, preparing infant formula, and washing fruits and vegetables. This includes:

- All faucets in multicompartment sinks
- Pantry faucets
- Pot fillers
- Spray hoses used to fill pots for cooking

Facilities should list these taps used for food preparation or drinking for sampling.

Appliances (Plumbed-In)

Any peripheral cafeteria/kitchen appliances that are directly connected to tap water from a water hose or line. Some examples include ice makers, steam ovens, steam/tilting kettles, and soup makers.

Please note the following if you choose to sample a plumbed-in appliance:

1) ONLY sample in the appliance as you start turning the water on. Do not sample behind appliances or unhook/unplug appliances.
2) If you cannot collect a water sample inside the appliance after it is turned on, do not include it.

CLASSROOMS

Bubblers and Classroom Sinks

Only include classroom sinks if they are specifically used for drinking or cooking.

Facilities should list bubblers attached (or plumbed) to a classroom sink used for drinking water in the classroom if they are not capped.

Food Preparation or Drinking Taps

This ONLY includes classroom sinks used for consumption.

This does NOT include the "food prep handwash sink" used in licensed child care centers, which should not be sampled.

Any taps used for preparing food or beverages for consumption including filling pots for cooking water, making beverages, preparing infant formula, and washing fruits and vegetables. This includes:

- All faucets in multicompartment sinks
- Faucets in classrooms used for cooking

List ONLY classroom taps that are specifically used for food preparation or drinking. Do not include classroom taps designated as handwash only.

GENERAL INDOOR AND OUTDOOR AREAS

Bottle Fillers/Water Fountains

Facilities should list each water fountain bubbler and bottle filler used for consumption and clearly label each "tap" in proximity to which part of the fountain it is on.

Include any water fountains anywhere inside the building and outside the building on the facility's campus (e.g., campus courtyards, sports fields).

Locker Room Tap

Only include locker rooms taps if they are specifically used for filling water bottles and coolers.

Bathroom sinks should typically NOT be included as they are handwash only sinks. However, if your facility fills up water coolers or bottles for sports in a locker room, include ONLY that specific tap used for drinking.

TAPS THAT SHOULD NOT BE SAMPLED

We do not recommend testing these taps for lead, as they are **not** typically used for consumption. Ingestion of water is the main lead exposure hazard. Facilities should post permanent signage indicating that the taps should not be used for drinking or cooking use. **See the program resources page for sign templates you can laminate.**

KITCHEN / CAFETERIA

Appliances (Not Plumbed-In)

Any peripheral cafeteria/kitchen appliances (e.g., standalone appliances such as coffee makers and standalone kettles) that use tap water at the facility but are not connected to tap water.

CLASSROOMS

Handwash Taps

Any taps in a classroom used for handwashing or other activities only, not for consumption or food preparation.

- This includes general handwash stations, taps used for art or lab activities, taps used for brushing teeth, and taps used for diapering.
- Note that water from these taps should not be used for mouth rinsing.

BATHROOMS, LAVATORIES, AND LOCKER ROOMS

Handwash Taps

Any taps in bathrooms/lavatories used for handwashing only, including electronically/motion-activated taps.

Shower Heads

Any bathroom or locker room outlets used for bathing.

General Indoor and Outdoor Areas

Eyewash Sinks/Safety Showers

Station for rinsing bodies or eyes in laboratories in case of emergency.

Laundry Taps

Any taps at the facility dedicated to cleaning or sanitizing clothes, sheets, towels, uniforms, etc.

Janitorial/Mop Taps

Any taps used specifically for janitorial purposes, such as filling mop buckets.

Outdoor Hose Spigots or Hoses

Faucets or spigots used for cleaning or irrigation. Facilities should only use designated drinking or cooking taps to fill sports coolers and water bottles.

Large Facility Water Sampling Plan Guidance

This document is designed to assist larger facilities that receive multiple sampling boxes with sampling plan options. Water needs to sit in the pipes for at least 8 hours and no more than 3 days (72 hours) to collect water samples. If it has been less than 8 hours since it was used, sample on a different day.

Important!

1. All staff involved in collecting water samples should complete the **required training** by attending a webinar or reviewing our training resources at www.cleanwaterforUSkids.org/howto.
2. Collect samples in the morning **before anyone has used the water**.

Best Option

Sampling Monday morning (before school opens) with two or more staff

- Each trained participant can take a box and complete the sampling for their box.
- This can be done simultaneously.
- Include each participant's name on the appropriate Chain of Custody (COC) document.
- All sample bottles go back in the sampling box with the COC document for UPS pick up.

Acceptable Options

Sampling on the first day of a school break or a Teacher work day

- More time may be available that day to complete sampling before other water use.
- Water should sit unused 8-72 hours before sampling.

Spreading sampling over a few weeks

- The Monday morning of each week, collect samples for one or more complete boxes.
- Fill out the accompanying Chain of Custody document, pack up the box(es) for those samples, and ship back to RTI Laboratory the day you sample.
- DO NOT HOLD samples to send all at once. The laboratory must receive your samples within 10 days of filling the bottles.
- Repeat the following week until all boxes are submitted.
- Results will only be posted after all samples for that facility have been analyzed.

Sampling on other weekday mornings

- Each morning chosen for sampling, collect samples for one or more complete boxes.
- Follow guidance above for "Spreading sampling over a few weeks" and repeat each morning until all samples are collected.

Sampling during periods of extended closure

Schools may be closed due to holiday breaks or for other reasons. Sampling can be done during this time; however, it requires a modified protocol to flush the building 3 days before sampling.

Three days prior to sampling, conduct an extended closure flush protocol for the building. Go to bit.ly/CWUSK-flushing or scan this QR code for guidance.

Flushing Tips

- Identify ways to **collect and reuse** the flushed, non-potable water (e.g., plant watering).

QUESTIONS?

Contact Us
bit.ly/CWUSK-contact

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1-855-997-2864

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Clean Water For US Kids™

WATER SAMPLING INSTRUCTIONS

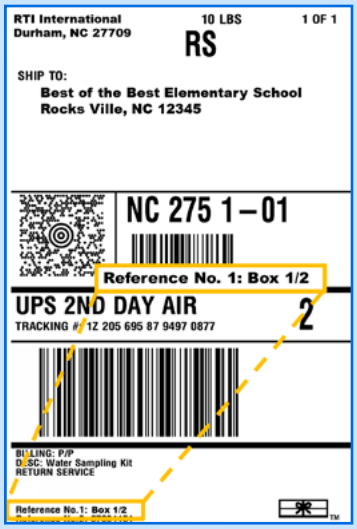
How to collect water samples to test for lead at your facility

If your facility is closed for the summer, holidays, or longer than 72 hours, you must take additional steps 2-3 days before you sample. Go to bit.ly/CWUSK-flushing or scan this QR code for guidance.

Step 1. Prepare to sample.

- **Set a date** to collect samples after not using water in your facility for 8-72 hours
  (over night or weekend).
- **Notify** staff, students, and cafeteria workers to not use water in the building at least 8 hours before yousample until sample completion.

Step 2. Collect sample.

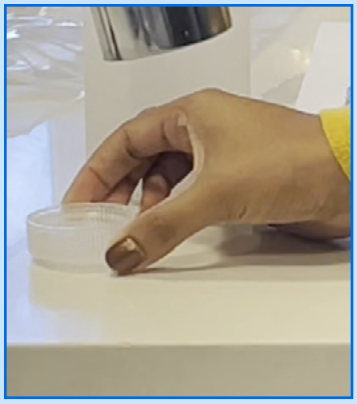


- **If water was run** within 8 hours of sampling, STOP and reschedule for the following day.
- **Follow box order.** Some schools will have multiple boxes. Find Box One noted on the UPS shipping label and begin with that box.
- **Start on lowest floor.** If facility has more than one floor
- **Start with the first number on the chain of custody.** Find the bottle with the matching number. Continue sampling in the order found on the chain of custody.
- **Do not touch inside of bottle or lid**, and place lid on a clean surface with open side facing up.
- **Position bottle underneath the tap** and turn water to a normal flow.
- **Fill bottle to neck** (narrow part of bottle where bottom of cap sits).
- Close bottle tightly.

Avoid Common Mistakes

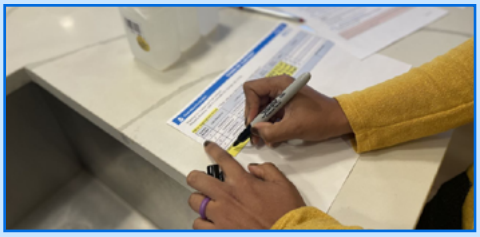
- Do NOT use water before sampling.
- Use water normally the week before.
- Do NOT remove faucet aerators.
- Do NOT close sink shutoff valves.

Tips for water fountains: At least 72 hours before sampling, identify where water typically hits so you know where to position the bottle. Mark spot with a sharpie. You may need to angle bottle to get all water inside of bottle. If you don't get it in right away, that's okay. Try to keep the bottle as full as you can. Do not pour it out and try again.



Step 3. Fill out chain of custody document.

- **Fill in date and time** on chain of custody for each sample.
- Add your name in "Collected by" section and date and time sampling is complete.



Step 4. Prepare samples for shipping.

- **Tightly close each bottle**, place them into large bag, and seal it.
- **Put chain of custody in smaller bag** and seal it so it does not get wet.
- **Put bags in box**. (If you lose it,use another box).
- **Place new shipping label** over the previous one on the box.
- **Close box and reseal** top flap using strong shipping tape.

Step 5. Schedule a UPS pickup.

- There is no charge for return shipping.
- **Schedule a pickup** with UPS.
- If you schedule before 10 a.m., UPS will come the same day.
- Give UPS your phone number and label tracking number.
- Write down the confirmation number UPS gives you.
- **Place the box outside for UPS pickup.**

Call UPS at 1-800-742-5877 OR go to UPS.com/pickup OR scan QRcode.

Samples must be shipped back within 10 days or you will have to resample.

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WHAT'S NEXT? We will notify you by email when sample results are ready. Your results will come with recommendations for how to take action to get lead out of each tap.

THANK YOU FOR YOUR DEDICATION TO PROTECTING CHILDREN'S HEALTH!

SUPPLEMENTAL WATER SAMPLING INSTRUCTIONS

How to collect water samples to test for lead from untraditional taps at your facility

For full water sampling instructions for your facility, see the program resources page.

Ice-Making Machines

- Fill the sample bottle with ice directly from the ice machine, if possible.
- Alternatively, use a non-metal scoop or clean, new, disposable plastic gloves to place ice into the sample bottle.
- Let the ice melt, and then refill the bottle until it is filled to the neck of the bottle (i.e., the narrow part of bottle where bottom of the cap sits).

AVOID COMMON MISTAKES

- Do NOT touch the ice with bare hands.
- Fill the bottle as full as you can get it and still securely close the lid.

Kitchen Kettles and Soup Makers

- Fill the sample bottle from the spout, filling the kettle, if possible.
- If direct sampling is not available, fill the kettle with the minimum amount of water needed to collect a 250 milliliter (mL) sample.
  - Mix the water with the kettle's mixer or stir with a non-metal utensil.
  - Use a non-metal utensil to pour the water into the sample bottle.
  - Fill the sample bottle to the neck with the mixed water sample.

IF YOUR APPLIANCE ONLY HAS HOT OR COLD WATER TAPS

- Indicate in the comments of the chain-of-custody document whether the water is hot or cold.

