



TOWN OF FRISCO WATER DIVISION

January 29, 2024

Public Water System ID: CO0159055

System Name: Town of Frisco

Town of Frisco Lead Control Program Update

Installation of Corrosion Control Treatment Systems

The Town of Frisco completed the installation of a Corrosion Control (CCT) system at all four (4) water sources by July 1, 2022. The first treated water was delivered on February 14, 2022 at two (2) of the water sources, while the other two were being outfitted simultaneously. The third water source came online by June 1, 2022, and the last and final was on July 1, 2022.

There are several different chemical and mechanical methods a water system, such as the Town of Frisco system, can use for CCT, and each water system determines the best method available to reduce lead. Currently, 156 systems in Colorado have pH adjustment in their treatment plants for various uses, not just for corrosion control. The corrosion control system that the Town of Frisco has installed at each of Frisco's four water sources has adjusted the pH of the water by adding small, metered amounts of sodium hydroxide into the system. This CCT has made Frisco's water more neutral to slightly alkaline to prevent the lead and copper from dissolving into the water when in contact with fixtures and/or pipes in individual buildings; the Town's targeted operating pH range was determined to be a pH of above 7.6 and below 8.5. Target alkalinity is above 51.

Using Sodium Hydroxide for Corrosion Control

Sodium hydroxide is used in a variety of manufacturing processes for many products, including medicines and pharmaceutical products like aspirin, anticoagulants, and cholesterol-reducing medications. Sodium hydroxide is also used in several food-processing applications, such as curing foods, removing skins from fruits and vegetables for canning, or as an ingredient in food preservatives that help prevent mold and bacteria from growing in food.

Municipal water treatment facilities, including [Denver Water](#) and [Dillon](#), already use sodium hydroxide to control water acidity and to help remove heavy metals, and the Town of Frisco already uses this substance for cleaning out water system filters.

There has not been a difference in the taste or smell of your Town of Frisco water.

Recent Lead and Copper Testing Results

Since the beginning of 2022 Frisco Water has been compliant with the Colorado Department of Health and Environment (CDPHE) lead and copper levels in the testing results.

All of Frisco's main water lines are constructed out of ductile iron, and all service lines (from the main line to homes) are either copper or galvanized; not lead.

- New state and federal laws are requiring water providers to inventory all water service lines in their service area to confirm the material the service line is made of.

What are the maximum allowable levels of lead in drinking water?

In 1991, the maximum allowable lead levels in drinking water went from fifty (50) parts per billion (ppb) to fifteen (15) parts per billion (ppb) measured at the tap. Starting in 2025, there will be a new trigger level for lead levels which is set at ten (10) parts per billion (ppb).

What is a part per billion (ppb)?

One part per billion = 1 ug/L (microgram per liter).

This amount is equal to:

- One drop of ink in a backyard swimming pool
- One grain of sand in a child's sandbox
- One second in 32 years

Where, when and how is testing done for lead?

- As of 2018 in a water service area of Frisco's size, 40 homes/buildings must be tested every six months, as opposed to the previous requirement to test in 10 homes/buildings every three years.
- Homes/buildings are selected for testing based on tiered selection criteria and must have been constructed from 1983 to 1987.
- Most home/building residents collect their own samples, after receiving instructions from the water provider. Samples must be cold water from an inside faucet that is used regularly for drinking water, but that has not been used in the previous six (6) hours at a minimum. The faucet, where samples are taken, may not be connected to any type of personal water treatment system.
- Any homeowner in Frisco can request free lead and copper testing if their residence was built before 1987.

What are the health effects associated with lead exposure?

Lead can cause serious health problems, especially for pregnant women and young children. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

What are the sources of lead?

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, food, and cosmetics. Other sources include exposure in the workplace and exposure from certain hobbies (lead can be carried on clothing or shoes). Don't forget about other sources of lead such as lead paint, lead dust, and lead in soil. Wash your children's hands and toys often as they can encounter dirt and dust containing lead.

How does lead get into drinking water?

Lead in drinking water typically comes from the corrosion of household plumbing materials. Lead solder was used in household plumbing until 1987.

