

**Public Water System
ID CO0101115**



2021 ANNUAL WATER QUALITY REPORT

Water Testing Performed in 2020

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Presented By



GENERAL INFORMATION

NORTHGLENN is proud to present its Annual Water Quality Report covering the period between January 1 through December 31, 2020.

CONTACT INFORMATION

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Jason Hensel, Utilities Manager 303.450.4050
Water/Sewer Line Issues 303.280.7803
After Hour Water/Sewer Line Issues 303.451.1289
Utility Billing 303.450.8700

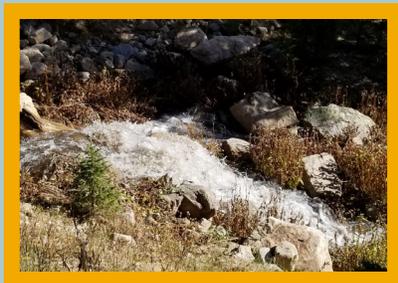
INTRODUCTION



Our mission is to provide you and your family with safe and reliable drinking water. Your high quality water starts with snowmelt sourced from the top of Berthoud Pass and concludes when it reaches your tap.

Through hard work and dedication, state licensed operators ensure your drinking water meets or is better than all state and federal drinking water standards. Investing in plant upgrades, new treatment technologies and operator continuing education ensures that the highest quality water is delivered to your home.

The Northglenn laboratory staff performs over 70,000 tests each year. The lab is state-certified for thirteen drinking water quality parameters. Water samples are collected and analyzed starting at our source water found in the mountains flowing through canals, rivers and lakes feeding through our raw water system into the treatment plant. Samples are also collected from the distribution system outside your home at the meter vault. About thirty different methods are run ranging from simple field measurements to complex organic analyses to ensure safe and reliable drinking water is served to our residents.



IMPORTANT HEALTH INFORMATION

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800.426.4791 or visiting EPA.org.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline 800.426.4791.



COMMUNITY PARTICIPATION

PARTICIPATION OPPORTUNITIES

Council Meetings are held on the 2nd and 4th Monday of the month at 7:00 pm at City Hall in Council Chambers. Residents have the opportunity to attend meetings and communicate directly to council with questions or concerns about their community. Agendas are available at northglenn.org. All Council meetings are televised on Channel 8 or can be viewed online.

Unable to attend a council meeting? Ward meetings are held regularly or you can directly contact your elected [Ward Council Members](#).

STORMWATER MANAGEMENT

Did you know that stormwater runoff is NOT treated, but flows directly into our streams?

The Stormwater Management Program works to reduce the amount of pollutants entering our streams, rivers, lakes and reservoirs. Oil, grease, fluids from vehicles, soil runoff during construction and other debris on the ground are just a few things that get washed away during storms and into the very water that we use for drinking and recreation.



Properly maintaining your vehicle, picking up after your pets and limiting use of lawn fertilizers and chemicals, are some of the ways you can help to reduce pollution.

Pet Waste Pollutes Our Watersheds!

Pet waste left on lawns does **not** fertilize grass. Bacteria in pet waste washes down storm drains into streams, traveling for miles, potentially entering drinking water down river.



You can make a difference in preventing stormwater pollution.

[Find Out How](#)

WATER REBATES



Rebates Include:

- ◆ Water-Efficient Toilets
- ◆ Water-Efficient Washing Machines
- ◆ Rotary Sprinkler Heads
- ◆ Irrigation Timers
- ◆ Rain Barrels
- ◆ Turf Replacement

Conservation Programs:

- ◆ Garden in a Box Program, offering discounts on water efficient garden kits
- ◆ Slow the Flow, offering free indoor and outdoor water use consultations

WATER CONSERVATION

Residents are encouraged to use water wisely. Here are a few easy to implement [conservation methods](#):

- ◆ Water your lawn only two days per week, especially during droughts. Your lawn will use water more efficiently, develop deeper roots, and become more tolerant to dry conditions.
- ◆ Water between 6 p.m. and 10 a.m. and break the amount of watering time into 2-3 shorter cycles. This will allow water to soak deeper into the soil between cycles. Watering during the heat of the day may cause you to lose up to 50% of your water application to evaporation.
- ◆ Regularly check your pipes, hoses, valves and faucets for leaks.
- ◆ Use a bucket to wash your car. Use a shut-off nozzle on the hose to save water when not actively in use.
- ◆ Use a broom to clean sidewalks, garages, patios and driveways instead of a hose.
- ◆ Use drought tolerant plants and grasses in your landscaping.
- ◆ Mulch your garden to reduce evaporation.
- ◆ Set your lawn mower one notch higher. Longer grass means less evaporation.
- ◆ Reduce your watering in the spring and fall. Lawns need less than one-third as much water in the spring and fall as it does during the summer.