Other Appliances

- If a sample can be obtained from the tap or valve, then fill the sample bottle to the neck, immediately after opening the tap or valve.
- Do NOT collect samples that require the disconnection of any taps.

IF YOUR APPLIANCE HAS BOTH HOT AND COLD WATER TAPS

- Collect water at the settings you usually use and fill the sample bottle to the neck.

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FLUSH INSTRUCTIONS

Flushing is the process of running water from a faucet to clear out sitting water from pipes. Flushing is a no-cost solution to reducing lead in water. When water sits in pipes or fixtures, it can pull lead and other metals into the sitting water. It's important to get that water out.

Here's a table with the recommended flushing times for your facility. Depending on your situation, you may need to flush specific taps or all the taps in your building. This guide will show you where and how to flush properly.

	1. Flush Select Taps	2. Flush All Taps in the Building
Before sampling an unused tap	X	
After replacing plumbing components	X	
After a filter is installed or replaced	X	
After a long weekend		X
After summer break		X
After a holiday closure		X
Before sampling a closed building		X

1. Flush Select Taps

Always flush 2-3 days before you plan to sample!

a. Before sampling an unused tap

Follow these steps 2-3 days before you plan to sample individual taps that are unused for any reason.

Flushing taps and water fountains can occur simultaneously or one at a time.

Flush water fountains

- Run any unused water fountains in your building for 1 minute each.
- If your fountain has a refrigeration unit, run the water for 15 minutes. These units have cooling systems, so the water dispenses colder than room temperature and may take longer to fully flush. This ensures all sitting water from the refrigeration tanks is cycled out of the system. A longer flush time helps clear out all the sitting water from the refrigeration tanks.

Flush taps

- Run any unused taps for 1 minute one at a time.

b. After replacing plumbing components

Follow these steps immediately after you replace fixtures or plumbing components in your building.

Step 1. Flush hot and cold water lines

Immediately after installing, flush the hot and cold water lines for 10 minutes each.

Step 2. Repeat Flushing for 3 weeks

Then run the water for at least 30 seconds 4 times per day during the three-week break-in period for new components.

Why flush after replacing components?

- **Particles can come loose** when replacing or removing components.
- **New materials** with small, allowable amounts of lead can release more lead when first used.
- **New plumbing typically requires a three-week break in period** with repeated flushing to ensure any particles of lead or other contaminants are cleared from the system.

c. After a filter is installed or replaced

Immediately run water according to the manufacturer's instructions. Some manufacturers recommend flushing for 5–10 minutes immediately after installation to ensure safe use. Please refer to the manufacturer's instructions for specifics.

2. Flush All Taps in the Building

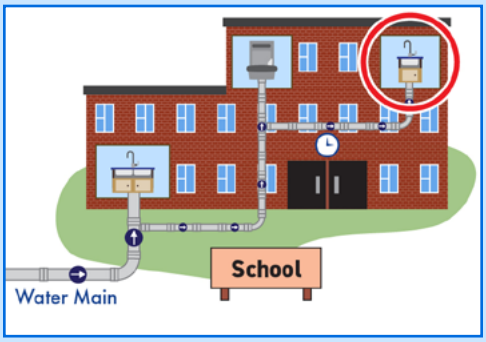
Use these instructions if water in the building has been sitting unused for more than 3 days. This includes closures for summer or holidays. Follow these steps 2-3 days before you plan to sample.

If your building has more than one floor, start with the top floor of the building. Only flush one floor at a time.

- If you notice water pressure decreasing, flush fewer taps at a time.

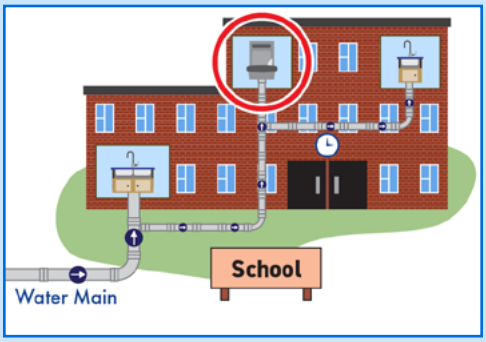
Step 1. Flush tap farthest from where the main water supply enters the building.

- Turn on the cold water and let it run for 10 minutes.
- While that tap is running, if your building has multiple wings:
  - Locate the tap in each wing that is farthest from where the main water supply enters the building.
  - Turn on the cold water and let those taps also run for 10 minutes at the same time.
- After 10 minutes for each tap, turn taps off in the order they were turned on



Step 2. Flush water fountains on the same floor.

- On the same floor, run all water fountains for 1 minute, one at a time.
- If your fountain has a refrigeration unit, run the water for 15 minutes. These units have cooling systems, so the water dispenses colder than room temperature and may take longer to fully flush. A longer flush time helps clear out all the sitting water from the refrigeration tanks.



Step 3. Flush additional taps on the same floor.

- After flushing the farthest tap and water fountains, on the same floor, run any additional taps for 1 minute, one at a time.

Step 4. Repeat Steps 1-3 for remaining floors in the building.

- Work from the top floor to the bottom.
- If sampling, proceed to sample collection 2-3 days after following these instructions.

QUESTIONS?

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WHAT HAPPENS WHEN YOUR SAMPLES GET TO THE LAB

When RTI International receives your samples at the lab, we

- Log the samples into our system using the barcode on each bottle
- Check to make sure the samples are in good condition. That no water has leaked out and the sample IDs match what's on the chain of custody document
- Measure how much sediment is in the sample (turbidity) to see if we have to do any additional preparation before laboratory analysis
- Preserve the sample by adding high purity nitric acid in a clean environment
- Let acidified samples sit at room temperature for at least 16 hours
- Check the sample pH to confirm it is in the proper range
- Load the samples into the automated sampler for analysis. Samples are analyzed for lead using an ICPMS (Inductively Coupled Plasma Mass Spectrometer)
- Review data to make sure all quality assurance and quality control standards are met
- Report results to program portal

Once the analysis is completed, your results will be available in your online portal and we will send you a notification email. Your results report will include recommendations to reduce lead exposures from water based on your results.

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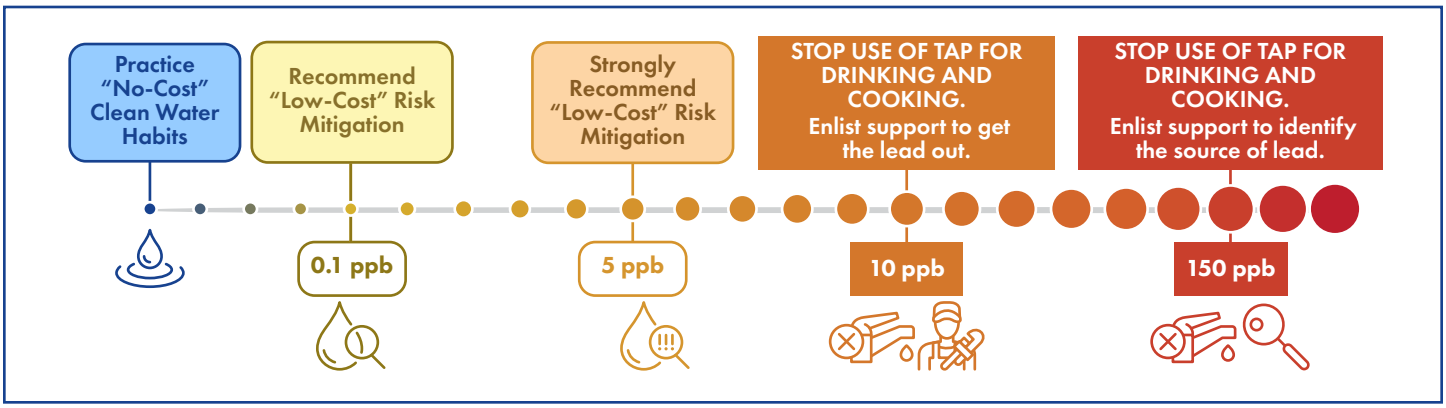
Understanding Your Lead in Water Test Results

Your results show if lead is detected, and at what level, for each drinking or cooking water tap you sampled. Lead results are measured in parts per billion (ppb). One ppb is about the same as one drop of water in a backyard swimming pool.

Recommendations

We recommend different actions depending on the level of lead in your water, as shown in **Figure 1**.

Figure 1. Illustration of Recommended Risk Mitigation Based on Test Results for Each Tap.



Results below detection limit (0.1 ppb)

If any results are below our laboratory detection limit, there is either no lead in your water or the amount is so low that our instruments cannot measure it (less than 0.1 ppb). Even if no lead is detected, we recommend practicing "**Clean Water Habits**."

CLEAN WATER HABITS FOR ALL TAPS

- Use signs to designate low-lead taps for drinking and cooking.
- Use only the cold water setting, even when boiling water
- Flush water after 8 hours of no use
- Clean faucets and aerators, regularly
- Maintain any filters per manufacturer instructions
- Choose certified lead-free products

Any detected lead (over 0.1 ppb)

If your results are at or above our laboratory detection limit of 0.1 ppb, we *recommend* low-cost solutions to remove lead and reduce exposure. The American Academy of Pediatrics recommends that lead in water should not exceed 1 ppb. We *recommend* practicing **Clean Water Habits** and implementing "**Low-Cost Solutions**."

LOW-COST SOLUTIONS FOR ANY DETECTED LEAD

- Install a filter certified to remove lead
- Replace faucet fixture

Results at or above 5 ppb

For samples at or above 5 ppb, **we strongly recommend the low-cost** solutions above to remove lead and reduce exposure.

Results at or above 10 ppb

If you have a sample that is at or above 10 ppb, then **immediately stop using tap for drinking and cooking**. The federal Lead and Copper Rule uses a treatment-based action level of 15 ppb and a trigger level of 10 ppb that prompts water utilities to identify system wide improvements. These are not health-based standards. Take action to remove lead from the tap by using the low-cost solutions previously recommended plus the recommendations below.

Recommendations for results at or above 10 ppb

- Restrict use of tap, DO NOT USE FOR DRINKING OR COOKING
- Contact your local or state health department and/or utility for guidance.
- Take steps to remove lead including replacing fixture and installing and maintaining lead-certified water filter
- After mitigation follow **Clean Water Habits**

Results at or above 150 ppb

There may be additional sources of lead in your piping or plumbing. Additionally, lead-certified filters are not certified for use above 150 ppb. If one of your taps is at or exceeds this level, **immediately stop using tap for drinking and cooking** and follow the steps below.

Recommendations for results at or above 150 ppb

- Restrict use of tap, DO NOT USE FOR DRINKING OR COOKING
- Contact your local or state health department and/or utility for guidance.
- **Collect follow-up** first draw and 30-second flush samples to evaluate the lead source(s).

More Resources

Check out additional resources from our program:

- No-Cost and Low-Cost Solutions for Lead in Water [bit.ly/CWUSK-solutions]
- Checking for Lead Service Lines [bit.ly/CWUSK-LSL]
- How to Choose a Water Filter to Remove Lead [bit.ly/CWUSK-Filters]

More Information

This informational flyer was developed for RTI International's Clean Water for US Kids™ program.

Clean Water for US Kids

www.cleanwaterforUSkids.org/carolina

RTI International

3040 E. Cornwallis Road, P.O. Box 12194

Research Triangle Park, NC 27709-2194 USA

FOLLOW-UP WATER SAMPLING INSTRUCTIONS

How to collect 2-step water samples for taps with prior lead results at or above 15 ppb. Taps should be restricted from use for drinking or cooking until post-mitigation testing confirms lower lead levels.

