

Ensuring Drinking Water Quality in Schools During and After Extended Closures



3Ts: TRAINING, TESTING, TAKING ACTION

Developed in collaboration with the signatory agencies and organizations of the Memorandum of Understanding (MOU) on Reducing Lead Levels in Drinking Water in Schools and Child Care Facilities: <https://www.epa.gov/ground-water-and-drinking-water/mou-reducing-lead-levels-drinking-water-schools-and-child-care>.

The purpose of this factsheet is to 1) provide guidance to schools on maintaining drinking water quality during extended closures, and 2) recommend start-up procedures when reopening to ensure that drinking water is safe for consumption.

When a school closes for an extended period (i.e., one week to several months), the water in the building's plumbing will become stagnant. The water may become unsafe for drinking, cleaning, cooking, or other purposes.

Stagnant water in plumbing may:

- Support growth of bacteria, such as *Legionella*, or other microorganisms that can cause disease, and
- Have higher levels of metals, such as lead and/or copper from the building plumbing components.

This factsheet is part of EPA's *3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities (3Ts) Toolkit*, referenced in **Important Resources**. This factsheet includes information for schools that are served by or are public water systems (PWSs). Schools that are PWSs have their own water supplies and are regulated by the EPA. This factsheet also includes considerations for lead sampling after extended closures.

INFORMATION ABOUT EXTENDED CLOSURES FOR SCHOOL FACILITY MANAGERS

What can schools do while they are closed to maintain water quality?

Completing the following steps during closures may help to avoid more complicated start-up procedures when reopening. Many of these steps are routine procedures that should be part of normal operations. EPA's 3Ts Toolkit Module 6 includes additional information about establishing routine practices. See **Important Resources**.

Know Your Plumbing

To maintain water quality, you need to know how water enters and flows through your facility. EPA's 3Ts Toolkit Module 4 provides examples of building plumbing configurations. Additionally, the U.S. Centers for Disease Control and Prevention (CDC) Water Management Program Toolkit provides guidance on how to understand and describe your building's water system. See **Important Resources** for links to both toolkits.



Consider Contacting a Water Professional

The instructions in this factsheet are necessary for the health and safety of children, staff, and other building occupants. However, they include technical content. Consider speaking with a water professional for assistance. Visit your water provider’s website for more information or contact them to find out if your facility may be served by a lead service line.

Closures also present a good opportunity to have a qualified plumber inspect the plumbing. For example, a qualified plumber can:

- Help you determine your plumbing configuration,
- Ensure that the plumbing is functioning properly and in good condition,
- Confirm that there are no cross-connections between your drinking water system and water that is not safe to consume, or non-potable water,
- Check for lead or galvanized service lines, and
- Identify any older faucets that are more likely to contain lead.



Flush Your Plumbing System

Routinely flush all water outlets used for drinking or food preparation. This is particularly important after weekends and during long vacations. The longer water has been sitting in pipes, the more lead it may contain. “Flushing” involves opening valves and letting faucets run long enough to remove standing water in the interior pipes and/or the outlets. It is important to know your plumbing, as described above, because flushing times vary based on the plumbing configuration in your facility. EPA’s 3Ts Toolkit Module 6 provides flushing best practices and guidance for developing a flushing plan. In addition, EPA’s Guidance on Buildings with Low or No Use addresses flushing.

See **Important Resources**.



Document Actions

Any steps taken to prevent standing water and maintain water quality in the school should be documented. This will help determine if and what steps are needed when reopening. Documenting actions may also be useful in communicating actions to students, parents, and staff upon reopening.



