2024

DRINKING WATER REPORT

LITTLE TREE WATER SYSTEM

State ID #022368
Kitsap County

TABLE OF CONTENTS

About Your Water Quality

Washington Water Service (Washington Water) is committed to being a leader in providing communities and customers with traditional and innovative utility services. Washington Water is proud of its service record and is staffed with courteous and knowledgeable water professionals who are dedicated to meeting your needs. While we are proud of our past record, we continually strive to improve upon the quality of services we provide to you, our valued customer.

This 2024 Drinking Water Report is your annual update on the quality and safety of your drinking water. It includes the most recent water quality results through the monitoring period ending December 31, 2024, in accordance with state and federal regulations (not all testing is required every year). This report also provides access through references and telephone numbers to source water assessments, health effects information, and other water system topics. This allows you to make personal health-based decisions regarding your drinking water consumption and become more involved in decisions which may affect your health.

Most importantly, this report shows that your drinking water source meets all primary and secondary EPA and Department of Health standards.

We hope you find this information helpful.

YOUR WATER SYSTEM

SOURCE WATER PROTECTION INFORMATION

Drinking water comes from groundwater (wells and springs) and surface water (rivers, lakes, streams). Protecting these drinking water sources is key to sustaining safe drinking water supplies for this and future generations.

WHAT YOU CAN DO TO PROTECT SOURCE WATER:

- Ensure that your septic system is properly maintained.
- Use chemical fertilizers and pesticides sparingly, if at all.
- Don’t dump any hazardous waste on the ground. This includes: motor oil, pesticides, paint or paint cans, mothballs, flea collars, household cleaners, medicines, etc.

CHECK THE SWAP INFORMATION FOR YOUR WATER SYSTEM:

The Washington State Department of Health Office of Drinking Water has compiled Source Water Assessment Program (SWAP) data for all community water systems in Washington. A source water assessment includes:

- A delineation (definition) of the source water protection area,
- An inventory of potential sources of contamination, and
- A susceptibility determination (how susceptible the source is to contamination).

An interactive map with data for your water system is available at: **fortress.wa.gov/doh/swap/**

WHERE YOUR WATER COMES FROM

Your water comes from a well (groundwater). The water is pumped into the system from this well, which is 178 feet deep.

Your water is not treated (no chlorination, filtration, pH adjustment, etc.).

If you have any questions, suggestions, or concerns, please contact our office, either by phone at (877) 408-4060 or through the Contact Us link at www.wawater.com.

CROSS-CONNECTION CONTROL

WHAT IS BACKFLOW?

Imagine a water customer has a hose in their hot tub to fill it up. If the customer doesn't have a backflow preventer and the water system experiences a drop in pressure, water from the hot tub could be pulled into the water system and contaminate the water supply.

So that the high-quality water we deliver is not compromised in the distribution system, Washington Water has a robust cross-connection control program in place. Cross-connection control is critical to preventing activities on customers' properties from affecting the public water supply. Our cross-connection control specialists confirm that all of the existing backflow prevention assemblies are tested annually, assess all connections, and enforce and manage the installation of new commercial and residential assemblies.

REMOVING OPPORTUNITIES FOR BACKFLOW

Backflow can occur when certain pressure conditions exist either in our distribution system or within the customer's plumbing, so our customers are our first line of defense. A minor home improvement project—without the proper protections—can create a potentially hazardous situation, so careful adherence to plumbing codes and standards will keep the community's water supply safe. Please be sure to utilize the advice or services of a qualified plumbing professional.

Many water-use activities involve substances that, if allowed to enter the distribution system, would be aesthetically displeasing or could even present health concerns. Some common cross-connections are:

- Garden hoses connected to a hose bib without a simple hose-type vacuum breaker (available at a home improvement store).
- Improperly installed toilet tank fill valves that do not have the required air gap between the valve or refill tube.
- Landscape irrigation systems that do not have the proper backflow prevention assembly installed on the supply line.

The list of materials that could potentially contaminate the water system is vast. According to the EPA, a wide variety of substances have contaminated drinking water systems throughout the country as a result of poor cross-connection control. Examples include:

- Antifreeze from a heating system.
- Lawn chemicals from a garden hose or sprinkler head.
- Blue water from a toilet tank.
- Carbonated water from a soda dispenser.