2-step sampling can provide information about possible sources of lead to guide mitigation actions. If you have already selected a mitigation action you may choose to save this kit to test after mitigation (post-mitigation sampling).

Step 1. Flush.

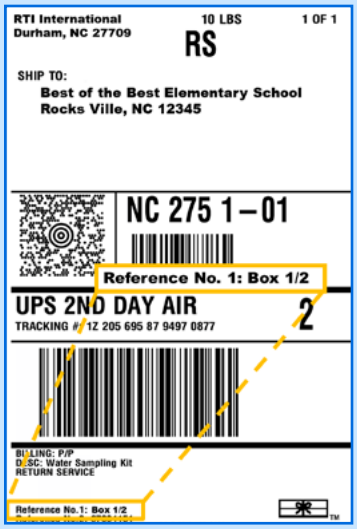
- You must flush these taps 2-3 days before you sample. Go to bit.ly/CWUSK-flushing or scan this QR code for guidance.

IMPORTANT! Save the box and bubble wrap for the return shipment! If you have more than one box, each box will have its own chain of custody. **OPEN ONE BOX AT A TIME.**

Step 2. Prepare to sample.

- **Set a date to collect samples** to collect samples after not using water in your facility for 8-72 hours (over night or weekend)**.**
- **Notify** staff, students, and cafeteria workers to not use water in the building at least 8 hours before you sample until sample completion.

Step 3. Collect "first-draw" sample.



- **If water was run** within 8 hours of sampling, STOP and reschedule for the following day.
- **Follow box order.** Some schools will have multiple boxes. Find Box One noted on the UPS shipping label and begin with that box.
- **Start on lowest floor.** If facility has more than one floor.
- **Start with the first number** on the chain of custody. Find the bottle with the matching number. This will be a "first-draw" sample bottle with yellow "First Draw" sticker. Continue sampling in the order found on the chain of custody.
- **Do not touch inside of bottle or lid**, and place lid on a clean surface with open side facing up.
- **Position bottle** underneath the tap and turn water to a normal flow.
- **Fill bottle to neck** (narrow part of bottle where bottom of cap sits).
- **Close bottle tightly**.

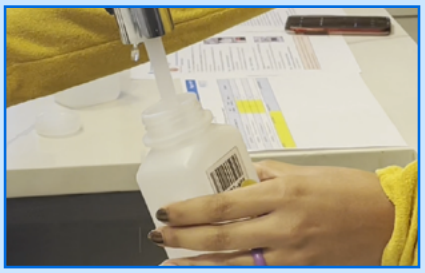
Avoid Common Mistakes

- Do NOT use water before sampling.
- Use water normally the week before.
- Do NOT remove faucet aerators.
- Do NOT close sink shutoff valves.

Tips for water fountains: At least 72 hours before sampling, identify where water typically hits so you know where to position the bottle. Mark spot with a sharpie. You may need to angle bottle to get all water inside of bottle. If you don't get it in right away, that's okay. Try to keep the bottle as full as you can. Do not pour it out and try again.

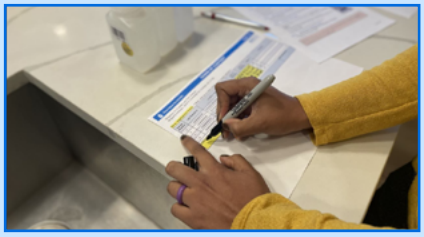
Step 4. Collect: "30-second flush" sample.

- **Open other bottle for this tap** (next sample ID on list) the same way as Step 2.
- **Using a timer**, run water at full speed from the same tap for 30 seconds.
- **After 30 seconds**, stop water and position bottle underneath tap.
- **Fill second bottle**, turn water off, and close bottle the same way as Step 2.



Step 5. Repeat Steps 2-3 for the remaining taps.

- Always match bottle sample ID to each tap.



Step 6. Fill out chain of custody document.

- Fill in date and time on chain of custody for each sample.
- Add your name in "Collected by" section and date and time sampling is complete.

Step 7. Prepare samples for shipping.

- **Tightly close each bottle**, place them into large bag, and seal it.
- **Put chain of custody in smaller bag** and seal it so it does not get wet.
- **Put bags in box** (If you lose it, use another box).
- **Place new shipping label** over the previous one on the box.
- **Close box and reseal** top flap using strong shipping tape.

Step 8. Schedule a UPS pickup.

- There is no charge for return shipping.
- **Schedule a pickup** with UPS.
- If you schedule before 10 a.m., UPS will come the same day.
- Give UPS your phone number and label tracking number.
- Write down the confirmation number UPS gives you.
- **Place the box outside for UPS pickup**.

Call UPS at 1-800-742-5877 OR go to UPS.com/pickup OR scan QRcode.

Samples must be shipped back within 10 days or you will have to resample.

QUESTIONS?

Contact Us
bit.ly/CWUSK-contact

Call/Text
1-855-997-2864

Visit
bit.ly/CWUSK-home

Scan to Contact Us

Understanding Your 2-Step Lead in Water Test Results

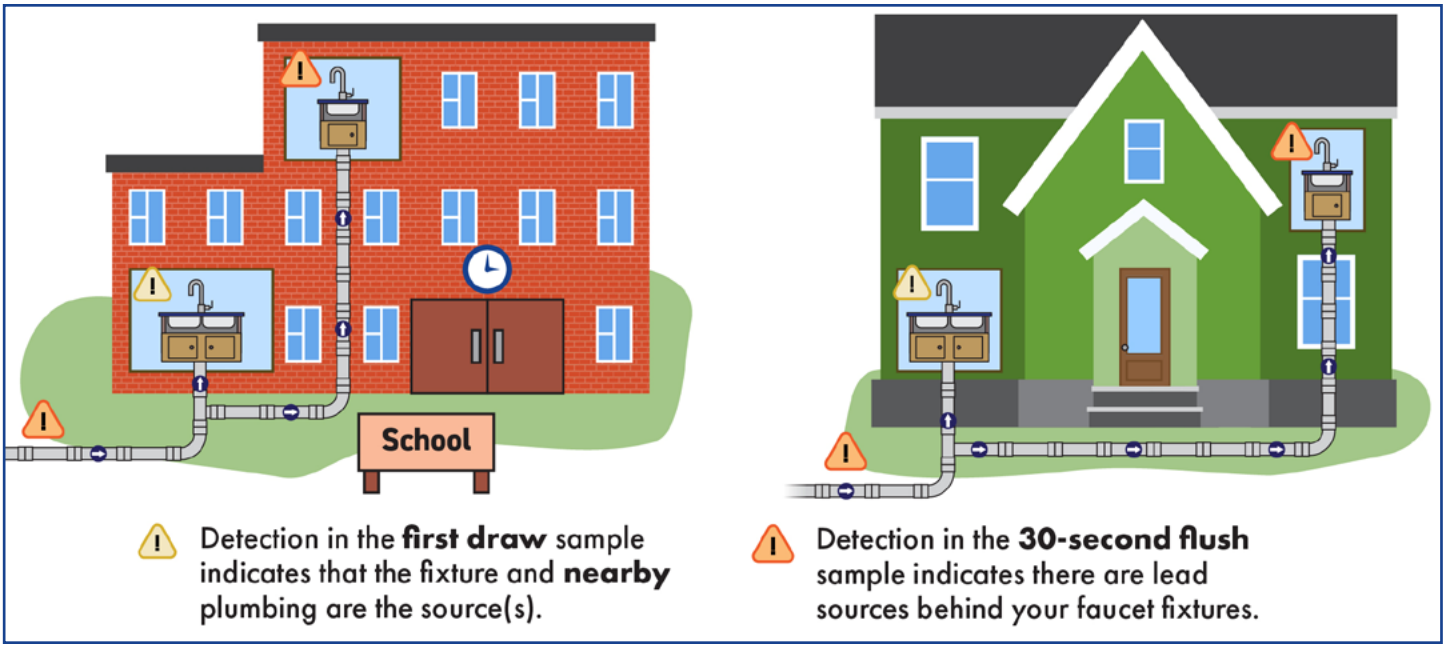
Your results show if lead is the level of lead detected at each drinking or cooking water tap you sampled. Lead results are measured in parts per billion (ppb). One ppb is about the same as one drop of water in a backyard swimming pool.

One or more taps may have two sets of results – one for the first draw sample and one for the 30-second flush sample you collected. Recommendations are based on the level of lead found in each sample and the type of collection (first draw or flush sample).

Sources of Lead in Your Water

The detection of lead in the first draw and flush samples provides insight on the location of potential sources of lead in your building's plumbing system. High first draw samples indicate that your faucet fixture is likely the source of lead, while high 30-second flush samples can indicate there are lead sources in plumbing behind your faucet fixtures. If both samples are high, you may have multiple sources of lead in your plumbing, as shown in **Figure 1**.

Figure 1. Illustration of Distant and Nearby Sources of Lead.



Recommendations

We recommend different actions depending on the level of lead in your water, as shown in **Figure 2.**

Figure 2. An Illustration of Recommended Risk Mitigation Based on the Test Results for Each Tap.

Results Below the Detection Limit (0.1 ppb)

If any results are below our laboratory detection limit, then either there is no lead in your water or the amount is so low that our instruments cannot measure it (less than 0.1 ppb). Even if no lead is detected, we recommend practicing "**Clean Water Habits**."

Clean Water Habits for All Taps

Recommendations for All Taps

- Use signs to designate low-lead taps for drinking and cooking
- Use only the cold water setting, even when boiling water
- Flush water after 8 hours of no use
- Clean faucets and aerators, regularly
- Maintain any filters per manufacturer instructions
- Choose certified lead-free products

Any Detected Lead (Greater Than 0.1 ppb)

If your results are at or above our laboratory detection limit of 0.1 ppb, then we recommend low-cost solutions to remove lead and reduce exposure. The American Academy of Pediatrics recommends that the amount of lead in water should not exceed 1 ppb. We recommend **Clean Water Habits** and implementing "**Low-Cost Solutions**."

Low-Cost Solutions for Detected Lead

- Install a filter that is certified to remove lead
- Replace the faucet fixture

Results At or Above 5 ppb

For samples at or above 5 ppb, **we strongly recommend the low-cost solutions** previously mentioned to remove lead and reduce exposure.

Results At or Above 10 ppb

If you have a sample that is at or above10 ppb, then **immediately stop using tap for drinking and cooking**. The federal Lead and Copper Rule uses a treatment based action level of 15 ppb and a trigger level of 10 ppb that prompts water utilities to identify system wide improvements. These are not health based standards. Do not use the tap for drinking and cooking. Take action to remove lead from the tap by using the low-cost solutions previously recommendedplus the recommendations below.

Recommendations for Results At or Above 10 ppb

- Restrict use of tap, DO NOT USE FOR DRINKING OR COOKING
- Contact your local or state health department and/or utility for guidance.
- Take steps to remove lead, including replacing the fixture and installing and maintaining the lead-certified water filter
- After mitigation follow **Clean Water Habits**

At or above 150 ppb

There may be additional sources of lead in your piping or plumbing. Additionally, lead-certified filters are not certified for use above 150 ppb. If one of your taps is at or exceeds this level, we strongly recommend stop use for drinking and cooking and follow the steps below.

