



2024

WATER QUALITY REPORT

Innovations *for* Water Quality

TACOMA  WATER
TACOMA PUBLIC UTILITIES



Water senior leadership led by superintendent Heather Pennington (front row, second from right)

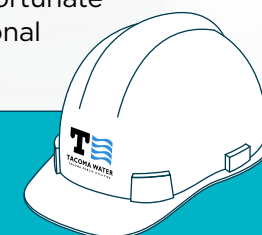
A message from your water superintendent

On behalf of Tacoma Water, I'm happy to share this 2024 Water Quality Report. We know our product and services are essential to your life and take that responsibility seriously. We are committed to our mission, which is to deliver clean, reliable water through our environmental, treatment, transmission, and distribution work.

In this report, we share details to give you confidence about the water you consume and use. We also feature recent innovations such as new infrastructure to improve service, operational improvements to enhance water quality, and technology to help us better communicate with you.

Our water originates from diverse sources, such as the Green River and our prolific groundwater supply. We are fortunate to have surface water and groundwater for operational flexibility and growth.

We work daily to protect, monitor, and treat the water we send to your tap.



Thank you for entrusting us to care for our sources and system as we monitor and adjust our operations to deliver the high-quality water you expect. We strive to be excellent and welcome your feedback.

Heather Pennington, Superintendent

TACOMA WATER
TACOMA PUBLIC UTILITIES



New water storage tank assures reliability

We recently commissioned a new water storage tank and pump station on a two-acre parcel of land in the Pinnacle Ridge neighborhood of the Tehaleh community in Bonney Lake. The facility ensures water service reliability, including adequate supply for firefighting and other emergencies.

A vital component of the project is to control and maintain water pressure, enhancing the comfort of the community.

The need was determined for the storage tank during planning of the Tehaleh master-planned development. Therefore, the timeline directly tied to the community's growth. In 2018, project planning began with a goal to accommodate the development's expansion over the next 10 years. In collaboration with the Tehaleh developers, we selected the location for the tank and pump station during the initial design of the community for its elevation, proximity, and accessibility.

Storage tanks benefit the water system by adding resiliency to provide backup storage and large volumes of water for firefighting and other emergencies. Additionally, we use water from the tank regularly and replenish it to maintain a high level of water quality at all times.

The adjacent pump station conveys water from the tank and moves it to higher-elevation neighborhoods while “boosting” water pressure. Maintaining appropriate water pressure is another factor in supporting a high level of water quality.

Design was already underway for the tank and pump station when the 2020 pandemic happened. Along with the design team at RH2 Engineering, we kept the project moving despite the change to remote work. We started constructing the new facility in 2023 and completed it in December 2024.

The welded steel tank stands approximately 90 feet tall and 106 feet in diameter, with a capacity of five million gallons.

It went into service at the end of 2024 and is a cornerstone of our commitment to water service reliability in the community.



EMPLOYEE SPOTLIGHT

Kit Hansen

“As a water construction inspector, I identify constraints, encounter unforeseen conditions, and adjust timelines to complete various projects successfully. The Pinnacle Ridge Water Tower project was a unique experience that allowed me to bring creative solutions to complex problems in the field, which is one of my favorite parts of my job. The ever-changing condition of the water system throughout a project leads to constant consideration of how decisions and actions may impact water quality. Whether that be dirty/cloudy water or possible contaminants entering the drinking water system, I monitor and test all work being completed. My position allows me to oversee changes and ensure all necessary procedures and methods are used to maintain clean and reliable drinking water.”

Water main swabbing improves water quality

In 2024, we conducted our first unidirectional swabbing project for sediment removal over two days. Swabbing is an industry-standard procedure used to remove bulk sediment within water systems. We conduct regular water main flushing as part of our ongoing water quality and water system maintenance. Our utility selected water main swabbing to remove sediment deposited within our mains over the years. Due to its success, we plan to use this strategy in the future to address historic sediment management throughout our distribution system.



Water main swabbing involves scouring the inside of a main with a large foam sponge or cylinder-shaped “swab.”

A water swab is inserted into the main through a fire hydrant, pushed along by water pressure, and then exits through another hydrant further down the main, or at an exit point installed within the main. In 2024, we conducted our first swabbing project over two days. Crews prepped the hydrants and set up the buffer areas to begin swabbing, and conducted several runs at two locations. We repeated the process many times until the swab was clean, and the water was clear. Swabbing removes scale, silt, and sediment, similar to water flushing, but uses less water, and in most cases, is more effective.