Need more information on water rebates or conservation?

Visit northglenn.org

WATER SOURCE

STANDLEY LAKE: SURFACE WATER



Your water supply originates as runoff from snowmelt and rain in the Clear Creek Watershed. Water travels down Clear Creek then through a network of canals and ditches to Standley Lake where it is stored until treated.

Water Quality is monitored at each stage of the journey from Clear Creek to Standley Lake. As well as throughout the treatment process and the distribution system until high quality water is delivered to your home.

Drinking water sources are susceptible to contamination from a wide variety of natural and man-made origins. Improperly disposing of chemicals, animal wastes, pesticides, human wastes, wastes injected deep underground and naturally occurring substances can all contaminate drinking water. Potential contaminant sources for Northglenn include: anything likely to manufacture, produce, use, store, dispose, or transport regulated and unregulated contaminants of concern. These sources are divided into discrete or dispersed contaminate sources.

DISCRETE CONTAMINANT SOURCES

Generally, include facility-related operations from which the potential release of contamination would be confined to a relatively small area.

Potential discrete contaminant sources are identified as:

- ◆ Superfund Sites
- ◆ Abandoned Contaminated Sites
- ◆ Hazardous Waste Generators
- ◆ Chemical Inventory/Storage Sites
- ◆ Toxic Release Inventory Sites
- ◆ Permitted Wastewater Discharge Sites
- ◆ Aboveground, Underground, and Leaking Storage Tank Sites
- ◆ Solid Waste Sites
- ◆ Existing/Abandoned Mine Sites

SWAP

The Colorado Department of Public Health and Environment provides a [Source Water Assessment Report](#) for our water supply. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that **could** occur. It **does not** mean that the contamination **has or will** occur.

This information is used to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your home. Source water assessment results also provide a starting point for developing source water protection plans.



DISPERSED CONTAMINANT SOURCES

Generally, include broad-based land uses and miscellaneous sources from which the potential release of contamination would be spread widely over a relatively large area.

Potential dispersed contaminant sources are identified as:

- ◆ Commercial/Industrial/Transportation
- ◆ High Intensity and Low Intensity Residential
- ◆ Urban Recreational Grasses or Fallows
- ◆ Quarries/Strip Mines/Gravel Pits
- ◆ Row Crops
- ◆ Pasture/Hay
- ◆ Forests
- ◆ Septic Systems
- ◆ Oil/Gas Wells
- ◆ Road Miles

POSSIBLE SUBSTANCES IN WATER

LEAD IN DRINKING WATER

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing.

If you are concerned about lead in your water, you may wish to have your water tested. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking.

Additional information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the [EPA website](#) or the Safe Drinking Water Hotline 800.426.4791.

NO LEAD LINES are present in city owned and maintained systems.

Private residential or commercial lines running from the meter pit to houses or buildings, may be tested for lead at the individual owner's expense. Interested in testing for lead, contact John Winterton at 303.450.4074.

FLUORIDE IN DRINKING WATER



Fluoride, a mineral naturally present in source water, can be a benefit to dental health, with an optimal range of 0.7-1.2 mg/L. Many communities add fluoride to their drinking water to help promote good dental health. **The City of Northglenn does not add fluoride beyond what is naturally found in our source water.**

The EPA has set a maximum level for fluoride of 4 mg/L in drinking water. Some people who drink water that contains fluoride in excess of this level can be at risk for bone disease.

A secondary level of 2 mg/L has been set to help protect against dental fluorosis, which can cause stains and pitting in developing teeth. Children who are under 9 years of age should not drink water that has more than 2 mg/L of fluoride.