Customers must confirm that all plumbing is in conformance with local plumbing codes. Additionally, state law requires certain types of facilities to install and maintain backflow prevention assemblies at the water meter. Washington Water's cross-connection control staff will determine whether you need to install a backflow prevention assembly based on water uses at your location.

POSSIBLE CONTAMINANTS

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 the water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap and bottled) include rivers, lake, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals—and in some cases radioactive material—and can pick up substances resulting from the presence of animals or human activities. Prior to entering the distribution system, source water with constituents over maximum contaminant levels is treated to reduce levels to meet standards set by public health experts.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

- Microbial contaminants, such as viruses, parasites, and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or 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.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.
- Organic chemical contaminants, including synthetic and volatile organic compounds, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

So that tap water remains safe to drink, the Washington State Department of Health (DOH) and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Washington State Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

VULNERABLE POPULATIONS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people 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 at (800) 426-4791.

KEY DEFINITIONS

ACTION LEVEL (AL): The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

LEAD AND COPPER 90TH PERCENTILE VALUE: Out of every 10 homes sampled, 9 were at or below this level. This must be less than or equal to the AL or additional steps must be taken.

MAXIMUM CONTAMINANT LEVEL (MCL): The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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.

MMHOS/CM: A measure of specific conductance.

N/A: Not applicable.

NEPHELOMETRIC TURBIDITY UNIT (NTU): A measure of water clarity.

NOT DETECTED (ND): The result is less than the SDRL.

PPB: Parts per billion (µg/L, micrograms per liter).

PPM: Parts per million (mg/L, milligrams per liter).

PPQ: Parts per quadrillion or picogram per liter (pg/L).

PPT: Parts per trillion or nanograms per liter (ng/L).

RAA: Running annual average.

STATE ACTION LEVEL (SAL): The Washington State action level.

STATE DETECTION REPORTING LIMIT (SDRL): The minimum reportable detection of an analyte as established by DOH. If the test result is less than the SDRL, the contaminant is considered to be not detected.

SECONDARY MAXIMUM CONTAMINANT LEVEL (SMCL): These standards are developed as guidelines to protect the aesthetic qualities of drinking water and are not health based.

MS/CM: Microsiemens/centimeter.

WADOH: The Washington State Dept of Health

TABLE INTRODUCTION

Your water is tested for more than 150 contaminants for which state and federal standards have been set.

Tables 1 & 2 list all primary contaminants that were detected at or above the state detection reporting limit (SDRL), along with their respective MCLs. Primary MCLs (primary standards) protect public health by limiting the levels of these contaminants in drinking water.

Table 3 lists secondary contaminants of interest to many consumers, as well as any unregulated contaminant detections. Secondary contaminants have no known health effects but can affect the aesthetic properties of water (taste, odor, and appearance). Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to help EPA determine their occurrence in drinking water and potential need for future regulation.

See the **Potential Contaminants** web page for a complete list of contaminants we test for.

SOURCE CODES

The source codes indicate major sources of contaminants in drinking water.

CH	Corrosion of household plumbing systems
EN	Erosion of natural deposits
LN	Leaching from natural deposits
LX	Leaching from septic tanks
NAT	Substances that form natural deposits
NOM	Naturally occurring organic materials
RF	Runoff from fertilizer use
RGE	Runoff from glass and electronics production wastes
RLN	Runoff/leaching from natural deposits
RO	Runoff from orchards
RS	Soil runoff
SEA	Seawater influence
SEW	Sewage
UR	Unregulated constituents with no source listed and that do not have standardized “source of substance” language
WI	Industrial wastes

Equipment in water-testing laboratories can detect constituents as small as 1 part per trillion. That is equivalent to 1 inch in over 15 million miles.

2024 WATER QUALITY

TABLE 1: PRIMARY CONTAMINANTS

Inorganic Chemicals	Year Tested	Units	MCL	MCLG	Your Water	Violation?	Source
Nitrate	2024	ppm	10	10	ND	No	EN, LX, RF, SEW
Arsenic	2024	ppb	10	0	ND	No	EN, RGE, RO

TABLE 2: LEAD AND COPPER[1]

Primary Contaminants	Year Tested	Units	AL	90th Percentile	Samples > AL	Violation?	Source
Copper	2023	ppm	1.3	0.06	0 of 5	No	CH, EN
Lead	2023	ppb	15	1	0 of 5	No	CH, EN