Recommendations for Results At or Above 150 ppb

- Restrict use of tap, **DO NOT USE FOR DRINKING OR COOKING**.
- **Contact your local or state health department and/ or utility for guidance.**
- **Collect follow-up** first draw and 30-second flush samples to evaluate the lead source (s).
- **If the 30-second flush sample is less than 150 ppb, you can safely use low-cost solutions at this tap**. Make sure to replace the faucet with a certified lead-free fixture AND install and maintain a water filter certified to remove lead. You can test your tap again after to confirm these actions were effective at removing lead at the tap.
- **If the 30-second flush sample is greater than 150 ppb, water filters will not be effective**. There is likely another source of lead in the plumbing other than the faucet that should be removed before installing a water filter. Contact a plumber to help identify other potential lead sources in plumbing and piping. Replace identified lead sources in plumbing with certified lead-free components. Collect follow-up sampling again as listed above.
- If lead levels are still above 150 ppb after removing potential lead sources, do not use the tap for drinking or cooking (e.g. reserve for handwashing).

More Resources

Check out additional resources from our program:

- No-Cost And Low-Cost Solutions For Lead In Water [bit.ly/CWUSK-solutions]
- Checking for Lead Service Lines [bit.ly/CWUSK-LSL]
- How to Choose a Water Filter to Remove Lead [bit.ly/CWUSK-Filters]
- How to Install a Certified Lead-Free Faucet [bit.ly/CWUSK-Faucets]

More Information

This informational flyer was developed for RTI International's Clean Water for US Kids™ program.

Clean Water for US Kids

www.cleanwaterforUSkids.org/contact

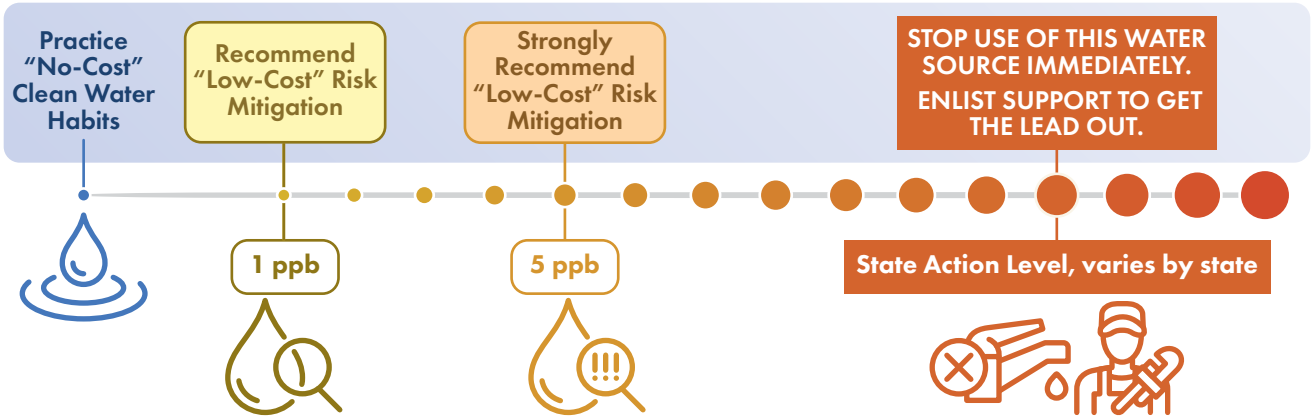
RTI International

3040 E. Cornwallis Road, P.O. Box 12194

Research Triangle Park, NC 27709-2194 USA

GET THE LEAD OUT

No-cost and low-cost solutions to eliminate lead at the tap in drinking and cooking water



The impact of early childhood exposure to lead lasts a lifetime. No level of lead exposure is considered safe for children—even small amounts cause reduced IQ, attention difficulties, and underperformance in school. We recommend these no-cost and low-cost methods to remove lead from your drinking and cooking water and to improve children's health.

Recommendations based on lead level

At any level, Practice Clean Water Habits

We always recommend that you practice these clean water habits to reduce the chance of lead in your water:

- **Use only cold water for drinking and cooking**. Don't use hot water, even if you're going to boil it or warm formula. Hot tap water can leach lead from your plumbing into your water.
- **Flush water at all taps regularly** to clear out standing water with fresh water. When water is not used, lead from the pipes and fixtures it is sitting in can get into your water. If your building has been unused for:
  - Prolonged closures (e.g., COVID, summer break): flush water at every tap for 15 minutes or more. For large buildings, only flush one floor or wing at a time, starting at the top level. Flush faucets first, then move to fountains.
  - Holidays: flush water for 3 to 5 minutes at every tap.
  - Daily/weekends: flush water for 1 to 2 minutes at each tap. Learn more about flushing from the EPA 3Ts flushing guidance.
- **Designate "one clean tap"** for drinking and cooking purposes. Choose a tap that has been tested and showed no detectable lead.
- **Contact a plumber** promptly if you have decreased tap flow.
- **Follow public health guidelines for periodic water testing**.

At or above 1 ppb

The American Academy of Pediatrics recommends that lead in water not exceed 1 ppb. To remove the lead, we recommend the following **low-cost solutions**:

- Practice clean water habits (see above) **PLUS**:
- **Install and maintain a water filter certified to remove lead**. https://www.rti.org/brochures/water-filters-certified-remove-lead-drinking-water-and-cooking-water-clean-water-carolina.
- **Replace your faucet fixture** with a new lead-free one.

At or above 5 ppb

To remove the lead, we strongly recommend the following **low-cost solutions**:

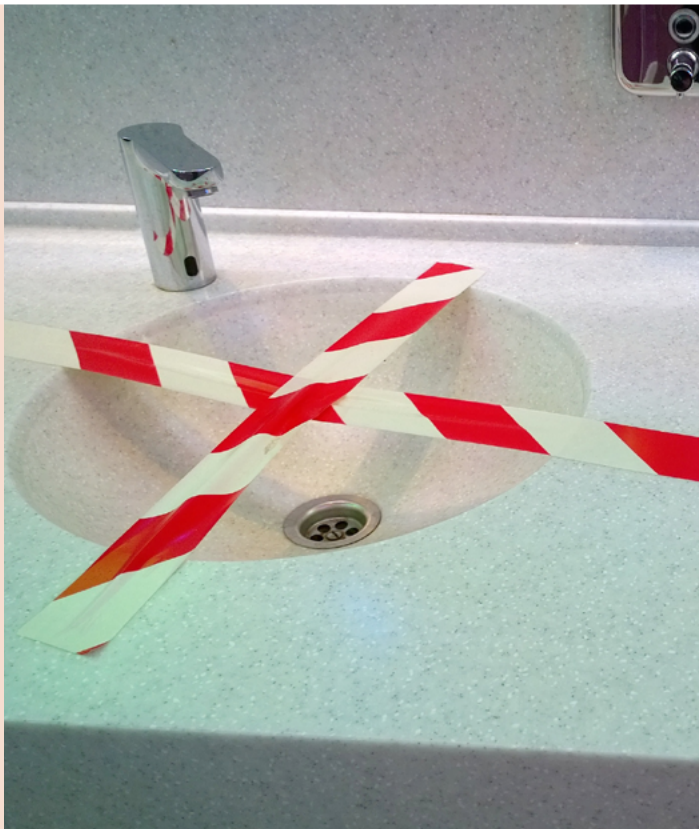
- Practice clean water habits (see above) **PLUS**:
- **Install and maintain a water filter certified to remove lead**. https://www.rti.org/brochures/water-filters-certified-remove-lead-drinking-water-and-cooking-water-clean-water-carolina.
- **Replace your faucet fixture** with a new lead-free one.

At or above State Action Level

If one of your taps is at or exceeds this level, place a **"Do not use"** sign and tape over the tap to ensure that nobody uses it. Next:

- **Contact your local or state health department**, water utility, or other relevant program to provide follow-up support.
- **Check for lead service lines, lead-lined water fountains, clogs, or other potential sources of lead, with the help of a plumber**. In some cases, you may need to replace lead service lines or remove an old water fountain. Note: Lead service line replacement can be costly—check with your local health department and utilities to see if there is any funding support.
- **Use water from another lead-free tap or purchase bottled water** while finding and fixing the problem.
- **Low-cost solutions may still be effective**. Install and maintain a water filter that is certified to remove lead and replace the faucet fixture with a lead-free one.

After actions are taken to remove lead, it is important to retest the water to make sure the actions are effective.

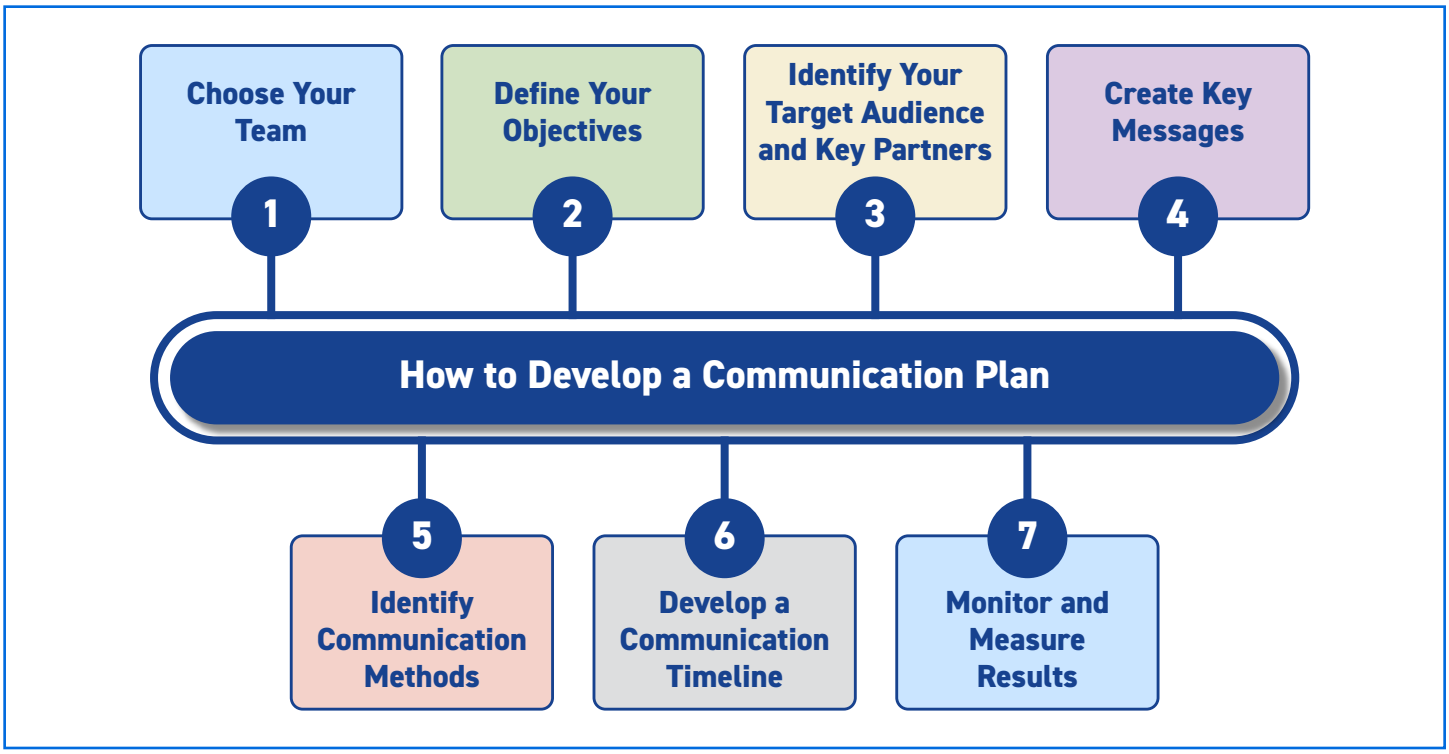


Thank you for your efforts to remove lead in drinking and cooking water to protect children's health. For more information on our program, how to test your water for lead using our program, what your results mean, and what you can to do reduce the amount of lead in your drinking and cooking water, go to www.cleanwaterforUSkids.org.