Consider Developing a Water Management Program

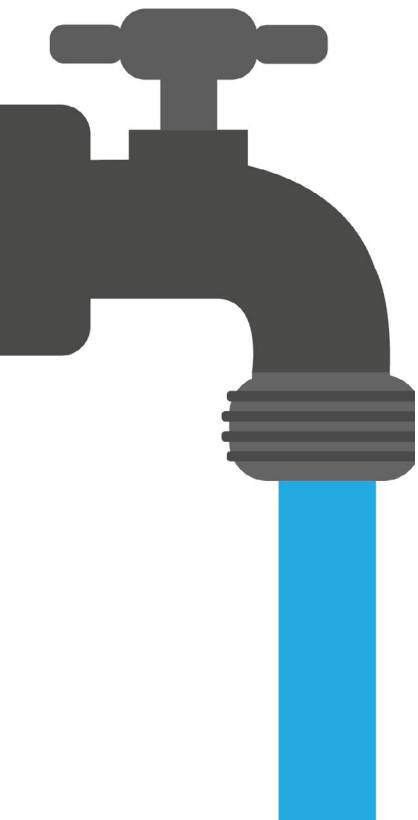
CDC provides a toolkit on creating a water management program (WMP) to reduce the risk of *Legionella* growth. A WMP specific to your school can help maintain drinking water quality in your plumbing system. See **Important Resources**.



Maintain Water System Components

Cleaning faucets and drinking water fountains should be a routine practice that continues during extended closures. The following activities should be conducted to maintain water system components:

- Remove and clean all aerators (or faucet screens) and drinking water fountain strainers often and before flushing,
- Replace any worn or damaged aerators with new ones before placing them back on outlets after cleaning or flushing,
- Maintain any water treatment systems in use, which may include point-of-entry or point-of-use filters or water softeners,
- Maintain filters per manufacturer’s instructions as routine practice (for more information on selecting filters, please see EPA’s consumer tool referenced in **Important Resources**), and
- Keep cold water cold and hot water hot. CDC recommends keeping water outside the range for *Legionella* growth, which is 77°F to 108°F. It is important to maintain water heaters at appropriate temperatures while following local and state anti-scald regulations. See **Important Resources** for CDC’s guidance on *Legionella*.



What drinking water start-up procedures should schools conduct when reopening after an extended closure?

Some schools may not be able to conduct the best practices described above during extended closures to maintain water quality. These schools should conduct the following steps to prepare the drinking water system before water is used by anyone, including students, staff, and others who occupy the building. Schools that were able to conduct the best practices described above during extended closures may not need to conduct all of the following steps. These steps provide additional precautions when reopening. EPA and CDC both have guidance on restoring water quality after extended closures. See [Important Resources](#).



Check Local Requirements

Contact your local health department for any steps they might require before reopening. Your local health department and water supplier may have information on additional water testing for bacteria and/or lead.



Consider Additional Actions

You should review the potential impact of poor water quality caused by the extended closure on students, staff, and other building occupants. You may want to consider taking additional actions. These may include limiting access to certain outlets, contacting a water professional, or developing a WMP. Factors to consider include outlets used for consumption and past issues with the plumbing system. EPA's [Guidance on Buildings with Low or No Use and 3Ts Toolkit Module 6](#) provide guidance for recommended additional actions. See [Important Resources](#).



Conduct Facility-Wide Flushing

Flushing removes stagnant water before anyone drinks it. EPA recommends flushing after extended breaks to maintain or restore water quality. Before flushing, the plumbing should be inspected, and water treatment systems should be maintained. Follow the steps in the previous section above: [Know Your Plumbing](#), [Flush Your Plumbing System](#), and [Maintain Water System Components](#).



Document and Communicate Actions

If any issues arise with the school's water system or water quality, communicate with students, parents, staff, and other building occupants. You should also consider sharing actions taken to maintain or restore water quality.

INFORMATION FOR SCHOOLS THAT ARE WATER SUPPLIERS

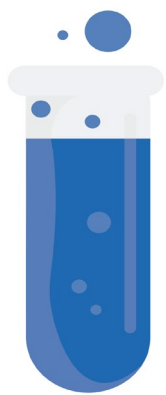
Schools that have their own water supply and/or treat their supply are regulated under the Safe Drinking Water Act (SDWA) - as non-community water systems (NCWSs).

If your school is a NCWS that continued drinking water operations during a school closure, then you should follow the steps above to maintain water quality during the closure.