TABLE 3: SECONDARY AND UNREGULATED CONTAMINANTS

Secondary Contaminants	Year Tested	Units	SMCL	Your Water	Violation?	Source
Iron	2024	ppm	0.3	ND	No	LN, WI
Manganese	2024	ppm	0.05	ND	No	LN
Chloride	2024	ppm	250	2.2	No	RLN, SEA
Sulfate	2024	ppm	250	ND	No	RLN, WI
Sodium[2]	2024	ppm	N/A	ND	No	EN, SEA
Hardness[3]	2024	ppm	N/A	46	No	EN
Conductivity	2024	µmhos/cm	700	110	No	NAT, SEA
Turbidity	2024	NTU	N/A	0.5	No	RS
Color	2024	color units	15	ND	No	NOM
Unregulated Contaminants	**Year Tested**	**Units**	**SMCL**	**Your Water**	**Violation?**	**Source**
Lead[4]	2024	ppb	N/A	ND	No	CH, EN
Copper	2024	ppm	N/A	ND	No	CH, EN

[1] Samples are collected at customer kitchen or bathroom taps. Residences considered to be at highest risk for corrosion are selected for sampling (i.e., those with lead and copper in internal plumbing, based on specific EPA tiering criteria and available home construction details from county web sites).The number of homes sampled is based on population served by the water system. This testing is done every three years.

[2] The EPA recommends 20 ppm sodium as a level of concern for consumers who must restrict their dietary intake.

[3] When reading the hardness value, 0–75 ppm is considered “soft” water, 75–150 ppm is “moderately hard,” 150–300 ppm is “hard,” and >300 ppm is “very hard”.

[4] Lead and copper are regulated at customer taps (see Table 2 for those results), not at the source, which is what these results represent. This is because lead and copper in drinking water do not typically come from the water source. They come from the plumbing that serves, or is inside, the customer’s home, from corrosion of lead and copper-containing plumbing or fixtures, or the lead solder that connects copper pipes.

TABLE 4: PFAS CONTAMINANTS

			Your Water				
PFAS Chemicals[1]	Year Tested	Units	SAL	Range	Average	Violation?	Source
PFOA (perfluorooctanoic acid)	2023	ppt	10	ND	ND	No	UR
PFOS (perfluorooctanesulfonic acid)	2023	ppt	15	ND	ND	No	UR
PFHxS (perfluorohexanesulphonic acid)	2023	ppt	65	ND	ND	No	UR
PFNA (perfluorononanoic acid)	2023	ppt	9	ND	ND	No	UR
PFBS (perfluorobutane sulfonate)	2023	ppt	345	ND	ND	No	UR
PFHpA (perfluoroheptanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFHxA (perfluorohexanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFDA (perfluorodecanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFUnA (perfluoroundecanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFDoA (perfluorododecanoic acid)	2023	ppt	N/A	ND	ND	No	UR
ADONA (4,8-dioxa-3H-perfluorononanoic acid)	2023	ppt	N/A	ND	ND	No	UR
9Cl-PF3ONS (9-chlorohexanedecafluoro-3-oxanone-1-sulfonic acid)	2023	ppt	N/A	ND	ND	No	UR
HFPO-DA (hexafluoropropylene oxide dimer acid)	2023	ppt	N/A	ND	ND	No	UR
11-Cl-PF3OUdS (11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid)	2023	ppt	N/A	ND	ND	No	UR
4:2FTS (4:2 fluorotelomer sulfonic acid)	2023	ppt	N/A	ND	ND	No	UR
6:2FTS (6:2 fluorotelomer sulfonic acid)	2023	ppt	N/A	ND	ND	No	UR
8:2FTS (8:2 fluorotelomer sulfonic acid)	2023	ppt	N/A	ND	ND	No	UR
NFDHA (nonafluoro-3,6-dioxaheptanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFBA (perfluorobutanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFHpS (perfluoroheptanesulfonic acid)	2023	ppt	N/A	ND	ND	No	UR
PFMBA (perfluoro-4-methoxybutanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFMPA (perfluoro-3-methoxypropanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFPeA (perfluoropentanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFPeS (perfluoro-1-pentanesulfonic acid)	2023	ppt	N/A	ND	ND	No	UR

[1] Per-and polyfluoroalkyl substances (PFAS) are a broad class of chemicals, which includes PFOA, PFOS, PFHxS, PFNA, and PFBS. SALs have been established for these five compounds. SALs are WADOH health-based regulatory levels. Studies indicate that long-term exposure to PFAS over certain levels could have adverse health effects, including developmental effects to fetuses during pregnancy or breastfed infants; cancer; or liver, immunity, thyroid, and other effects. Washington Water is working closely with the WADOH and EPA to conduct extensive monitoring and identify the best available treatment technology for treatment of PFAS.