Clean Water for US Kids: A Guide for Developing a Communication Plan

This document will help you develop a Communication Plan to share information about your school or child care facility's involvement in the Clean Water for US Kids program. A comprehensive Communication Plan offers a foundation for transparent communication about your participation in the program, results from hazard assessments, and actions taken to address any hazards identified, while establishing trusting relationships with your communities. As shown in **Figure 1**, the seven simple steps for developing an effective Communication Plan are briefly listed.

Figure 1. Seven Steps for Developing an Effective Communication Plan



The seven steps are further discussed as follows:

1) **Choose your team** to support the development and implementation of the Communication Plan,
2) **Define your objectives** for outreach and communication,
3) **Identify your target audience and key partners** to ensure that your message is customized to reach everyone in your community,
4) **Create key messages** to ensure that you are sharing updates and information about your participation in the program,
5) **Identify communication methods** to provide community awareness of key events throughout testing and mitigation for lead in drinking and cooking water,
6) **Develop a communication timeline** with your target audience before you participate in the program, while you are participating, and after you have taken action following participation, and
7) **Monitor and measure results** to track the effectiveness of your communication efforts and adjust your outreach, if necessary.

These seven steps are further detailed in the remainder of this document.

Step 1: Choose Your Team

A well-rounded team with identified roles can help foster effective communication and prompt responses. Your team should include the following:

- A leader to organize the team,
- A primary contact for questions,
- Someone to lead social media and outreach efforts, and
- Backups for each position.

Developing well-ordered team dynamics will encourage the success of implementing an effective Communication Plan and should not be a one-person job. You can use **Table 1** in the supplemental Communication Plan template (bit.ly/CWUSK-Comms-Template) to help organize your team.

Develop a spreadsheet that includes a point of contact for each partner. Collect the full names, phone numbers, and email addresses of each point of contact. It is also important to make a note of the target audience for each partner. Use **Table 2** in the supplemental Communication Plan template (bit.ly/CWUSK-Comms-Template).

Now that you have chosen your team, you can move on to Step 2.

This Communication Plan describes assigning roles to at least five communication team members. However, it is possible for one person to develop and implement a Communication Plan for his or her facility.

Step 2 : Define Your Objectives

The objectives for communicating with your community will guide the creation of your Communication Plan. Some examples of goals for Communication Plans are to:

- Build stakeholder awareness,
- Provide transparency throughout the process,
- Enhance community engagement, and
- Update your community about the proactive steps that your facility is taking to protect and improve children's environmental health.

A more in-depth analysis of how to accomplish these goals is explained in Step 4.

After defining your objectives, you are ready to identify your target audience and key partners in Step 3.

Step 3: Identify Your Target Audience and Key Partners

You should think about with whom you would like to share communication. Keep in mind that people who will likely be impacted by your participation in this program should be included here. Some examples of groups to target with outreach materials include the following:

- **School or child care facility community:** Staff members, students, and parents or guardians should be informed of program participation, goals, results, and outcomes of your participation in this program.
- **Other facility users:** This community includes people outside of the school or child care facility community who may sporadically use or occupy the building (e.g., local community groups, churches, camps, school board members).

- **Broader community:** This community may consist of residents and local businesses in the school or child care facility's district or town. The media (e.g., local, regional, national) can serve as a conduit for vital information for the broader community. Preparation is key in an effort to generate accurate news releases. The spokesperson or designated team member of the broader community should prepare factual and consistent information and be ready to respond to interview requests.
- **Local community organizations:** Local health officials, such as health officers, environmental health specialists, doctors, and nurses, can assist you and your community in understanding the health risks associated with lead in drinking and cooking water in schools and child care facilities. Local environmental community organizations may be able to help you draft communication materials, assist you with sampling, or help you understand results.
- **Drinking water community:** Public water systems are responsible for complying with all national and state drinking water standards. The public water system that serves your school or child care facility can provide information to the community about the system's efforts to minimize lead in drinking water and would be interested in the results of your water test.

It is important to identify your key partners because this will ensure that you reach your target audience. The key partners can help share your communication materials, spread awareness of the program to others, and effectively inform the local community. For example, media outlets can serve as a conduit for vital information for the broader community. In addition, local community organizations and local health officials, can assist you and your community in understanding the health risks associated with lead in drinking and cooking water.

Note for Working with Media Outlets

Preparation is key because you want to generate accurate news releases. The spokesperson or designated team member of the broader community should prepare factual and consistent information and be ready to respond to interview requests.

These partners can be valuable team members and can include, but are not limited to, the following:

• School board members	• Utility or water suppliers
• Civic leaders	• Environmental organizations
• Local public health officials	• Community organizations
• State drinking water program representatives	• Heads of buildings or facility maintenance and custodial services.
• Media (newspapers, radio stations and podcasts, television stations, web, and newswire outlets)	

Develop a spreadsheet that includes a point of contact for each partner. Collect the full name, phone number, and email address of each point of contact. It is also important to make a note of the target audience for each partner. Use **Table 2** in the supplemental Communication Plan template (bit.ly/CWUSK-Comms-Template).

Step 4: Create Key Messages

A key message can clarify your meaning and provide the critical takeaway regarding the issue about which you are communicating. You should develop concise messages about your facility's efforts to protect children's health. Materials should be consistent, focused, and easily understandable. Our communication toolkit (bit.ly/CWUSK-Comms-Template) will support the development of these messages. Here are some communication materials that you can use to ensure clear and concise communication:

- Launch a continuous strategy of education and awareness, using varying communication channels,
- Prepare a fact sheet so that your spokesperson has verified information about the status of your plumbing system and program,
- Post information on your official web page, and
- Ensure that your communication materials include the following:
  - A program description with information on how to contact the Clean Water for US Kids team if you have any questions;
  - Results of the sampling program and Risk Mitigation Plans;
  - Public health risks and effects caused by lead in drinking and cooking water at schools and child care facilities;
  - How families can increase their awareness of potential lead exposure in their homes and elsewhere; and
  - Information from state-certified laboratories, which can test water for lead and other harmful contaminants.

Step 5: Identify Communication Methods

The methods of public notification may be applied independently or in combination with communication about lead in water and the meaning of sampling program results. You should:

- Provide an email and phone number to receive communications about the program, and
- Decide where requests for additional information should be directed. Will you create an informational webpage on your facility website? Will you direct them to the Clean Water for US Kids website?

Multiple platforms should be used to communicate the information. The methods of communication are discussed as follows:

- **Press releases:** This type of release in the local newspaper or on local television and radio stations can reach a broad audience. It is vital that the press release informs readers of how to get sampling results and other information about lead in drinking and cooking water.
- **Letters and flyers:** These materials are a direct and effective method of communicating the Clean Water for US Kids program activities to parents and guardians and to other members of a school, child care facility, or building community.
- **Staff newsletters:** A notice enclosed in a staff newsletter is another option for directly and effectively communicating information about the Clean Water for US Kids program to employees.
- **Presentations:** Providing presentations at schools and during child care–related meetings can also serve as an effective method of communication to groups (e.g., Parent–Teacher Associations [PTAs], faculty, school boards).
- **Email and websites:** Digital communications are highly convenient for parents and guardians. Email provides a quick and easy method for parents to ask questions, but responses must be timely to be effective. Websites can be frequently updated to quickly relay new and updated information.
- **Social media:** Updates of the status of the Clean Water for US Kids program and information about regular activities can be provided to the public with ease via official social media accounts (e.g., Facebook, Instagram).

Step 6: Develop a Communication Timeline

A thorough communication timeline will help you identify critical communication opportunities and ensure that you are communicating with your community throughout your participation in the program. Having a relationship that is built on trust through effective communication will establish and maintain strong partnerships between your facility and cthe ommunity by building trust and highlighting your dedication to reducing lead in drinking and cooking water where children learn and play.

The federal grant supporting this program requires that lead testing results are displayed on the Clean Water for US Kids public mapper, so **make sure you have a plan in place to communicate results and the schools' next steps before the public can see them**.

Participating in this program can improve the environmental health of children; therefore, disseminating the communication materials in a timely manner is of the highest priority. Public communication efforts are less challenging if those who are affected are notified in advance of significant issues and events. The following times for communicating to members of the local community are recommended:

- **Before** the program begins,
- **As soon as** the results are available,
- **If or when** corrective measures are decided upon, and
- **If** no corrective measures are appropriate because lead levels are low.

Table 3 in the supplemental Communication Plan template (bit.ly/CWUSK-Comms-Template) can be used to refine your communication timeline.

Step 7: Monitor and Measure Results

Document public outreach and communication activities because this will help improve your public Communication Plan as it evolves. Some examples of items that should be recorded includes:

- Successful communication,
- Pivot points for future communication, and
- Changes to your Communication Plan in response to community feedback.

Table 3 in the supplemental Communication Plan template (bit.ly/CWUSK-Comms-Template) can be used to monitor and record your communication activities.

How to Develop a Drinking Water Management Plan for Schools and Child Care Facilities

The Clean Water for US Kids™ program helps schools and child care facilities identify and eliminate lead in drinking and cooking water where children learn and play.

This flyer focuses on developing a drinking water management plan. We assume that you have already 1) received your lead in water results for every drinking and cooking tap, and 2) mitigated lead in water at taps, as needed.

STEPS TO COMPLETE AND MAINTAIN A DRINKING WATER MANAGEMENT PLAN

Step 1: Map all taps in your facility

- **Plan and catalog:** This may be something you already did before collecting water samples for testing, but if not, make a plan to catalog and map all the taps in your building, along with their designated use (e.g., handwash only, cooking, drinking).
- **Check:** Note the location of the water meter and where water enters each building.

Step 2: Designate taps for drinking and cooking and communicate with your community

Let your staff and students know which taps can be used for drinking and cooking and which should only be used for handwashing with proper signage and communication. This process can be implemented after mapping all taps in your facility. To decide on which taps to designate for drinking and cooking, discuss the following considerations with your facilities staff:

- **Prioritize:** Fewer taps to maintain means less work and maintenance expenses on flushing and potentially filter maintenance.
- **Select:** We recommend selecting taps for drinking and cooking where first-draw samples have tested below 1 ppb. Follow our no-cost and low-cost solutions for lead in drinking water. Ensure there is at least one safe drinking water tap for every 100 students.
- **Post:** Place signs at all taps to indicate whether they are for drinking and cooking or for other uses.
- **Share:** Communicate relevant information with all building users including proper usage of the designated taps for drinking and cooking.
- **Empower:** Enlist all staff to help children practice using the correct taps.

Step 3: Develop a flushing schedule

Regularly running water through your pipes helps keep lead levels in them low. When water sits in pipes, it allows lead to move into the water from pipes, solder, or faucets and fixtures. When used in combination with other steps to get the lead out like replacing faucets and installing filters, it can help reduce lead levels and buildup of bacteria throughout the building. Flushing water filters can also help prevent clogging.

