EGLE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

Michigan Filter First Faucet Filter Guidance

Filtration for Classrooms or Other Necessary Locations Where a Filtered Bottle Filling Station Cannot Be Installed

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has prepared this guidance document to help schools and child care centers meet the requirements of Filter First. This document provides guidance on deciding which type of filtration device may best fit the needs of the school or child care center.

There are unique challenges associated with certain water fixtures within schools and child care centers. These challenges include but are not limited to areas where approved filtered bottle-filling stations cannot be installed but water is needed for consumption (preschool, kindergarten, or special needs classrooms, nurse's sink, etc.).

Point of Use Filtration for the Removal of Lead

The risk of lead exposure in the water depends on the presence of leaded material in the plumbing system and water stagnation. The typical water use in a school or child care center building lends to water stagnation. Leaded material is found in older building pipes, solder, components, and fixtures. Newer buildings may still contain leaded material in the fixtures (faucets and fittings manufactured prior to 2014 may contain up to eight percent (8%) leaded material and newly manufactured faucets can still contain a weighted average of up to zero-point twenty-five percent (0.25%) leaded material)[1].

Although EGLE recommends removing as much leaded material in the system as possible and replacing it with NSF/ANSI/CAN standard 61 Q≤1 ug for components safe to be in contact with drinking water, replacement of plumbing may not be achievable. Unless the water is constantly moving through the system to prevent stagnation, the risks of lead exposure remain. Because these risks are present, point of use filtration at fixtures used for consumption is an additional protection against lead exposure.

Water fixtures in a school or child care center that are used for consumption (drinking or food preparation including rinsing vegetables and fruits, preparing drinks or formula, etc.) must be filtered at the point of use. Schools and child care centers must decide what point of use filtration configuration is suitable for the needs of the facility, considering the benefits and challenges covered on the following page. All filters, no matter the configuration, must be included in the Drinking Water Management Plan for routine maintenance and cartridge replacement.

NOTE: Schools and child care centers classified as a public water supplier (noncommunity water system) must work with their local health department and local plumbing authority to ensure proper permits are obtained prior to any plumbing changes. If a noncommunity school or child care center already has approved Point-of-Use filters for another contaminant (e.g. arsenic), that filter must also meet Filter First requirements or a separate lead filter must be installed.

Per the Filter First requirements, every consumptive fixture must have a point of use filter that meets the NSF/ANSI standard 53 for lead reduction and NSF/ANSI standard 42 for particulate reduction. Additionally, each filtered consumptive fixture must be included on a filter maintenance schedule, ensuring regular inspection of the fixture and replacement of the filter cartridge per manufacturer instructions.

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[1] How to Identify Lead Free Certification Marks for Drinking Water System & Plumbing Products | US EPA

Filtration Options for Classrooms and Other Necessary Locations Where a Filtered Bottle Filling Station Cannot Be Installed

OPTION 1: Designate faucets needed for food and drink preparation as consumptive fixtures and install a faucet mounted filter meeting the NSF/ANSI standards 53 and 42.

Benefits of Faucet-Mounted Filters:

- Effective if used and maintained properly.
- Convenient.
- Filters water at the end of the faucet.

Challenges of Faucet-Mounted Filters:

- Potential for unintentional misuse, tampering, or vandalism.
- May be bypassed, thus delivering unfiltered water to a child.
- May be damaged if hot water flows through the filter.
- May not fit the faucet.
- May require more frequent cartridge replacement.