2024 WATER QUALITY

				Your Water			
PFAS Chemicals	Year Tested	Units	SAL	Range	Average	Violation?	Source
PFEESA (perfluoro (2-ethoxyethane) sulfonic acid)	2023	ppt	N/A	ND	ND	No	UR
PFTrDA (perfluorotetradecanoic acid)	2023	ppt	N/A	ND	ND	No	UR
PFTA (perfluorotridecanoic acid)	2023	ppt	N/A	ND	ND	No	UR
NEtFOSAA (2-(N- ethylperfluorooctanesulfonamido)acetic acid)	2023	ppt	N/A	ND	ND	No	UR
NMeFOSAA (n-methyl perfluorooctanesulfonamidoacetic acid)	2023	ppt	N/A	ND	ND	No	UR

ABOUT LEAD

Washington Water is compliant with health and safety codes mandating use of lead-free materials in water system replacements, repairs, and new installations. We have no known lead service lines in our systems. We test and treat (if necessary) water sources to confirm that the water delivered to customer meters meets water quality standards and is not corrosive toward plumbing materials.

The water we deliver to your home meets lead standards, but what about your home's plumbing? In Washington state, lead in drinking water comes primarily from materials and components used for in-home plumbing (for example, lead solder used to join copper plumbing, and brass and other lead-containing fixtures). Therefore, the Lead and Copper Rule is a critical part of our water quality monitoring program, and we follow it completely. This rule requires us to test water *inside* a representative number of homes that have plumbing most likely to contain lead and/or lead solder. This test, along with other water quality testing, tells us if the water is corrosive enough to cause lead from home plumbing to leach into the water. If the Action Level (the concentration of a contaminant which, when exceeded, triggers action which a water system must follow before it becomes a health concern) is exceeded, either at a customer's home or system-wide, we work with the customer to investigate the issue. If the problem is system-wide, we will implement corrosion control treatment at the source before the lead levels create a health issue.

Elevated levels of lead, if present, can cause serious health problems, especially for pregnant women and children. If your home's plumbing contains lead piping or pipe fittings, lead solder, or brass fixtures that may contain lead, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking.

If you are concerned about lead in your water, you may wish to have your water tested by a certified lab. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Results of our lead monitoring program, conducted in accordance with the Lead and Copper Rule, can be found in Water Quality Tables 2 and 3.

PFAS

In April 2024, the EPA adopted the final water quality regulation for certain per- and polyfluoroalkyl substances (PFAS):

- MCL of 4 ppt for PFOS and PFOA.
- MCL of 10 ppt for PFHxS, PFNA, and GenX.
- Hazard Index of 1.0 combined for PFHxS, PFNA, PFBS, and GenX.

Water systems must begin monitoring for these PFAS within three years (2027), and must comply with the regulation within five years (2029).

At Washington Water, protecting our customers' health and safety is our highest priority, and we are committed to complying with all requirements set by the public health experts. We have been preparing for the EPA regulation and its potential impact on—and any treatment needed in—our systems, and already evaluated the impact of the proposed regulation so that we could be better prepared to comply with the final MCLs.

In 2021, the Washington State Board of Health adopted State Action Levels (SALs) for five PFAS compounds. The SAL is the level at which water suppliers should take action to reduce concentrations in order to protect human health, including for sensitive populations, and is based on the best available science at the time. The Washington Department of Health required that all Group A water systems test for PFAS in each drinking water well between 2023 and 2025. We tested all active sources in our Group A water systems in 2023 for 29 PFAS compounds, including the ones now regulated by the State and EPA, and have developed ongoing monitoring plans. As part of a larger company, we have the support, resources, and best practices to help us take appropriate actions required to confirm our water complies with the new regulations.

Your water system results are reported in Table 4: PFAS Chemicals. For additional information, visit **doh.wa.gov/community-and-environment/contaminants/pfas**.