Sediment is an ongoing concern we proactively manage, and removal of sediment is vital to system reliability and enhancing long-term water quality. Swabbing gives us another option to meet our goal of delivering clean, reliable drinking water.

Factors affecting water quality

Changes to the quality of water coming out of your faucet can result from various issues. If you see discoloration, it may be caused by fire hydrant use, water main flushing, or a water main break. Taste and odor issues can be due to seasonal changes in water sources such as whether it came from groundwater wells or the Green River, a surface water supply. Water quality changes may even originate from recent plumbing work in your home.

There are several ways to contact us. For urgent matters, call 253-502-8384, and for more general concerns email WaterQuality@Tacoma.gov. Note that it may take us several days to respond to email.

We are available to help with your concerns 24 hours a day. If you have questions about your water quality, contact us immediately so we can quickly identify and correct any problems.

Our water events map is valuable for locating and learning about proactive water main flushing and other work that may affect water quality. The map also provides a way to stay current on unplanned water quality issues in your area. You can receive water event notifications by enrolling in MyTPU.org/MyAccount; navigate to “Profile” and then “Notifications.” You will see a “Water Outage” section and a drop-down menu allowing you to receive email and text notifications. Our water events map and website are mobile responsive so you can access them on your smartphone in real time. You can view the map at MyTPU.org/WaterEvents.

Importantly, we assure you that if a water quality issue presents a potential health concern, we must immediately notify you by the fastest means. This may include hand-delivered notices or mass media such as television and radio, our website and social media.

EMPLOYEE SPOTLIGHT



Carol Powers

“As a principal engineer, I work with a team of engineers who plan, design, and execute capital projects to support the water system. Projects include rehabilitating existing assets and designing and constructing new facilities such as pipelines, tanks, and pump stations. For all projects, following federal,

state, and local water quality regulations is vital to placing potable water assets into service and ensuring clean water delivery.

Another part of my job is to work with land developers and contractors who have projects near our large-diameter pipelines. It is challenging and rewarding to collaborate on solutions that protect the integrity of our water mains.

I enjoy my job because I work with a great team that understands it is a privilege and a responsibility to contribute to a water system that has endured for 100 years and desires to sustain it for future generations.”

Reporting chemicals in your water

The water quality table below shows substances we identified at the water source, treatment plant, and in the distribution system during our most recent sampling. The table doesn't include the other 35 inorganic, 67 volatile organic chemicals and 73 synthetic organic chemicals we test for—including many industrial chemicals, herbicides, and pesticides—but did not find.

Understanding the terminology

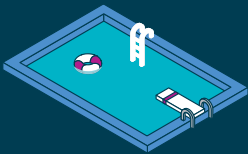
Picocuries

The curie (Ci) is a standard measure for the intensity of radioactivity contained in a sample of radioactive material. A picocurie (pCi) is a measure of the rate of radioactive decay of radon. One pCi is one trillionth of a curie. 1 pCi = 0.000000000001 Ci



Visualizing 1 ppm

Four drops of water in a 55-gallon rain barrel



Visualizing 1 ppb

One drop of water in a 13,000-gallon swimming pool

Regulated at our groundwater sources

Constituent	Highest level allowed (MCL)	Highest level detected	Ideal goals (MCLG)	Range of level detected	Regulation met	Potential sources of contaminant
Arsenic	10 ppb	1.7 ppb (2021)	0	0-1.7 ppb	Yes	Natural erosion
Nitrate	10 ppm	4.26 ppm (2024)	10 ppm	0-4.26 ppm	Yes	Agricultural uses, septic
Trichloroethylene	5 ppb	1.4 ppb (2020)	0	0-1.4 ppb	Yes	Industrial contamination

Unregulated at our groundwater sources

Chloroform	N/R	0.72 ppb (2020)	N/R	0-0.72 ppb Average 0.131 ppb	N/R	Industrial contamination
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Regulated at our treatment plant

Fluoride	4 ppm	0.96 ppm	4 ppm	0.54-0.96 ppm	Yes	Treatment additive
Turbidity	1 NTU	0.034 NTU	N/A	0.015-0.034 NTU	Yes	Soil erosion

