

Seattle/King County Water System Disinfection Procedures

Updated 11/21/2023

New or repaired potable water supply systems shall be disinfected prior to use

Applicability:

New & Repaired Potable Water Systems Only (see below for definitions)

Definitions:

New Potable Water System - A new water supply system installed within a newly constructed commercial building and connected for the first time to a new building supply line and new water purveyor's service line.

Repaired Potable Water System - An existing water supply system within an existing building using an existing building supply line and utility water meter wherein all or nearly all of the existing water supply piping is removed and replaced in kind with new piping material in a like-for-like manner (i.e. Re-Pipe) either with or without the removal or replacement of existing like-for-like plumbing fixtures in the same locations.

Notes:

1. A plan reviewed project having an existing building supply line that is connected to a newly constructed water supply system within a building (not a Re-Pipe) may be required to perform a disinfection procedure at the discretion of Public Health if the project is deemed to be an extensive remodel or change of use.
2. System disinfection is not required for single-family residences (including townhomes & ADU/DADU), tenant improvement work in an existing building with multiple tenant spaces and an existing shell/core plumbing system, or any project that has not gone through Plan Review.

Disinfection, Flushing, and Testing Procedures (New Construction / Unoccupied):

- A. Flush and chlorinate water system in accordance with UPC/SPC Section 609.9 Items #1 & #2 using an adjusted concentration of 20 ppm. Chlorine fill port must be located where the water supply enters the building. Chlorine solution must be administered through a flow meter to measure solution volume. After water-chlorine solution is incorporated into the new or repaired water supply system a minimum 24-hour waiting period must be observed prior to flushing.
Note: The 3-hour high-concentration option noted in UPC/SPC Section 609.9 Item #2 is not an allowable option within this jurisdiction.
- B. After the 24-hour waiting period, flush system with clean potable water in accordance with UPC/SPC Section 609.9 Item #3.
- C. After flushing, chlorine residual levels in the new or repaired water supply system shall be not less than the mean average chlorine residual of the water purveyor's source supply within the project service area and shall not exceed the EPA limit of 4 mg/L. All chlorine residual levels shall be measured using a calibrated digital chlorine meter (not test strips).

- D. Wait at least 36 hours before collecting bacteriological water quality samples from fixtures. Bacteriological testing shall be conducted by a laboratory certified for drinking water in Washington State affirming water quality contains no coliform by sample testing the furthest fixture from the public water source and not less than two other locations in different parts of the water supply system.

Alternate Flushing and Testing Procedures (Re-Pipes / Occupied Buildings only):

- A. Flush water system in accordance with UPC/SPC Section 609.9 Item #1.
- B. After flushing, chlorine residual levels in the new or repaired water supply system shall be not less than the mean average chlorine residual of the water purveyor's source supply within the project service area and shall not exceed the EPA limit of 4 mg/L. A calibrated digital chlorine meter (not test strips) shall be used to measure residual chlorine levels at each fixture outlet. Two separate tests shall occur at fixtures supplied with both hot and cold water (one test flowing cold water only, the other test flowing hot water only).
- C. Plumbing permit applicant shall maintain records of system flushing and chlorine test results to present to plumbing field inspector upon request. Records shall include the name of the person(s) that conducted the test and flush procedure as well as the date and time of each step of the process.

Note: Plumbing permits for projects requiring disinfection and lab testing will not be approved for final inspection until disinfection process is conducted and lab test shows building water supply meets drinking water quality standards. Your inspector may ask for proof of disinfection and/or flushing and test procedure records prior to final inspection.

Use this website to obtain average mean chlorine levels at a specific location within Seattle:

<http://www.seattle.gov/utilities/your-services/water/water-quality/quality-concerns>

Or, contact Seattle Public Utilities / (206) 615-0827