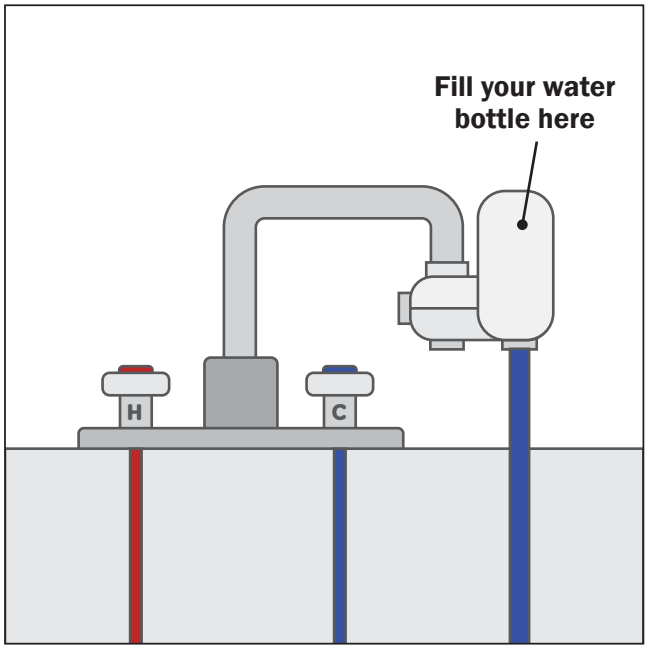

Figure 1: Faucet with faucet-mounted filter meeting the NSF/ANSI standard 53 for lead reduction and the NSF/ANSI standard 42 for particulate reduction installed.

OPTION 2: Designate faucets needed for food and drink preparation as consumptive fixtures and install an in-line filter meeting the NSF/ANSI standards 53 and 42.

NOTE: The in-line filter must be installed upstream* of post-2014 "lead-free" plumbing materials and fixtures that meet NSF/ANSI/CAN standard 61 Q≤1 ug for components safe to be in contact with drinking water.
*Components downstream of the in-line filter include the connective pipe, valves, fittings, faucet, and bubbler.

Benefits of In-Line Filters:

- Effective if used and maintained properly.
- Convenient.
- Filters water at the point of use.
- Lower potential for unintentional misuse, tampering, or vandalism.
- Cold water is always filtered.
- Hot water does not pass through the filter causing potential damage.
- May be used to filter classroom sink bubblers.
- Larger filters allow less frequent cartridge replacement.

Challenges of In-Line Filters:

- May be ignored if out of sight.
- Does not filter water in contact with plumbing materials/fixtures downstream of filter.

NOTE: Current EGLE guidance may change if or when new technology becomes available. **Remember, in-line filters may only be used upstream of post-2014 "lead-free" plumbing materials and fixtures that meet NSF/ANSI/CAN standard 61 Q≤1 ug for components to be safe in contact with drinking water.**

Mandatory sampling (annually for schools and every 2 years for child care centers) will assist in the identification of filters and maintenance plans that are ineffective and help to identify fixtures contributing to lead exposure risk. If the mandatory sampling of these fixtures results in persistent lead detections or any result over 5 parts per billion, the filter type in use will be evaluated as the lead exposure is mitigated.

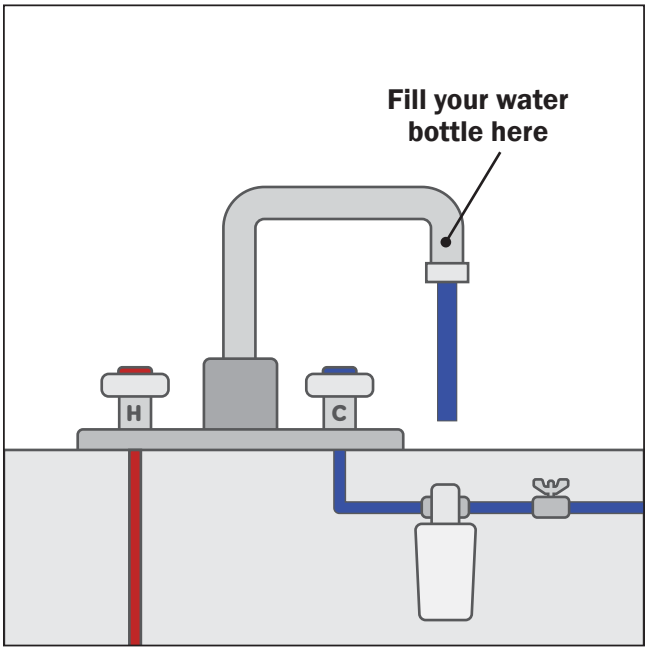

Figure 2: Faucet with an in-line filter meeting the NSF/ANSI standard 53 for lead reduction and the NSF/ANSI standard 42 for particulate reduction installed. Additionally, the faucet, connective piping, and fittings downstream of the filter meet the NSF/ANSI standard 61 Q≤ 1 ug for components to be safe in contact with drinking water.