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the [Colorado Department of Public Health & Environment](#) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

The [Food and Drug Administration](#) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.



CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER:

Microbial Contaminants, such as pathogens and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations or wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff and septic systems.

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the Safe Drinking Water Hotline at 800.426.4791.

DETECTED CONTAMINANTS

The City of Northglenn routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show all detections found in the period of January 1 to December 31, 2020 unless otherwise noted. The State of Colorado requires the monitoring for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than one year old. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report.

Note: Only detected contaminants sampled within the last 5 years appear in this report. If certain results do not appear in this section then those contaminants were not detected in the last round of monitoring.

Disinfectants Sampled in the Distribution System

TT Requirement: At least 95% of samples per period (month or quarter) must be at least 0.2 ppm **OR** If sample size is less than 40 no more than 1 sample is below 0.2 ppm

Typical Sources: Water additive used to control microbes

Disinfectant Name	Time Period	Sample Size	Results	Number of Samples Below Level	TT Violation	MRDL
Chlorine	April 2020	51	Lowest period percentage of samples meeting TT requirement: 100%	0	No	ppm

Lead and Copper Sampled in the Distribution System

Contaminant Name	Time Period	Sample Size	90th Percentile	Unit of Measurement	90th Percentile AL	Sample Sites Above AL	90th Percentile AL Exceedance	Typical Sources
Copper	06/01/2020 to 07/14/2020	35	0.1	ppm	1.3	0	NO	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	06/01/2020 to 07/14/2020	35	2.3	ppb	2.3	0	NO	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection Byproducts Sampled in the Distribution System

Name	Year	Sample Size	Average	Range Low-High	Unit of Measurement	MCL	MCLG	MCL Violation	Typical Sources
Haloacetic Acids (HAA5)	2020	16	11.09	8.2 to 15.1	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalo-Methanes (TTHM)	2020	16	41.11	6.8 to 73.7	ppb	80	N/A	No	Byproduct of drinking water disinfection

Total Organic Carbon (Disinfection Byproducts Precursor) Removal Ratio of Raw and Finished Water

*If minimum ratio not met and no violation identified then the system achieved compliance using alternative criteria.

Contaminant Name	Year	Sample Size	Average	Range Low-High	Unit of Measurement	TT Minimum Ratio	TT Violations	Typical Sources
Total Organic Carbon Ratio	2020	12	1.1	1 to 1.25	Ratio	1.00	No	Naturally preset in the environment

Summary of Turbidity Sampled at Entry Point to the Distribution System

Contaminant Name	Sample Month	Level Found	TT Requirement	TT Violation	Typical Sources
Turbidity	Sept.	Highest Single Measurement: 0.077 NTU	Maximum 1 NTU for any Single Unit	NO	Soil Runoff
Turbidity	Dec.	Lowest Monthly Percentage of Samples Meeting TT Requirement for our Technology: 100%	In any month, at least 95% of the samples must be less than 0.3 NTU	NO	Soil Runoff

Inorganic Contaminants Sampled at Entry Point to the Distribution System

Contaminant Name	Year	Sample Size	Range Low-High	Average	Unit of Measurement	MCL	MCLG	MCL Violation	Typical Sources
Barium	2020	1	0.04 to 0.04	0.04	ppm	2	2	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	2020	1	0.39 to 0.39	0.39	ppm	4	4	NO	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories

Secondary Contaminants**

**Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

Contaminant Name	Year	Sample Size	Range Low-High	Average	Unit of Measurement	Secondary Standard
Sodium	2020	1	25 to 25	25	ppm	N/A

Unregulated Contaminants Present in the Distribution System***

EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not yet have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed this monitoring throughout 2018 and results are submitted and reviewed by EPA.

Once EPA finalizes review, the results will be made available in the EPA's National Contaminant Occurrence Database (NCOD), where consumers can access the data.

Contaminants that were detected during our UCMR4 sampling and the corresponding results are provided below.

Contaminants sampled at the entry point were all non-detects (including 10 cyanotoxins, 2 metals, 8 pesticides, 3 alcohols and 3 semi-volatiles).

