

## 2023 JPUD Annual Consumer Confidence Report: Quimper Water System Water ID # 05783U

Contact:	Email	Phone Number	Title
Bill Graham	bgraham@jeffpud.org	(360) 385-8375	Resource Manager
Eric Storey	estorey@jeffpud.org	(360) 301-1799	System Operator
Environmental Protection Agency (EPA) Drinking Water Hotline	----	1-800-426-4791	----

The Quimper water system is owned, operated, and managed by PUD No.1 of Jefferson County. Your District Commissioner is Kenneth Collins. If you wish to attend a board meeting, the PUD board currently meets remotely via Zoom and at its conference room at 310 Four Corners Road every first and third Tuesday and second Tuesday in December. For details, go to [jeffpud.org](http://jeffpud.org) for more information on how to attend.

### Your Water Sources

Your water comes from eight interconnected groundwater wells. Sources 05, 06, 11, 14, 15, 18, 19 and 20 are approximately 113, 133, 217, 120, 175, 468, 501 and 95 feet deep respectively. The Sparling Wellfield (active Sources 5 and 20) and treatment plants at the corner of Rhody Drive (State Route 19) and Kennedy St. in Port Hadlock provides most of the water to the system at over 1,000 gallons per minute during peak season. Your principal source depends on where you live: the Woodland Hills/Kala Point area is served primarily by four wells: the Airport 2b well (Source 14); Willison Ave well (Source 11, seasonal only) and two Kala Point wells (Sources 18 and 19). Marrowstone and Indian Island are mostly served by the “New” Kivley well (Source 6) behind Mountain Propane. Also another well serves most of Olympic Mobile Village (Source 15) and surrounding Four Corners area. Treatment is required to remove iron and manganese at most sources to reduce staining. Most Quimper water system wells are treated with orthophosphate to minimize the corrosion of lead and copper from customer’s plumbing at their homes.

Source	Susceptibility Rating
S014, S018, S019	Low
S05, S06, S020	Moderate
S011, S015	High

### Health Effects and Risk

The table below lists all the drinking water contaminants that we tested for the Quimper water system during the 2022 calendar year. The law requires us to monitor for certain contaminants once a year and most others once every three years. However, if the source has low susceptibility to types of contamination, we can receive a waiver to sample less frequently. 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 EPA’s Safe Drinking Water Hotline (see phone number above). The water quality tests are commonly referred to as microbiological (total coliform bacteria), nitrate, arsenic, lead and copper, radionuclides, disinfectant byproducts (both alone and with all VOC tests), inorganic contaminants (IOC), volatile organic contaminants (VOC) and synthetic organic contaminants (SOC) such as herbicides, insecticides, pesticides and PFAS.

### Arsenic in your drinking water

While no arsenic testing was required in 2022, several sources over the years have shown low levels of arsenic below the maximum contaminant level (MCL) of 0.010 mg/L (or 10 ppb). The largest sources serving Quimper (S05 and S020) are

below the detection limit for arsenic and no source has ever been at or above the maximum contaminant level (MCL). Active sources that have tested between 5 and 10 ppb in the last 20 years are SO6 (New Kivley well), SO19 (Kala Point), and SO15 (Olympic Mobile Village well). Your drinking water currently meets EPA's drinking water standard for arsenic. However, it does contain very low levels of arsenic. 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. EPA's standard balances the current understanding of arsenic's health effects against the costs of removing it from drinking water.

**Lead in Your Drinking Water**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The PUD is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. 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 the water for drinking or cooking. Never consume water from your hot tap. If you are concerned about lead in your water, you may wish to have your water tested. 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 <http://www.epa.gov/safewater/lead>.

**PFAS In Your Drinking Water**

In 2022, the PUD participated in WA Department of Health (DOH) program to test public water sources for per and polyfluoroalkyl substances (PFAS) also known as “forever chemicals” for their persistence in many environments. Of the eight sources tested, trace amounts of these chemicals were found in SO5, SO6 and SO20 in concentrations measured in nanograms per liter or parts per trillion. Additional follow up sampling was performed on each of those three sources (twice at SO5 and S20, three at SO6). PFAS chemicals currently do not have a set regulatory maximum contaminant levels (MCLs) under the Clean Drinking Water Act but do have tentative concentration and action levels where treatment is required. **None of our sources require treatment to remove PFAS under the current state and federal regulatory framework.**

*The 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 can dissolve naturally-occurring minerals and, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or from human activity.*

*Contaminants that may be present in source water include:*

- Microbial contaminants, such as viruses 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 storm water runoff, industrial or domestic wastewater discharge, oil and gas production, mining or farming.*

- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.*
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.*
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.*

*In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in the water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for human health.*