Additionally, we believe a comprehensive approach is needed to properly address the situation. We urged the EPA to establish a consistent, science-based standard as quickly as feasible, and strongly supported state legislation that will prohibit the sale and use of certain products that contain PFAS, require the certification of accurate testing methods for PFAS, and establish a publicly accessible database that houses the sources of PFAS entering water supplies. We have also filed lawsuits to hold PFAS manufacturers responsible—and ultimately prevent our customers from bearing the costs of treatment, to the extent possible—and are pursuing grants where available to further offset customer cost impacts.

As background, PFAS are manmade compounds that have been used to make carpets, clothing, fabrics for furniture, paper packaging for food, and other materials (e.g., cookware) that are resistant to water, grease, or stains. These compounds are also used for firefighting at airfields, which is one way they have found their way into groundwater in certain areas.

Studies indicate that long-term exposure to PFAS over certain levels could have adverse health effects, including developmental effects to fetuses during pregnancy or infants; cancer; or impacts on liver, immunity, thyroid, and other functions. Potential health effects related to PFAS are still being studied, and research is still evolving on this issue.

ABOUT MONITORING WAIVERS

(Reduced Monitoring)

ORGANIC COMPOUNDS

Drinking water sources are sampled and tested a minimum of every six to nine years for an array of organic compounds including:

- Volatile organic compounds (VOCs): Human-made chemicals that are used and produced in the manufacture of paints, pharmaceuticals, and refrigerants. Typical VOCs are components of petroleum fuels, paint thinners, and dry cleaning agents.
- Synthetic organic compounds (SOCs): Human-made chemicals that are used as herbicides, pesticides ,and in the manufacture of plastics.

Sampling frequencies for these groups of organic compounds can vary depending on the county in which your water system is located, whether the source has been granted a monitoring waiver, and whether there have been past detections of any of these organic contaminants.

Monitoring waivers are granted by the DOH and are based on a source's susceptibility rating (risk of contamination), water quality history, and information gathered from across the state.

If there are no detections of organic contaminants shown in the water quality data tables, there were none detected.

RADIOACTIVE CONTAMINANTS

Drinking water sources are sampled and tested a minimum of every six years for radioactive contaminants (radium 228 and gross alpha). These contaminants can be naturally occurring or the result of oil and gas production and mining activities.

If there are no detections shown in the water quality data tables, there were none detected.

WATER-USE EFFICIENCY

Water is a precious, limited resource. In the Pacific Northwest, drinking water for our growing population competes with other uses that include agriculture, industry, recreation, and maintaining an adequate stream flow for fish.

Washington Water strives to be a leader in the water industry, and we encourage our customers to be good stewards of our water resources. We monitor the amount of water we withdraw from aquifers in Washington, and track water losses along with water sold to our customers to confirm compliance.

Washington Water also continues to invest diligently in our infrastructure to reduce the amount of water lost to pipeline leaks and are updating our assessment of the impacts of climate change on water supply and demand. Using water wisely will help make sure that we have enough water in dry years and for generations to come.

Water-use efficiency goals are established in accordance with WAC 246-290-830(6)(b).

DEMAND GOAL

Washington Water's company-wide water demand goal is an annual customer consumption of less than 117,300 gallons (or 0.36 acre feet) per year, per equivalent residential unit. Washington Water monitors demand and encourages conservation through a variety of resources. Washington Water's Customer Service Department alerts customers with unusually high consumption, and provides 13 months of consumption history on billing statements to all customers. See **www.wawater.com/conservation** for more information about how you can make a difference.

SUPPLY GOAL

To control use of our groundwater sources, Washington Water established a supply goal to withdraw a maximum of 130,340 gallons (or 0.40 acre feet) per year, per equivalent residential unit. This goal is a measure of operational efficiency and adequate maintenance of pumping, treatment, and distribution systems. The difference between the supply and demand goals allows for a maximum of 10% total distribution system leakage use company-wide. Washington Water gauges and records monthly source production, and identifies treatment backwash and system flushing volumes to regularly assess supply-side conservation efficiencies. Washington Water also annually evaluates our systems' water main repair history and distribution system water losses to develop capital improvement projects for water main replacements. See **www.wawater.com/construction** for current and recently completed main replacement projects.

COMPANY-WIDE 2024 WATER USE RESULTS

- Total production: 2.029 billion gallons
- Total accounted usage: 1.746 billion gallons
- Total distribution system leakage: 13.9%

Important Contact Information

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Even more information awaits you at wawater.com.

Visit our web site to get information about your account, water-use history, water rates, and water system. You will also find water-saving tips and news about infrastructure improvements in your area.

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