Regulated in our distribution system

Disinfection byproducts	Highest running annual average allowed	Our running annual average	MCLG	Range of level detected	Regulation met	Potential sources of contaminant
Total Trihalomethanes	80 ppb average	13.2 ppb average	N/A	5.6-36.6 ppb	Yes	Disinfection interaction
Haloacetic Acids	60 ppb average	1.9 ppb average	N/A	<1-3.57 ppb	Yes	Disinfection interaction
Bromate	10 ppb	0	0	0	Yes	Disinfection interaction
Chlorine Residual	4 ppm	N/A	4 ppm (MRDLG)	0.30-1.46 ppm	Yes	Treatment additive
Total Coliform	<5% positive	0.04%	0	1 of 2,530 sites	Yes	Sampling technique

Regulated at your tap

Lead and copper sampled in 2022 (required once every three years)	90% of samples must be below the action level (AL)	90% of samples were at or below this level	MCLG	# of sites above the action level (AL)	Regulation met	Potential sources of contaminant
Lead	15 ppb (AL)	N/D	0	0 of 53 sites	Yes	Household plumbing
Copper	1.3 ppm (AL)	N/D	1.3 ppm	0 of 53 sites	Yes	Household plumbing

Definitions

Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available technology.

Maximum Contaminant Level Goal (MCLG):

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

ppm

One part per million.

ppb

One part per billion.

NTU

Nephelometric Turbidity Unit is a standard to measure water clarity.

AL

Action Level is the concentration which, if exceeded, triggers treatment or other requirements that a water system must follow. Action Levels are reported at the 90th percentile for homes at greatest risk.

Minimum Reporting Level, also known as Method Reporting Limit (MRL):

The smallest amount of a substance we can reliably measure and report in a sample.

N/D

Not Detected (result is below the laboratory minimum detection level).

N/A

Not Applicable.

N/R

Not Regulated (not currently subject to EPA drinking water regulations).

Maximum Residual Disinfectant Level (MRDL):

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG):

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.



Identifying substances in your water

Tap water and bottled water sources include rivers, lakes, streams, reservoirs, springs, and wells. As water travels over or through the ground, it dissolves naturally occurring minerals and can pick up other substances resulting from the presence of animals or human activity. Those substances may include inorganic material such as salts and metals, synthetic and volatile organic material from industrial processes, storm water runoff and septic systems, and pesticides and herbicides from agriculture and residential uses. To ensure your drinking water is safe, the EPA and the Washington State Board of Health prescribe regulations that limit the number of certain contaminants in public water systems.

Organisms

Cryptosporidium (KRIP-toe-spo-RID-ee-um)

Cryptosporidium is a microscopic organism commonly found in open surface water sources. Swallowing Cryptosporidium can cause diarrhea, fever, and other stomach and abdominal symptoms. Federal and state regulations require us to treat Green River water for Cryptosporidium. We remove any Cryptosporidium that might be present effectively with filtration. We have had no reported instances of Cryptosporidium-related health problems in our service area.

Giardia (GEE-are-DEE-uh)

Giardia lamblia is another microscopic organism commonly found in open-surface waters such as rivers, lakes, and streams. Like other water systems that use open surface water sources, federal and state regulations require us to treat Green River water for Giardia. We kill Giardia effectively with disinfecting chemicals like chlorine and ozone.

Gases

Radon

Radon is a naturally occurring radioactive gas. Breathing radon can cause lung cancer in humans. Ninety-eight percent of detected radon comes from indoor air generally released from soil beneath homes. Radon can release from tap water, but

in much smaller quantities – only about one percent of radon exposure comes from drinking water. We test for radon in our groundwater sources. Federal guidelines require drinking water to contain no more than 4,000 picocuries per liter (a picocurie is a measure of radiation). We took 117 samples and tested them between 1992 and 2024. Findings show an average of 291 picocuries per liter. Our largest single test shows 530 picocuries per liter.

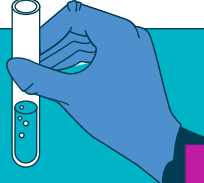
Minerals

Lead and Copper

Studies cited by the EPA show swallowing lead or copper can cause health problems, especially in pregnant women and young children. Lead and copper found in drinking water usually come from home plumbing. Some homes have higher levels than other homes. Water with a low pH can cause copper to dissolve directly from pipes into water and lead to dissolve from solder used to join copper pipes.