Definitions:	
<p><b>Maximum Contaminant Level (MCL):</b> The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available technology.</p> <p><b>Maximum Contaminant Level Goal (MCLG):</b> 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.</p> <p>Mg/l: milligrams per liter or ppm.</p> <p><b>pCi/l:</b> Pico curies per liter, measure of radioactivity</p> <p><b>ppm:</b> parts per million or milligrams per liter (mg/L).</p> <p><b>ppb:</b> parts per billion or micrograms per liter (ug/L)</p> <p><b>ppt:</b> parts per trillion or nanograms per liter (ng/L)</p>	<p><b>Action Level (AL):</b> The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.</p> <p><b>Treatment technique (TT):</b> A required process intended to reduce the level of a contaminant in drinking water if MCL is exceeded.</p> <p><b>n/a:</b> Not applicable</p> <p><b>ND:</b> none detected</p> <p><b>Presence/Absence:</b> Indicates positive/negative test for bacteria.</p> <p><b>SO:</b> Source number listed with WA Dept of Health</p>

Microbial (Distribution)	MCLG	MCL	Your Water Results	Sample Date	Violation (Y/N)	Potential Health Effects from Long-Term Exposure Above the MCL
Total Coliform Bacteria	Absence	Presence	<b>Absence</b>	10 sites sampled every month	N	Not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present
Inorganic Contaminants	MCLG	MCL	Your Water Results (Sources)	Sample Date	Violation (Y/N)	Potential Health Effects from Long-Term Exposure Above the MCL
Arsenic (ppb)	Zero	10 ppb	<b>3 ppb (SO6)</b> <b>4 ppb (SO15)</b> <b>3 ppb (SO18)</b> <b>3 ppb (SO19)</b>	4/11/2022 4/11/2022 4/11/2022 4/11/2022	No No No No	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer
Nitrate (mg/L)	10	10	<b>ND (SO5), (SO11) (SO14) (SO15), (SO18) (SO19), (SO20)</b>	4/6/2022	N	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and

						blue-baby syndrome.
Nitrate (mg/L) (SO6)	10	10	<b>2.27 mg/l (SO6)</b>	4/6/2022	N	See above
Lead & Copper (Distribution)	MCLG	AL	Results	Sample Date	Violation	Potential Health Effects from Long-Term Exposure Above the MCL
Lead (ppb)	Zero	15	<b>* 6 homes ND, 14 homes ranged from 1.1– 38 ppb of 20 homes</b>	7/28/2022	N	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities Adults: Kidney problems; high blood pressure
Copper (mg/l)	1.3	1.3	<b>0.3 – 1.19 mg/L in 20 homes</b>	7/28/2022	N	Short term exposure: Gastrointestinal distress. Long term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level
* One lead sample of 20 homes was over 15 ppb. No additional anti-corrosion action or treatment is required under the EPA Lead and Copper Rule.						
Disinfectant Byproducts	MCLG	MCL	Your Water Results (Sources)	Sample Date	Violation (Y/N)	Potential Health Effects from Long-Term Exposure Above the MCL
Total Trihalomethanes (TTHMs) (ppb)	N/A	80	<b>6.1 (SO5)</b>  <b>0.87 (SO11)</b>  <b>ND (SO15)</b>  <b>5.3 (S20)</b>	4/13/2022	N	Byproduct of chlorination  Liver, kidney or central nervous system problems; increased risk of cancer

Haloacetic acids (HAA5) (ppb)	N/A	60	<b>23.7 (Oak Rd.)</b>	4/8/2022	N	Byproduct of chlorination Increased risk of cancer
Total Trihalomethanes (TTHMs) (ppb)	N/A	80	<b>52.9 (Oak Rd.)</b>	4/8/2022	N	See above
Radionuclides	MCLG	MCL	Your Water Results (Sources)	Sample Date	Violation (Y/N)	Potential Health Effects from Long-Term Exposure Above the MCL
Gross Alpha (pCi/L)	N/A	15	<b>0.231 (SO15)</b> <b>2.85 (SO11)</b>	4/11/2022	N	Increased risk of cancer
Gross Beta (mrem/yr)	N/A	4	<b>1.17 (SO15)</b> <b>1.17 (SO11)</b>	4/11/2022	N	Increased risk of cancer
Radium 228 (pCi/L) (SO15)	N/A	5	<b>0.549 (SO15)</b> <b>0.193 (SO11)</b>	4/11/2022	N	Increased risk of cancer
Synthetic Organic Contaminants	MCLG	MCL	Your Water Results (Sources)	Sample Date	Violation (Y/N)	Potential Health Effects from Long-Term Exposure Above the MCL
Herbicides	Zero	Varied	ND (SO5)	4/13/2022	N	Various, liver and kidney problems, increased risk of cancer

Unregulated Contaminants (See note at bottom of table)						
Per and Polyfluoroalkyl Substances (PFAS)	MCLG	MCL	Your Water Results (Source)	Sample Date	Violation (Y/N)	Potential Health Effects from Long-Term Exposure Above the MCL
(PFBS) PFbutane sulfonic acid (ppt)	Zero	NA	<b>2.92 (SO6)</b>	7/26/2022	N	Thyroid and kidney disease