Contaminant Name	Year	Sample Size	Range Low-High	Average	Unit of Measurement
HAA9 (includes the HAA5 already regulated, plus 4 additional brominated haloacetic acids) <i>Tested Every 5 Years—Next Test Year 2023</i>	2018	16	19.7 to 28.4	22.5	ppb

*More information about contaminants that were included in UCMR monitoring can be found at:

drinktap.org/Water-Info/What's-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR.

Learn more about EPA UCMR at: epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule

Contact the Safe Drinking Water Hotline at (800) 426-4791 or water.epa.gov/drink/contact.cfm.



Violations, Deficiencies, Enforcement

Backflow and/or Cross-Connection Health-Based Violations

We have an inadequate backflow prevention and cross-connection control program. Uncontrolled cross connections can lead to inadvertent contamination of the drinking water.

MAXIMUM CONTAMINANT LEVEL (MCL) VIOLATION

- Test results for this contaminant show that the level was too high for the time period show.
- This is likely the same violation disclosed in 2020.
- Evaluations are being performed to reduce or remove the contaminant.
- Quarterly updates will be provided if the solution takes an extended period to resolve.

TREATMENT TECHNIQUE (TT) VIOLATION

- Failure to complete an action that could potentially affect water quality.
- This is likely the same violation disclosed in 2020.
- Failures may include one or more of the following during the time period shown below.
 - Not meeting minimum operation/treatment standards.
 - Not making required upgrades to the system.
 - Not evaluating system for potential sanitary defects

Information provided below describes potential health effects for vulnerable populations.

NAME	DESCRIPTION	TIME PERIOD	HEALTH EFFECTS	COMPLIANCE VALUE	TT LEVEL OR MCL
CROSS CONNECTION RULE	Failure to Meet Cross-Connection and/or Backflow Prevention Requirement M617	8/18/2019 through 9/15/2020	Inadequate Backflow Prevention & Cross-Connection Program. Uncontrolled Cross-Connections can lead to inadvertent contamination of drinking water.	N/A	N/A
CROSS CONNECTION RULE	Failure to Meet Cross-Connection and/or Backflow Prevention Requirement M612	8/18/2019 through 9/15/2020	Due to one or more of the following violations: <ul style="list-style-type: none"> • Permitting an uncontrolled cross-connection • Installation or permitting an uncontrolled cross-connection • Failure to comply with requirements for surveying system for cross-connections • Failure to complete testing requirements for backflow prevention devices or methods • Failure to notify State Health Department of backflow contamination event 	N/A	N/A
CROSS CONNECTION RULE	Failure to Meet Cross-Connection and/or Backflow Prevention Requirement M611	8/18/2019 through 9/15/2020		N/A	N/A

Additional Violation Information

Please share this information with others who drink this water, especially those who may not have received notice directly (for example, people in apartments, nursing homes, schools and businesses). Do this by posting this notice in a public place or distributing copies by hand or mail.

Explanation of the violation (s), the steps taken to resolve them and the anticipated resolved date.

The City of Northglenn received violations for 6 locations that failed to retest cross-connection control devices within 90 days of the testing date. In addition, 4 locations had uncontrolled cross-connections that did not repair the problem within 120 days of being noticed of the violation. These violations occurred during the period of August 2019 through August 2020.

At this time, all violations, but one, have been corrected.

Northglenn is working with the state to ensure the remaining violation is resolved in the timeliest manner possible.

It is anticipated that this issue will be resolved by December 31, 2021.

Violation Questions?

Contact 303.450.4022

TERMS, ABBREVIATIONS & SYMBOLS

Action Level (AL)

The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.

Average (x-bar)

The calculated central value of a set of numbers.

Compliance Value (No Abbreviation)

Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).

Distribution System (DS)

The series of pipes the city maintains that deliver finished drinking water to our residents and businesses.

Entry Point to the Distribution System (EPTDS)

The point at the water treatment facility that treatment is complete (finished), but prior to being pumped out to the system.

Formal Enforcement Action (No Abbreviation)

Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.

Gross Alpha (No Abbreviation)

Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.

Health-Based (No Abbreviation)

A violation of either an MCL or TT.