Guidelines for flushing faucets to maintain water quality

- Use the map you created to identify the taps that are farthest away from where the water enters the building on each wing and each floor of the building.
- Let the water run at each of these taps for 10 minutes (flush one floor at a time to avoid water pressure issues).
- Let the water run at all water fountains for 1 minute.
- Let the water run at all kitchen faucets and any other drinking/cooking faucets for 1 minute.

Plan: We recommend developing and implementing a flushing plan like the one in the box on the right to use after all school holidays and summer breaks. After weekends or each morning, facilities can also communicate with staff to run the water at their classroom and hallway taps for 30 seconds to one minute prior to consumption.

Clean: Clean any faucet screens and aerators, which can collect sediment containing lead, during the flushing routine at least quarterly.

Flush: Follow the plan!

Note that flushing is not recommended as a solution to lead levels at or above 10 parts per billion without first replacing faucets and installing lead-certified filters as it does not remove the source of lead and may be ineffective.

Step 4: Maintain water filters

It is important to maintain any water filters installed to remove lead. Under-sink and water fountain filters have disposable cartridges that must be replaced regularly to make sure the filters continue to remove lead. Remember—filters are only as good as how well they are maintained! This is because these filters work by accumulating contaminants from the water onto the filter's surface. Once the filter cartridge is full, it cannot remove any more contaminants and may release the accumulated contaminants back into the water.

- **Follow the manufacturer specifications:** Replace the filter cartridges as often as the manufacturer recommends—usually every 6 to 12 months, or after a certain volume of water has been filtered.
- **Check the light:** Some water fountains have an indicator light that turns red when the filter needs to be changed. Set a schedule to check these regularly throughout the year to know when to change the filters.
- **Put an alert on your phone:** If the device doesn't have a built-in indicator (many under-sink filters do not), develop a system to remind you when the filter needs to be replaced. This can be as simple as setting a reminder in your phone.
- **Purchase in advance:** Order at least one to two filters in advance of the next replacement for each tap so you have them on hand.
- **Consider a monitor:** The best solution is to have real-time monitoring of water use through all filtered taps to know exactly when to replace filters without having to do manual inspections. For a complete water filter monitoring system to easily keep track of all your filters and never miss a cartridge change, check out RTI Aquantix.

RTI Aquantix™

Step 5: Develop a testing scheduling

Water quality changes over time so re-test water at drinking and cooking taps periodically to make sure your management practices are effective and water in your facility continues to be lead free. Consider the following:

- **Sample frequency:** The sampling frequency for your facility will depend on a variety of factors, including water quality, your building's plumbing, recent renovations, whether there has been a change in your water source or source water treatment, your initial lead results, and available resources. Especially for buildings with one or more taps with prior lead levels at or above 10 parts per billion, re-testing those taps every 3 years would be prudent.
- **Planning:** Make sure to document the chosen sampling frequency so designated staff can plan to sample according to the schedule.
- **Testing:** Schools and child care centers can complete follow up water testing through the Clean Water for US Kids program. You can also check with your local water utility or local laboratories, but make sure to follow the 3Ts sampling protocol by the US Environmental Protection Agency.

STEPS TO COMPLETE AND MAINTAIN A DRINKING WATER MANAGEMENT PLAN (cont.)

Step 6: Designate staff for key roles

Clearly define roles and responsibilities for each of the steps above to maintain drinking water quality throughout the building. We include a chart template for identifying the key roles and assigning staff below.

- **Assign:** Choose a responsible person for educating staff and students on proper tap usage, performing regular upkeep of signage at taps, carrying out the flushing routine, checking water filters throughout the building, ordering and installing new filter cartridges, scheduling routine water testing, and communicating updates with the school or center community.

Step 7: Maintain Records

Keep: Record maintenance activities scheduled or completed for accountability and to demonstrate the actions you are taking to keep drinking and cooking water safe in your building. See an example of a simple tracking template below.

ADDITIONAL RESOURCES

Check out our other Get the Lead Out flyers

- EPA's best practices for drinking water management in schools
- EPA's Healthy Schools website
- Resources from EPA's 3Ts (Training, Testing, and Taking Action) for reducing lead in drinking water:
  - Interactive plan builder and template
  - Guidance on Establishing Routine Practices
  - Guidance on Assigning Roles
  - Flushing best practices
  - Lead sample collection guide
- Resources from the Clean Water for US Kids Program:
  - Instructional videos
  - How to sample for lead in drinking water
  - No-cost and low-cost solutions to lead in drinking water
  - How to choose a water filter to remove lead
  - How to identify a lead service line
  - How to select a lead-free faucet

CONTACT

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Research Triangle Park, NC 27709-2194 USA

QUESTIONS?

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Get The Lead Out

How to Choose a Water Filter to Remove Lead

Installing and maintaining a point-of-use water filter that is certified to remove lead may be a low-cost solution to improve your drinking water. Whether water testing has shown you need to take action to remove lead or you want to choose a water filter as a precaution, this flyer will help you make the right filter choice and answer some of the most frequently asked questions about dealing with lead in drinking water.

No amount of lead in drinking water is safe. Installing a point-of-use water filter can help remove or reduce lead in your drinking water. Point-of-use water filters treat water from one tap—such as a kitchen sink—after the water has passed through most of the pipes and fixtures that could increase the water's lead content. We recommend using water filters at taps designated for cooking or drinking water.

Where Does Lead in My Water Come From?

Lead does not generally come from the water source or water system itself. Instead, lead in drinking water usually comes from corroding pipes, plumbing, and fixtures on the way to the tap. Some plumbing components that are still in use were made partly or wholly of lead, including solder, pipes, and faucet fixtures. Even new components may have a small amount of lead. In addition, lead can be part of a build-up of minerals on the inside of the pipes.

What Are Point-of-Use Water Filters?

Point-of-use filters treat the water where you use it, typically at a sink. There are also "point-of-entry" water treatment systems that can make the water less corrosive before it continues through the rest of the plumbing in a building. These systems can reduce lead in drinking water but are much more expensive and may not fully solve a lead problem if plumbing components within the building still contain lead. Water softeners are another common type of point-of-entry system, but they are not designed to reduce or remove lead in the building. Since lead can come from so many different sources in a building's plumbing, a point-of-use filter is often the best and most cost-effective option for removing lead in the water that you drink.

How Do I Choose Among the Different Types of Point-of-Use Water Filters?

Many types of point-of-use filters are available, including faucet-mounted filters, countertop units, plumbed-in units installed underneath the sink, pour-through pitchers, and refrigerator water dispensers. Here, we compare the types of water filters that are certified to remove lead. The examples in the table below are not particularly recommended over other certified systems. We encourage you to research the best filter that fits your needs. Products also change often, so these products in the table may no longer be available.

Activated carbon

The most common filters are made with activated carbon, a highly porous material designed specifically for water treatment. Activated carbon can also improve the taste of your water. These filters are economical and come in the different all types mentioned above. Not all activated carbon filters are certified to remove lead, however, and they don't remove certain other contaminants like nitrate.

Reverse osmosis

This other common type of point-of-use system removes the widest range of contaminants but is usually more expensive than activated carbon. It also has lower flow rates, creates waste that increases total water use, and requires more space underneath the sink. Most reverse osmosis systems also require a post-treatment remineralization step to add flavor back into the water and prevent the water from becoming more corrosive, which could be a concern for lead.

A note about pitcher-style water filters: We do not recommend pitcher filters because they do not have adequate capacity to meet the needs of a child care center or school, or homes that rely on filtered water for all drinking and cooking uses. They have also been shown to be less effective at removing lead in tap water and are more expensive to operate per gallon because they require frequent filter changes.

Regardless of the type of filter you choose, make sure it is certified to remove lead by an accredited third party (see How Are Water Filters Certified? below).

See examples of certified products in the table below.

Water Filter Type/Examples[1]	Purchase Price[2]	Installation Difficulty	Flow	Number of cartridges	Filter Life[3]	Maintenance Cost[4]	Other Considerations
Faucet mounted filters							
PUR PLUS Faucet Mount Filtration System	$33	🔧	💧	1	100 gal. 3 mos.	$0.15/gallon $5/month	• Requires manual switch for filtered water • Need to replace filter cartridge more often than other types • May not fit some faucets
BRITA Complete Water Filter Faucet System	$20	🔧	💧	1	100 gal. 4 mos.	$0.18/gallon $4.5/month	
Countertop filters							
Pentair Pelican Countertop Drinking Filter System (PDF-450)	$135	🔧	💧	2	450 gal. 6 mos.	$0.18/gallon $13/month	• Uses existing faucet • Requires manual switch for filtered water
Refrigerator filters							
Specific filter type for each refrigerator brand and model	$30-50	🔧	💧	1	200–300 gal. 6 months	$0.10–0.20/gallon $5–10/month	• Requires refrigerator connected to water line • Also filters water for the refrigerator ice dispenser
Under-sink activated carbon filters							
A.O. Smith Main Faucet Single-Stage Carbon Bock Under Sink Filtration System (AO-MF-ADV)	$100	🔧🔧	💧💧	1	784 gal. 6 mos.	$0.09/gallon $12/month	• Different designs either filter the full flow of cold water from the main faucet or filter water to a separate lead-free faucet
Culligan US-2 Two-Stage Under Sink Drinking Water Filtration System	$105	🔧🔧	💧	2	500 gal. 6 mos.	$0.11/gallon $9/month	
Under-sink reverse osmosis (RO) filters							
Aquasana OptimH20 Reverse Osmosis + Claryum Filter	$250	🔧🔧🔧	💧	4	Pre/post filters: 6 mos. RO membrane: 12 mos.	$20/month	• Removes the most contaminants • Filters water to a separate lead-free faucet • Takes up more space underneath the sink • Generates wastewater • May change water's taste
GE Under Sink Reverse Osmosis Water Filtration System (GXRQ18NBN)	$200	🔧🔧🔧	💧	3	Pre/post filters: 6 mos. RO membrane: 12 mos.	$15/month	

🔧 Easy DIY installation, no tools required

🔧🔧 Can be installed without professional help with basic tools

🔧🔧🔧 May require the help of a professional plumber or additional tools

💧 Low flow, less than 0.5 gallons per minute

💧💧 Full faucet flow, up to 1.5 gallons per minute

1 These are examples only, not recommendations.

2 Purchase price is approximate and may change. Purchase price does not include installation costs. Some systems may need to be installed by a plumber at an additional cost.

3 Filter life is measured by volume of water filtered and time in use. Some filters have a built-in flow meter or timer with an indicator light that turns on to remind you when to replace the filter. If your filter has an indicator light, be sure to replace the cartridge promptly when the light turns on. If your filter does not have an indicator light, be sure to replace the filter promptly after the recommended amount of time.

4 Maintenance cost is calculated in two ways: 1) assuming the filter is changed at the time limit (price per month), and 2) assuming the filter is changed at the volume limit (price per gallon). The price per gallon estimate is only relevant for filters with a built-in device to measure water use over time. In most cases, the price per month provides a more realistic estimate. Reverse osmosis membranes usually need to be replaced every 12 months, regardless of the amount of use, so a price per gallon estimate is not available for RO filters.

How Are Water Filters Certified?