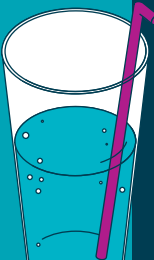
Federal and state drinking water rules establish “action levels” allowable for lead and copper in water samples collected from homes. At least 90 percent of samples may have no more than 15 parts per billion (ppb) of lead in one liter of water and no more than 1.3 parts per million (ppm) of copper per liter. Once every three years, we sample at least 50 homes for lead and copper.

We completed the most recent sampling in 2022. Results show our system met action levels for both lead and copper. Although we detected lead in a few homes, all were at levels below the 15 ppb action level.



To continue ensuring we meet regulatory requirements, we will continue to monitor and adjust pH levels to reduce corrosion in pipes. We will sample again for lead and copper in 2025.

Pregnant women and young children can be more vulnerable to lead in drinking water than the general population. If you have concerns about lead levels in the water at your home, have your water tested. Running water for two minutes after it sits stagnant in the pipe for a few hours can help clean the tap and reduce the amount of lead and copper in your water. A change in the temperature of water will also tell you when fresh water arrives.



Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline, 1-800-426-4791 or at [EPA.gov/SafeWater/Lead](https://www.epa.gov/safewater/lead).

Sand and Silt

Because we take our water from the Green River, which, prior to 2015, was an unfiltered water source, pipeline shutdowns and fire flows from hydrants can stir up sand and silt that sits in the bottom of water mains throughout the water supply system. Even though the water is treated, turbid events like these can cause water to appear visually unpleasant, but it remains safe.



EMPLOYEE SPOTLIGHT

Daniel Broussard

“As a water quality specialist, I take samples throughout our system and conduct cross-connection control inspections on new and existing water services. These inspections are one way we protect the system against potential hazardous backflow occurrences. I also assist customers with water quality concerns at their homes or businesses and sample on-site to verify that the water is safe to use.

Another key responsibility is to coordinate the Unidirectional and dead-end flushing program. This project removes sediment and stagnant water from water mains. To inform customers, I send postcards and update our events map which allows customers to see where our flushing crews are currently operating. Additionally, I organize special flushes in the system’s “problem areas” outside the routine schedule. These targeted flushes address customer concerns or changes in water quality that we discovered by sampling.”

Treating your water

In addition to filtering your water, in 2024 we treated our Green River drinking water supply with chlorine, fluoride, caustic soda, and ozone. Treating water with the chemical disinfectants chlorine and ozone is important to protect your health when water is drawn from a surface supply like the Green River. Placing disinfecting chemicals in water kills germs and microorganisms, making it safe to drink. When we use our groundwater supply, it is treated with chlorine, fluoride, and caustic soda.

Fluoride

Tacoma voters approved fluoride treatment in 1988 and 1989 because of the dental health benefits it provides. The Tacoma City Council then enacted an ordinance directing fluoridation of our water supply. We currently fluoridate at a level of 0.7 ppm.

Caustic soda

We treat our Green River and groundwater supplies with caustic soda to raise the pH (a measurement of acidity) of the water, making it less corrosive on plumbing and reducing the amount of lead and copper that can dissolve into your drinking water.

Ozone

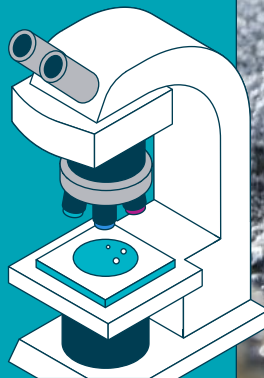
We treat the Green River water with ozone, which effectively destroys any undesirable taste and smells that can occur and provides disinfection benefits to help ensure your water remains safe to drink. Ozone gas generates when we expose pure oxygen gas to electricity in an ozone generator. After creating ozone gas, we combine it with water and inject into pipeline reactors at the Green River Filtration Facility. Ozone only lasts for a few minutes in the water and is not present in the water supply when it leaves the treatment site.

Chlorine

Chlorine is our primary disinfection treatment. While it does an excellent job of killing the microorganisms that may be harmful to you, chlorine also reacts with the natural organic material commonly found in surface water sources like lakes, rivers, and streams. This reaction forms compounds called “disinfection byproducts.” We must meet drinking water standards for two groups of disinfection byproduct compounds.