(PFNA) PFnonanoic acid (ppt)	Zero	NA	<b>2.44 (SO6)</b>	7/26/2022	N	Liver function
(PFOA) PFOctanoic acid (ppt)	Zero	4 ppt	<b>2.26 (SO6)</b>	7/26/2022	N	Higher cholesterol, changes to liver function, reduced immune response, thyroid disease, and increased kidney and testicular cancer.
PFOS + PFOA (ppt)	Zero	NA	<b>2.26 (SO6)</b>	7/26/2022	N	See PFOA above (PFOS was ND)
PFOS + PFOA + PFHxS + PFNA (ppt)	Zero	NA	<b>4.70 (SO6)</b>	7/26/2022	N	See PFOA and PFNA above (PFOS, PFHxS were ND)
(PFBS) PFbutane sulfonic acid	Zero	NA	<b>2.32 (SO20)</b>	5/5/2022	N	Thyroid and kidney function
(PFBS) PFbutane sulfonic acid (ppt)	Zero	NA	<b>3.06 (SO6)</b>	5/5/2022	N	Thyroid and kidney function
(PFNA) PFnonanoic acid (ppt)	Zero	NA	<b>4.33 (SO6)</b>	5/5/2022	N	Liver function
(PFOA) PFOctanoic acid (ppt)	Zero	4 ppt	<b>2.75 (SO6)</b>	5/5/2022	N	Higher cholesterol, changes to liver function, reduced immune response, thyroid disease, and increased kidney and testicular cancer
PFOS + PFOA (ppt)	Zero	NA	<b>2.75 (SO6)</b>	5/5/2022	N	See PFOA above (PFOS was ND)
PFOS + PFOA + PFHxS + PFNA (ppt)	Zero	NA	<b>7.08 (SO6)</b>	5/5/2022	N	See PFOA and PFNA above (PFOS, PFHxS were ND)
(PFBS) PFbutane sulfonic acid (ppt)	Zero	NA	<b>2.49 (SO5)</b>	5/5/2022	N	Surfactant, stain repellent
(PFBS) PFbutane sulfonic acid	Zero	NA	<b>2.16 (S20)</b>	3/14/2022	N	Surfactant stain repellent
(PFBS) PFbutane sulfonic acid (ppt)	Zero	NA	<b>3.12 (SO6)</b>	3/15/2022	N	Thyroid and kidney function
(PFBS) PFhexane sulfonic acid (ppt)	Zero	NA	<b>2.34 (SO6)</b>	3/15/2022	N	Neurological disorders, birth weight, breast cancer
(PFNA) PFnonanoic acid (ppt)	Zero	NA	<b>4.06 (SO6)</b>	3/15/2022	N	Liver function

(PFOS) PFOctane sulfonic acid (ppt)	Zero	4 ppt	<b>2.55 (SO6)</b>	3/15/2022	N	Higher cholesterol, changes to liver function, reduced immune response, thyroid disease, and increased kidney and testicular cancer.
(PFOA) PFOctanoic acid (ppt)	Zero	4 ppt	<b>2.9 (SO6)</b>	3/15/2022	N	Higher cholesterol, changes to liver function, reduced immune response, thyroid disease, and increased kidney and testicular cancer.
PFOS & PFOA (ppt)	Zero	NA	<b>5.45 (SO6)</b>	3/15/2022	N	See PFOS and PFOA effects above.
PFOS + PFOA + PFHxS + PFNA (ppt)	Zero	NA	<b>11.85 (SO6)</b>	3/15/2022	N	See PFOS and PFOA effects above. (PFHxS, PFNA were ND)
(PFBS) PFbutane sulfonic acid (ppt)	Zero	NA	<b>2.15 (SO5)</b>	3/15/2022	N	Surfactant, stain repellent
25 different PFAS contaminants (ppt)	Zero	NA	<b>ND (SO11, SO14, SO15, SO19)</b>	3/14/2022, 3/15/2022	N	See above

Notes: PFAS are currently going through the Unregulated Contaminant Monitoring Rule 5 (UCMR 5) process under the Clean Drinking Water Act. More samples will be taken in September 2023 under this UCMR 5 program as MCLs become more formalized under law. Currently, only PFOA and PFOS have proposed MCLs (4 ppt for each). PFOS results varied between sample dates at SO6, likely because concentrations are very close to the testing method detection limit of 2 parts per trillion. That also means that despite PFAS not being detected in some sources, they may be present at non-detectable levels below 2 ppt. The origin of these contaminants is unknown, but based on nitrate concentrations and well locations, the source could be wastewater discharge from nearby fully functional septic systems discharging return flow to the water table.