Brass faucets, fittings, and valves, including those advertised as "lead-free", may contribute lead to drinking water. Until 2014, the allowed end-use brass fixtures, such as faucets, with up to eight percent lead to be labeled as "lead free". Currently, plumbing fixtures labeled National Sanitation Foundation (NSF) certified may only have up two percent lead. Consumers should be aware of this when choosing fixtures and take appropriate precautions.

When water is in contact with pipes or plumbing that contains lead for several hours, the lead may enter drinking water. Homes built in or before 1987 are more likely to have plumbing containing lead. New homes may also have lead; even “lead-free” plumbing may contain some lead. EPA estimates that 10 to 20 percent of a person’s potential exposure to lead may come from drinking water. Infants who consume mostly formula mixed with the lead-containing water can receive 40 to 60 percent of their exposure to lead from drinking water.

Steps you can take to reduce your exposure to lead in your water

Please read this information closely to see what you can do to reduce lead in your drinking water.

- 1) Run your water to flush out lead. If it hasn’t been used for several hours, run the cold water tap until the temperature is noticeably colder. This flushes lead-containing water from the pipes. To conserve water, remember to catch the flushed tap water for plants or some other household use (e.g. cleaning).
- 2) Always use cold water for drinking, cooking, and preparing baby formula. Never cook with or drink water from the hot water tap. Never use water from the hot water tap to make formula.
- 3) Do not boil water to remove lead. Boiling water will not reduce lead.
- 4) Periodically remove and clean the faucet’s strainer/aerator. While removed, run the water to remove debris.
- 5) You may consider investing in a home water treatment device or alternative water source. When purchasing a water treatment device, make sure it is certified under Standard 53 by NSF International to remove lead. Contact NSF at 1-800-NSF-8010 or visit www.nsf.org. You may also visit the Water Quality Association’s website at www.wqa.org.
- 6) Test your water for lead. A list of certified laboratories is listed at www.colorado.gov/cdphe/dwlab.
- 7) Get your child’s blood tested. Contact your local health department (970-668-9161) or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.
- 8) Identify and replace plumbing fixtures containing lead. Brass faucets, fittings and valves, including those advertised as “lead-free,” may leach lead into drinking water. The NSF website at www.nsf.org has more information on lead-containing plumbing fixtures. You should use only lead-certified contractors.
- 9) Have a licensed electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electric code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

What happened and what is being done?

Corrosion Control Systems

- The last time, The Town of Frisco exceeded the 90th percentile action level for lead was in the second six (6) month testing cycle for 2021.
- The Town of Frisco water division has performed water quality parameter testing to analyze the water chemistry for all water sources, every two weeks, starting February 14, 2022 through July 30, 2023. These tests have not shown exceedance of permitted lead and copper levels.
- Treated drinking water within the distribution system was also tested twice in a six month period. Frisco Water compared the results from the samples collected in order to optimize the Corrosion Control processes.
- CDPHE has established the target pH and alkalinity range for each individual water source and distribution system water in the Town of Frisco. The Frisco Water Division is monitoring pH continuously and/or daily and has started measuring alkalinity on a bi-weekly basis to confirm the target range has been achieved.

Lead and Copper Testing

- Lead and copper monitoring will continue every six months for the 40 individual homes/buildings in the Town of Frisco, which are part of the sampling pool.
- As needed, public outreach and education to all water users, including parents of children attending daycares and schools in Frisco, healthcare facilities, and all residents, will continue to ensure that awareness of testing outcomes and next steps are well publicized and understood.
- Since 2023, CDPHE is requiring all schools and licensed daycare facilities to test for lead and copper. The Town of Frisco had been doing this testing in schools and licensed daycare facilities before it was required.

Town Programs for Water Customers

- The Town continues to offer the [Start at the Tap fixture rebate program](#), implemented in July 2019, to encourage homeowners to replace old fixtures in Frisco homes and buildings with WaterSense approved fixtures, which are more efficient and lead free.
- The Town is now also offering free lead and copper testing for homes/buildings built on and before 1987 in the Town of Frisco. Please email Town of Frisco Water Supervisor, Ryan Thompson, at RyanT@TownofFrisco.com to request a sampling kit.

More information

- Please visit FriscoGov.com
- Call or email Ryan Thompson, Water Foreman- 970-668-9156 and RyanT@TownofFrisco.com
- For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's website at www.epa.gov/lead or contact your health care provider.