Byproduct levels found in water depend primarily on:

- The amount of natural organic material in the water
- The amount of chlorine used to treat the water
- The amount of time it takes water to reach the customer



Byproduct levels vary throughout the year. Byproducts often increase during the warmest months when our water supply has its highest levels of natural organic material and chemical reactions happen faster. We work to minimize byproduct levels and have adjusted portions of our system operations.

An important message from the EPA

Your drinking water currently meets the EPA's revised drinking water standard for arsenic. However, it does contain low levels of naturally occurring arsenic not associated with known sources of industrial contamination. There is a small chance that some people who drink water containing low levels of arsenic for many years could develop circulatory disease, cancer, or other health problems. Most types of cancer and circulatory diseases are due to factors other than exposure to arsenic. The EPA standard balances the current understanding of arsenic's health effects against the costs of removing arsenic from drinking water.

The importance of conserving water

When each of us uses only as much water as we need, we conserve water. Conservation makes it possible to plan and provide for residential and commercial development, only take what we need from reservoirs and wells, and leave more water in the river for fish. When we each do our part, we help ensure enough water remains available to meet the needs of wildlife and our growing community.

We are halfway through our Water Conservation Plan and we need your help. From May to October, our water conservation goal is to reduce peak summer demand water use by 6.65 percent per person from 2018 to 2027. You can read about our conservation efforts at [MyTPU.org/WaterSystemPlan](https://www.mytpu.org/WaterSystemPlan), scroll down to “Supplemental Plan” and click on “Water Conservation Plan.”

Every family and business that uses water outdoors—for gardens, yards, and landscaping—plays a part in helping us reach that goal.

Want to learn more about saving water indoors and out? Would you like to apply for a new smart irrigation controller rebate? Need a free outdoor water savings kit? You can find all those and more at [MyTPU.org/WaterSmart](https://www.mytpu.org/WaterSmart).

Delivering your water

Most of your water comes from the Green River in South King County. The Green River Watershed is a 231-square-mile forested area that serves as a collection point for melting snow and seasonal rainfall in an uninhabited area of the Cascade Mountains between Chinook and

Snoqualmie Passes. We own land along the river, which is about 11 percent of the watershed.

Through agreements with other landowners, we limit watershed access and carefully control activities, such as recreation, road maintenance and logging. We also own and operate

seven wells on the North Fork of the Green River and take water from them during periods when Green River water is turbid. We supplement the Green River supply with groundwater from more than 20 additional wells to meet peak summer demands. Most are in Tacoma city limits.

Keeping you healthy

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, 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons 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, 1-800-426-4791.

Tacoma Public Utility Board

The Tacoma Public Utility Board is the governing and policy-making body for Tacoma Water. To be involved in water quality decisions, you may participate in public meetings, held on the second and fourth Wednesdays of each month at 6:30 p.m. in the Tacoma Public Utilities Auditorium, 3628 S. 35th St., Tacoma. Meetings are also held virtually via Zoom Meetings and televised live on TV Tacoma. For details, visit [MyTPU.org](https://www.mytpu.org).

Your Water Quality Report

This report contains information about your drinking water. Congress and the EPA require us to inform you annually about your drinking water and its impacts. Although most content in this report is required, we are pleased to share additional helpful information about your water and the work we do to get it to you. We produce and mail this report for about 55 cents per customer.

Contact information

Water Quality
253-502-8384 • WaterQuality@Tacoma.gov

Conservation
253-502-8723 • [MyTPU.org/WaterSmart](https://www.mytpu.org/WaterSmart)

Cross Connection Control / Backflow Prevention
253-502-8215 • [MyTPU.org/BackFlow](https://www.mytpu.org/BackFlow)
Backflow@Tacoma.gov

Rates
253-441-4942

National Radon Hotline
1-800-55-RADON • 1-800-557-2366

Washington State Department of Health
[DOH.WA.Gov/DrinkingWater](https://www.doh.wa.gov/DrinkingWater)

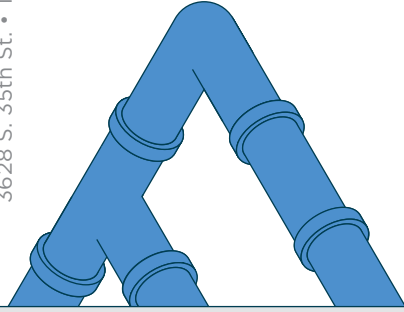
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[MyTPU.org/WaterQuality](https://www.mytpu.org/WaterQuality)

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