Location Running Annual Average (LRAA)

The average of results for samples collected at a particular location during the most recent four calendar quarters.

Maximum Contaminant Level (MCL)

The highest level of a contaminant allowed in drinking water.

Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Nephelometric Turbidity Unit (NTU)

Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.

Not Applicable (N/A)

Does not apply or not available.

Non-Health-Based (No Abbreviation)

A violation that is not MCL or TT.

Parts per million = Milligrams per liter (ppm = mg/L)

One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion = Micrograms per liter (ppb = µg/L)

One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L)

Measure of the radioactivity in water.

Range (R)

Lowest value to the highest value.

Running Annual Average (RAA)

An average of monitoring results for the previous twelve calendar months or previous four quarters.

Sample Size (n)

Number or count of values (i.e. number of water samples collected).

Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

Variance and Exemptions (V/E)

Department of Public Health & Environment permission not to meet an MCL or treatment technical technique under certain conditions.

Violation (No Abbreviation)

Failure to meet a Colorado Primary Drinking Water Regulation.

FREQUENTLY ASKED QUESTIONS

What is the hardness of Northglenn's water?

Total hardness in drinking water is caused by calcium and magnesium carbonate, which occur naturally in our water source. When high levels of these two minerals are present in the water supply, build-up of mineral deposits or scaling can occur. A level of 75 mg/L or less of these minerals is considered "soft" water, while a level of 300 mg/L or more is considered "very hard" water. In the distribution system, Northglenn's average level of total hardness in 2019 was 120 mg/L (or 7.01 grains per gallon), which falls within the moderate range.

How much sodium is in water?

At this time, sodium is not a regulated contaminant in drinking water. The EPA recognizes that high levels of salt are associated with hypertension, but that sodium levels in drinking water are usually low and unlikely to contribute to adverse health effects. Most Americans consume between 4000-6000 mg of sodium a day from their diet.

In a study conducted by the EPA, 75% of the water systems tested had concentrations less than 50 mg/L of sodium. At this level, drinking 2 liters (about 8 glasses) of water per day would contribute less than 100 mg of sodium per day.

What causes the odors from sink drains?

Sometimes unpleasant odors can rise from the sink drain in your kitchen or bathroom, usually caused by bacterial growth.

Suggestions to minimize drain odors:

- ◆ Put orange or lemon peels in your garbage disposal.
- ◆ Pour water with some bleach down the drain.
- ◆ Put baking soda in the drain, followed by a few cups of boiling water.
- ◆ Pour hot vinegar down the drain, followed by cold water.
- ◆ Repeat as needed.

Why does the water appear cloudy at times?

This seems to happen more often in winter when the drinking water is colder, but may also happen if you have an aerator attached to your faucet.

There is no cause for alarm; tiny air bubbles in the water cause the milky or cloudy appearance. If the water is left to stand for a short while, the bubbles will rise to the surface and dissipate.

Why do I taste chlorine in my water?

Chlorine, a disinfectant, is added to the water in its final treatment stage to kill bacteria and viruses. This is the most efficient and cost-effective method of disinfection available. The amount used is well below a level that would harm humans, but some people are more sensitive to the taste and odor of chlorine than others and may find it objectionable.

An inexpensive way to minimize this is to keep a jug of water in the refrigerator for drinking; the colder the water, the less noticeable the taste and odor of chlorine.

What causes rusty colored water?

Periodically, city crews may flush every fire hydrant along the 110 miles of water mains in Northglenn to remove debris in the form of sand particles or pipe scale. Small amounts of iron and manganese may temporarily discolor your water during this process, but this is not harmful.

If you notice a rusty tinge to your water, open all your faucets at the same time for a few minutes until the water runs clear.

What is the black color in my water?

Check the washers and O-rings inside your faucet fixtures as they can break down and ooze black.

Why does my water appear muddy or sandy?

Flushing all your taps for 10 minutes should help alleviate the issue.

Fixtures getting plugged with sand-like particles? Even in the toilet?

The most probable source is a water softener. Zeolite, or resin beads, can escape from the water softener into the internal plumbing. This can happen even if the softener is not in use. Proper maintenance should prevent this issue. (Northglenn has only moderately hard water and in most instances, a water softener is not necessary.)