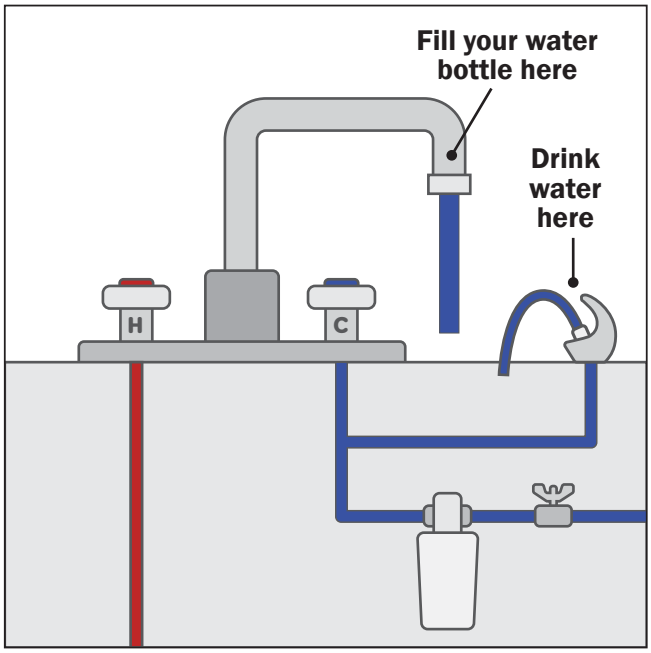

Figure 3: Faucet and bubbler with an in-line filter meeting the NSF/ANSI standard 53 for lead reduction and the NSF/ANSI standard 42 for particulate reduction installed. Additionally, the faucet, bubbler, connective piping, and fittings downstream of the filter meet the NSF/ANSI standard 61 Q≤ 1 ug for components to be safe in contact with drinking water.

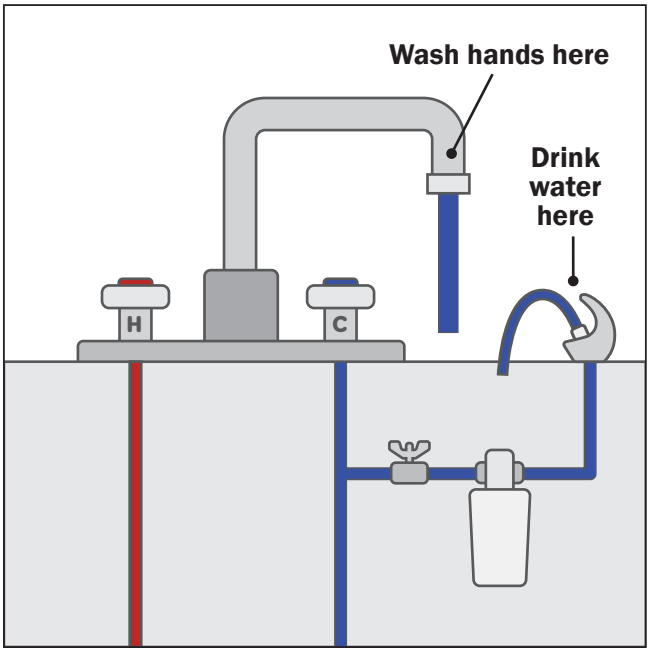

Figure 4: Bubbler with an in-line filter meeting the NSF/ANSI standard 53 for lead reduction and the NSF/ANSI standard 42 for particulate reduction installed. Additionally, the bubbler, connective piping, and fittings downstream of the filter meet the NSF/ANSI standard 61 Q≤ 1 ug for components to be safe in contact with drinking water.