The National Sanitation Foundation (NSF) and the American National Standards Institute (ANSI) have developed standards for ensuring that point-of-use filters remove what they claim to remove. Not all filters on the market are certified. To be sure you choose a reliable product:

1. **Make sure that the device you choose lists lead as one of the removed contaminants** by reviewing the filter's "performance data sheet," which is a list of all the contaminants it is certified to remove. This can generally be found online by downloading the user guide or manual for the product.
2. Check for its **certification**. This can be found online or on product packaging.
    - For activated carbon filters, make sure it is certified for lead removal according to **NSF/ANSI 53** and for particle removal according to **NSF/ANSI 42**.
    - For reverse osmosis filters, check that it is certified for lead removal according to **NSF/ANSI 58**.
3. Make sure it was certified by an **accredited third-party organization** such as NSF, the International Association of Plumbing and Mechanical Officials (IAPMO), the Water Quality Association (WQA), or Canadian Standards Association (CSA) Group. You should see their logo on the product packaging.

For images of the certification logos, see the Environmental Protection Agency's Consumer Tool for Water Filters to Reduce Lead.

Why Is Filter Replacement Important?

Regularly maintaining your filter is the only way to make sure your water continues to be lead free. Both activated carbon and reverse osmosis filters have disposable cartridges that must be replaced regularly according to manufacturer specifications, based on how much time has passed or how much water has been used since it was installed. Activated carbon filters work by accumulating contaminants from the water onto the filter's surface. Once the filter cartridge is full, it cannot remove any more contaminants and may release the accumulated contaminants back into the water. Reverse osmosis filters use specialized membranes to separate contaminants from the water, but these membranes wear out over time and need to be replaced.

Determining when the filter cartridge is full or when the membrane is worn out can be difficult. Replace the filter cartridges as often as the manufacturer recommends—usually every three to six months, or after a certain volume of water has been filtered, whichever occurs first. Some devices have an indicator light or alarm that turns on when the filter needs to be changed. If the device doesn't have a built-in indicator, add a reminder to your calendar for when the filter needs to be replaced.

Make sure to purchase the manufacturer's replacement filters because off-brand filters may not be certified. Only buy replacement filters certified to remove lead to NSF/ANSI standards.

How Much Do Water Filters Cost?

In general, the operating costs—that is, the costs of replacing the filter cartridges regularly—will quickly exceed the initial cost. Thus, we recommend that you weigh maintenance cost more heavily than initial cost in your planning. If water in your area is expensive or scarce, note that reverse osmosis systems create 1 or more gallons of wastewater for every 1 gallon of filtered water.

What About Water Fountains?

If there is lead in your water fountain, you can replace the existing fountain with one that contains a filter certified to remove lead. These fountains also often have bottle fillers, which promote water consumption and can allow for water bottle filling that follows COVID-19 precautions (e.g., Elkay Enhanced ezH2O Bottle Filling Station, $1,000).

You can also replace the water fountain with a freestanding dispenser that filters water from your building's water supply. These units can be purchased or rented from water cooler companies (e.g., quenchWATER+ Q7 series). The company covers maintenance costs when renting a unit. The cost to rent a unit is typically less than the cost to purchase bottled water. However, the rental cost may be higher than the cost to maintain a water fountain. Investing in a water fountain with a certified lead filter is likely to pay off in a few years compared to renting a freestanding dispenser.

What About Having Drinking Water Outside?

It is not recommended to drink water from outdoor spigots because they may not meet the lead-free requirements of indoor plumbing. If you need drinking water available outdoors, you can use a portable water jug that can be filled inside at a lead-free or filtered tap. For water play, a certified lead-free hose can be purchased (e.g., Camco Premium Drinking Water Hose, $15–$25). Keep in mind that lead-free hoses will not address lead in other parts of the plumbing, just lead from the hose itself.

What About Other Chemicals in My Water?

If you suspect other chemical contaminants are in your water, such as per- and polyfluoroalkyl substances (known as PFAS), make sure that the filter is certified to specifically remove them according to NSF/ANSI performance standards. For PFAS, make sure that the filter is certified according to NSF P473 or that the chemicals PFOA and PFOS are listed in the performance data sheet for filters certified under NSF/ANSI 53 or NSF/ANSI 58. Reverse osmosis filters are generally the most reliable for PFAS and other emerging contaminants, but certified activated carbon filters can also be effective for the levels of PFAS typically found in U.S. tap water. To find more information about whether there may be PFAS in your tap water, contact your water utility.

Can I Eliminate Sources of Lead in the Plumbing?

You may be able to eliminate or reduce sources of lead in your plumbing and fixtures. A plumber can help to locate and replace any lead-lined water fountains, lead service lines, or other plumbing components containing lead. Detailed water testing can also help you identify lead sources.

We recommend replacing any faucets where lead is detected with new, certified lead-free faucets. Look for faucets certified according to NSF/ANSI 372 or NSF/ANSI 61. Stainless steel is best. Avoid brass and chrome-plated faucets because they may contain small amounts of lead. The Lead Service Line Replacement Collaborative also has helpful resources for checking whether water lines in your building are made of lead and provides suggestions for coordinating with your utility. Your local or state health department, water utility, or other relevant program may be able to provide additional support.

After taking any actions to remove lead, it is important to retest the water to make sure the actions were effective.

Should I Just Use Bottled Water?

If the tap water in your home or building has less than 150 parts per billion (ppb) of lead, installing a water filter will be more cost-effective than buying bottled water. Bottled water can cost up to $1–$2 per gallon, while maintaining a point-of-use filter costs only a few cents per gallon. If your tap water has over 150 ppb lead, however, you should consider using bottled water because point-of-use filters are not certified to remove more than 150 ppb of lead.

If you use bottled water, check the package or the manufacturer's website to ensure the company meets Food and Drug Administration (FDA) standards. The FDA mandates that bottled water contain less than 5 ppb of lead. For long-term bottled water use, we recommend buying refillable 5-gallon jugs to lower costs and waste. Make sure to store all bottled water out of direct sunlight and away from heat to avoid microbial growth and reduce leaching of other chemicals from the plastic into the water.

What If I Get My Water from a Private Well?

If your home or building is connected to a private well, there can be other sources of lead in your plumbing, including the bore hole, pump components, and pressure tank. Many water utilities treat the water with certain chemicals to make it less corrosive, but private well water is not required to have any corrosion control so children who get their water from private wells may be at greater risk of lead exposure. Fortunately, point-of-use water filters are also effective for removing lead from private well water. However, if you are on a private well, make sure to test your water for microbial contaminants, including *E. coli* and total coliforms. If any microbial contamination is detected, consult a well water professional to make sure your well is properly sealed, protected, and disinfected before installing a filter since most point-of-use filters are not protective against bacteria and viruses. You can find a well water contractor and schedule a well water checkup at WellOwner.org.

Additional Resources

This informational flyer was developed for RTI International's Clean Water for US Kids™ program. For additional resources please refer to the following links.

- www.cleanwaterforUSkids.org
- Environmental Working Group Water Filter Buying Guide
- Environmental Protection Agency Consumer Tool for Water Filters to Reduce Lead
- Environmental Protection Agency Consumer Tool for Lead-Free Plumbing Products
- NSF Lead Filtration Guide
- FDA Bottled Water Consumer Update

More Information

Clean Water for US Kids

www.cleanwaterforUSkids.org/contact

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CleanPlus

HOW TO INSTALL A CERTIFIED LEAD-FREE FAUCET

Sinks, faucets, and plumbing fixtures sometimes contain unsafe levels of lead.

If your faucet is a source of lead in your water, we recommend:

1. Replacing the faucet with a certified lead-free faucet.
2. Replacing the supply hoses underneath the sink (these are the lines that bring water to the faucet) with certified lead-free, stainless steel hoses.
3. Installing a point-of-use water filter to protect against any other potential lead sources elsewhere in the plumbing (see our flyer on How to Choose a Water Filter to Remove Lead [bit.ly/CWUSK-Filters])

Replacing a faucet is easy! If you are handy, you can replace a faucet with only basic tools. If you are unsure about doing it yourself, a plumber or handyperson can quickly do the job with these steps:

Step 1. Check what kind of faucet you need.

Faucet fixtures come in many different types and sizes. You will need to check the number of holes on the faucet you are replacing. If it has two or three holes, you will need to know the distance between the holes so you can buy a new one that fits your sink. Use a measuring tape to check the distance between the faucet handles. For some types of faucets, you may need to remove the old faucet first (Step 6) to know how many holes there are and the distance between them.

Step 2. Find a certified lead free faucet and supply hose – look for NSF/ANSI 372 or 61, certification.

Lead is often added to pipes and faucet fixtures to make the metal more malleable and less brittle. However, faucets used for drinking or cooking in the U.S. must be lead free under the Safe Drinking Water Act. For a faucet to be considered "lead free" it must have less than 0.25% lead in any materials that are in contact with the water.

The **American National Standards Institute (ANSI)** is a private, nonprofit organization that administers and coordinates voluntary U.S. standards for different commercial products and services.

The **National Sanitation Foundation (NSF)** is an independent product testing, inspection, and certification organization focused on protecting human health.

To find a trustworthy lead-free faucet and supply hose:

A. Check that the product is certified to lead-free standards created by the National Sanitation Foundation (NSF) and the American National Standards Institute (ANSI). This could include either:

- NSF/ANSI 372 which shows that a faucet has no more than 0.25% lead.
- NSF/ANSI 61 which shows that a faucet meets NSF/ANSI 372 and also does not leach more than 1 microgram of lead into the water during leaching tests. This standard is even safer than NSF/ANSI 372 alone.

B. Make sure that the product is certified by an independent laboratory accredited by ANSI.

C. Beware of cheap products advertised as "lead free" but not certified to NSF/ANSI standards.

D. Look for "Q≤1" on the packaging or product. This mark means the product meets the 2020 edition of NSF/ANSI/CAN 61 standard which requires the product leach no more than 1 microgram of lead.

E. Look for products with certification marks from these companies listed in the table below. The laboratory's logo should be accompanied by text showing which certification standard was tested (for example, either NSF/ANSI 372 or NSF/ANSI 61).

Certification mark images are from the U.S. Environmental Protection Agency's factsheet: 'How to Identify Lead Free Certification Marks for Drinking Water System & Plumbing Products' (nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100LVYK.txt). Label images are from Safeplumbing.org (https://www.safeplumbing.org/advocacy/health-safety/low-lead-faucet).

A certification mark is a trademark used to show consumers that particular goods and/or services, or their providers, have met certain standards. Check out the examples below.

Step 3. Review the manufacturer's instructions.

After selecting your certified lead-free faucet, read through the installation instructions thoroughly. The written instructions may also direct you to manufacturer videos to review. You can also view our faucet replacement video entitled 'Replacing a faucet' on our 'How to' page (www.cleanwaterforUSkids.org/howto).

Step 4. Assemble the tools you'll need.