NCWS schools that shut down operations

Under the EPA's Revised Total Coliform Rule (RTCR), there are required start-up procedures for seasonal systems that shut down during operating seasons. This applies to schools that are NCWSs and shut down over breaks (e.g., during summer months). Contact your state drinking water agency for details on the specific steps that are required in your area. The EPA RTCR State Implementation Guidance recommends the following start-up steps, some of which are similar to those above. See [Important Resources](#) for EPA's RTCR Implementation Guidance and [Template Factsheets for Primacy Agencies \(Requirements for Seasonal Systems\)](#).

- Inspect water system components and address any issues.
- Open hydrants and/or faucets.
- Drain storage facilities.
- Activate the source(s) and flush the entire system.
- Disinfect the water system.
- Collect water samples and have them tested for bacteria and chlorine.
- Contact your primacy agency for a site visit.



Water that has been sitting for weeks or months may have higher levels of metals, such as lead and/or copper from the building plumbing components. The most common sources of lead in drinking water are lead pipes, faucets, and fixtures.

There is no safe blood lead level in children. The best way to know if there is lead in drinking water is to test for it. Starting in 2019, states began receiving federal funding under the Water Infrastructure Improvements for the Nation (WIIN) Act to conduct a voluntary program to assist with testing for lead in drinking water at schools and child care facilities. See [Important Resources](#) for EPA's WIIN Lead Testing Grant Program.

Test your water for lead.

If you are served by a water utility, they may test your water upon request. You may also contact laboratories certified to test for lead in water. See [Important Resources](#) below for information on how to find these laboratories.

Perform sampling at appropriate locations and times.

EPA's 3Ts Toolkit Module 4 recommends collecting lead samples that represent water typically consumed by students, teachers, staff, and other facility occupants. *Water that has been sitting stagnant for weeks or months (i.e., during extended periods of closure) is not considered representative of typical drinking water.*

Do not conduct sampling immediately after an extended closure or immediately after flushing your facility's plumbing.

These samples would not represent typical water consumption. Ensure that you plan ahead to sample at an appropriate time before serving water to students, teachers, staff, and other facility occupants. EPA's 3Ts Toolkit Module 5 provides information on lead sampling and understanding results. See [Important Resources](#) below.

IMPORTANT RESOURCES (in order of appearance)

This factsheet builds on EPA's continued efforts to provide proactive steps to protect children's health. More guidance on actions "building water systems" can take to minimize water stagnation during prolonged shut down of operations can also be found on the [EPA](#) and [CDC](#) coronavirus websites.

EPA's 3Ts Toolkit for Reducing Lead in Drinking Water in Schools and Child Care Facilities (Modules 1-7): <https://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water-toolkit>

- Modules 4, 5, and 6 are referenced in this factsheet. The link provided will bring you to the 3Ts Toolkit homepage where you can navigate to the 3Ts Manual and the individual modules.

CDC Water Management Program Toolkit: <https://www.cdc.gov/legionella/wmp/toolkit/index.html>

EPA's Information on Maintaining or Restoring Water Quality in Buildings with Low or No Use: <https://www.epa.gov/coronavirus/information-maintaining-or-restoring-water-quality-buildings-low-or-no-use>

EPA's Consumer Tool for Identifying POU Drinking Water Filters Certified to Reduce Lead: <https://www.epa.gov/water-research/consumer-tool-identifying-pou-drinking-water-filters-certified-reduce-lead>

CDC Guidance on *Legionella* for Building and Healthcare Facilities Owners and Managers: <https://www.cdc.gov/legionella/wmp/overview/growth-and-spread.html>

CDC Guidance for Reopening Buildings After Prolonged Shutdown or Reduced Operation: <https://www.cdc.gov/coronavirus/2019-ncov/php/building-water-system.html>

EPA's RTCR Implementation Guidance: <https://www.epa.gov/dwreginfo/total-coliform-rule-compliance-help-primacy-agencies>

Template Factsheets for Primacy Agencies (Requirements for Seasonal Systems): <https://www.epa.gov/dwreginfo/total-coliform-rule-compliance-help-primacy-agencies>

EPA's Water Infrastructure Improvements for the Nation Act Lead Testing in School and Child Care Program Grant: <http://www.epa.gov/safewater/grants>

EPA's National Accredited Laboratory List: <https://www.epa.gov/lead/national-lead-laboratory-accreditation-program-list>