- A light for under the sink
- An adjustable wrench
- Plumber's thread seal tape
- WD-40 or another penetration oil spray
- You may also need a wire brush and a hair dryer

Company	Certification Mark	Examples
CSA group www.csagroup.org/testing-certification/product-areas/plumbing/water-quality-and-health-effects/	NSF/ANSI 372 · Drinking Water NSF/ANSI 61-G	
ICC-ES https://icc-es.org/mark/	ICC ES PMG	
NSF International info.nsf.org/Certified/dwtu/listings_leadreduction.asp	NSF · NSF Certified to NSF/ANSI 61 · NSF-61-372 · NSF-61-G · NSF-372 · NSF pw-G	
UL www.ul.com/services/health-effects-testing-and-certification-drinking-water-system-components	UL Certified File No. · UL · UND. LAB. CLASSIFIED · UND. LAB. CLFD	
IAPMO R&T, Inc. www.iapmo.org/rt/marks-of-conformity	UPC® · IAPMO R&T · UPC®	
Intertek www.intertek.com/building/plumbing/	Intertek · Intertek	
Truesdail https://www.truesdail.com/product-certification/		
WQA https://wqa.org/grow/product-certification/	WQA · NSF/ANSI 372 by WQA	

Certification mark images are from the U.S. Environmental Protection Agency's factsheet: 'How to Identify Lead Free Certification Marks for Drinking Water System & Plumbing Products' (nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100LVYK.txt). Label images are from Safeplumbing.org (https://www.safeplumbing.org/advocacy/health-safety/low-lead-faucet).

Step 5. Shut off your water.

You can find the water shutoff valves in the cabinet below the sink. Use your fingers to twist both the hot water AND cold water supply lines to the "off" position. Make sure you also know where the building's main water shut-off valve is before you begin. If you are dealing with old, rusted, or brittle pipes it is a good idea to shut off the water in the whole building before attempting to remove the old faucet.

TIP: Sometimes the shutoff valves can get stuck or rusted, which can make them difficult to budge. If that happens to you, get a hair dryer and apply some heat to the valve. That should loosen the valve enough that you can close it by hand. Don't use tools like wrenches to try to close the valve: if you put too much twisting pressure on it, it could break. If you're still having trouble, shut off the building's main water valve before you go any further.

Water shut off valve in the "on" position. When valve is parallel with pipe (like in the image), water is "on." If pointing away from the pipe, water is "off."

Step 6. Remove the old faucet and supply hoses.

Removing the old faucet can be the trickiest part of the process. The space under the sink is often narrow and dark. You'll need a work light and an adjustable wrench to loosen the nuts.

TIP: The nuts can often be stuck or rusted. Try brushing away as much corrosion as possible with a wire brush. Then, spray on some WD-40. That will help dissolve the corrosion and make the nuts easier to turn. If you're still having trouble loosening the nuts, it may be time to call a professional.

Step 7. Install the new faucet and supply hoses.

Once the old faucet is out, installing the new faucet and supply hoses is the easy part. Follow the video or written instructions that come with your new faucet to learn how to install it. Use thread seal tape on the pipe fittings to prevent leaks. After you are finished installing the new faucet, turn the water back on and check for leaks. You may need to tighten the fittings underneath the sink or add more plumber's tape to the pipe threads.

Step 8. Flush the new faucet

Even certified lead-free faucets need to be broken in to make sure that any trace amounts of lead used in the manufacturing process are rinsed from the inside surface of the faucet. It is recommended that you allow for three weeks of flushing before using the water for drinking or cooking purposes or before sampling for lead. Immediately after installing, flush the hot and cold water lines for 10 minutes. Then run the water for at least 30 seconds 4 times per day during the three week break in period.

More resources

Check out our other Get the Lead Out flyers

- Checking for Lead Service Lines [bit.ly/CWUSK-LSL]
- How to Choose a Water Filter to Remove Lead [bit.ly/CWUSK-Filters]

U.S. Environmental Protection Agency's 'How to Identify Lead Free Certification Marks for Drinking Water System & Plumbing Products'

https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100LVYK.txt

More Information

This informational flyer was developed for RTI International's Clean Water for US Kids™ program.

Clean Water for US Kids
www.cleanwaterforUSkids.org/

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GET THE LEAD OUT

Lead and Galvanized Steel Service Lines

No safe level of lead in drinking water

The impact of early childhood exposure to lead lasts a lifetime. No level of lead exposure is considered safe for children—even small amounts cause reduced IQ, attention difficulties, and underperformance in school. Adults can also experience health effects from exposure to lead, including kidney problems and high blood pressure.

Why are lead and galvanized steel service lines a problem?

In the past, lead was used because of its abundance, low cost, and corrosion resistant properties. Lead was used for many years as the main component in service lines in some parts of the country. Unfortunately, records are not available for all locations where lead pipes were used in our nation's infrastructure.

Water treatment plants can add minerals to the water to form a protective layer in the pipes, which helps prevent the water from pulling lead from pipes. However, even with corrosion control, lead service lines can still contribute to lead in tap water.

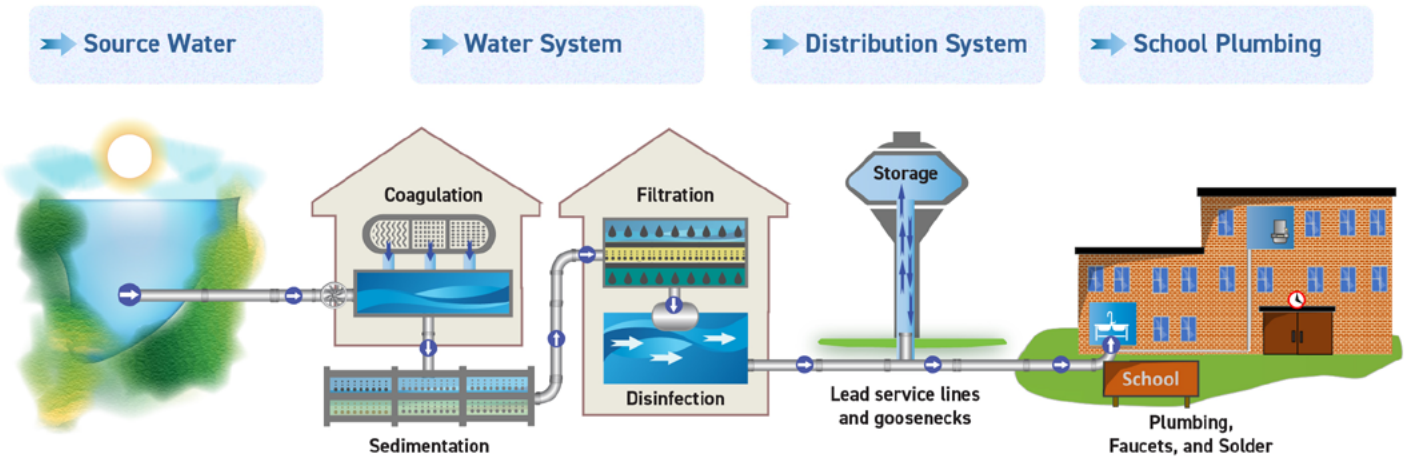
Galvanized steel pipes can also be a source of lead. The zinc coating of galvanized steel pipes can contain some lead. In fact, during the early 1900s some galvanized steel pipes were coated inside with lead instead of zinc. In addition, lead can accumulate on the interior surface of galvanized steel pipes that are or have ever been downstream of lead pipes.

How does lead get into drinking water?

Lead in drinking water generally comes from components of the pipes, plumbing, solder, and fixtures. Lead can get into water from water infrastructure that contains lead, particularly if the water is corrosive, or if the water sits for a long time in the pipe or fixture.

What is a service line?

This is the pipe that connects your home or building to the main water line coming from your water utility or your private well.



Lead in drinking water is not typically found at the source or in the water system (also known as water utility facility or public water supply plant). Any lead that gets into the water is typically from building plumbing or service lines, or distribution pipes (the pipes that bring water from the utility to your building). If your building is served by a private well, the private well components could also be a source of lead.

Do I have lead service lines, galvanized steel service lines, or goosenecks?

Lead service lines, galvanized steel service lines, and goosenecks were used in many parts of the country to connect water mains coming from the water treatment plant to home or building plumbing. Water system records do not always identify the locations of lead service lines. However, you can check for lead service lines on your property yourself.

Checking for lead and galvanized steel service lines

To check for lead service lines on your property, you'll need a metal tool, such as a screwdriver, and a magnet.

What is a gooseneck?

A gooseneck or pigtail is a short piece of lead pipe that was used to connect the water main to customer's service lines.

Step 1. Locate Where the Water Line Enters the Building

Depending on where you live, this can be in the basement or lowest level, near the water meter. In other locations, the water meter and valve may be in an underground box, near the street. Once you locate your inlet, you can identify the inlet valve going into the building.

Step 2. Scratch off Rust or Corrosion on the Outside of the Pipe

Find a place to examine the pipe that goes into the building. If there is a covering around the pipe, uncover or unwrap the pipe first.

If the pipes are made of plastic, you can stop here.

If the pipe material is not easily visible because of rust or corrosion, use the metal tool to scrape off a section of that rust or corrosion large enough to see what is underneath, and to be able to touch the magnet to the pipe.

Step 3. See if the Magnet Sticks to the Pipe

If the **magnet sticks, the pipes are most likely galvanized steel**, which is typically a dull gray, or iron, which is typically a reddish, brown color when rusted. A magnet will not stick to lead or copper pipes.

IMPORTANT!

If the magnet sticks, this is not a lead pipe. However, galvanized steel or iron pipes could have lead lining on the inside.

Step 4. If the Magnet Does Not Stick, Check the Color of the Pipe

If the magnet does not stick, the pipes must be lead or copper. You can distinguish between these by the color (both are typically shiny):

Lead pipe is silver or gray.

Copper pipe is the color of a penny or may be green like the Statue of Liberty.

If you are not comfortable completing these steps or suspect you have lead or galvanized steel pipes, we suggest you consult a plumber for verification.

If you found plastic or copper pipes at this location, you made important progress in narrowing down the possible sources of lead in water. However, this does not confirm the composition of all piping and plumbing leading to your tap. Finding the source of lead is a complicated process that can involve the building owner/resident, a plumber, public utility staff, and state or county environmental health specialist.

See https://www.lslr-collaborative.org/identifying-service-line-material.html for more information and sample photos.

What to do if I have lead or galvanized steel service lines

- Contact your utility to discuss the process of replacing a service line and to learn about any programs already underway. Recent changes to the U.S. Environmental Protection Agency's Lead and Copper Rule require water utilities to replace 3% of their lead service lines annually.
- Full lead service line replacement can be costly ($2,400-$7,100[1]), check in with your local health department and utilities to see if there is any funding support.
- In the meantime, take measures to minimize the lead in water used for drinking and cooking, for example, by using a water filter certified to remove lead.

Testing recommendations

Regardless of what pipe material you find, you should test the water at all your cooking and drinking taps for lead. Lead in water can vary from tap to tap, even if you do not have lead service lines. Child care centers, schools, and households should test water for lead at least every three years, and after any changes are made to the water supply or renovations done on the building. The only way to identify whether lead is in your water is to test it at the tap.

More information

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More resources

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Check out our other Get the Lead Out flyers

- **No-cost and Low-cost solutions to eliminate lead at the tap in drinking and cooking water** (https://www.cleanwaterforuskids.org/cms/documents/6/LeadWaterSolutions.pdf)
- **How to Choose a Water Filter to Remove Lead** (https://www.cleanwaterforuskids.org/cms/documents/5/Get_The_Lead_Out.pdf)

- **Lead Service Line Replacement Collaborative** (https://www.lslr-collaborative.org/)
- **Interactive app from NPR on identifying lead service lines** (https://apps.npr.org/find-lead-pipes-in-your-home/en/#intro)
- **Step-by-step guide to identifying lead pipes, from the U.S. EPA** (https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead-0)

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[1] US Environmental Protection Agency. (October 2019) Economic Analysis for the Proposed Lead and Copper Rule Revisions. https://www.regulations.gov/document/EPA-HQ-OW-2017-0300-0003