

Quimper Drinking Water Report 2017

Reporting

To comply with the Safe Drinking Water Act amendments, Jefferson County PUD #1 is issuing this annual report on water quality monitoring performed in calendar year 2016. The purpose of the report is to educate consumers about their drinking water and the need to protect and conserve this essential resource. Your water system manager is Eric Storey. Eric Storey can be contacted at (360) 301-1799. **Our drinking water is a finite resource. Please use water wisely! You can find conservation tips on our web site at jeffpud.org. FREE conservation kits are available at the PUD office in Port Hadlock.**

Your Water Sources

There are multiple groundwater wells serving the Quimper water system. The Sparling Wellfield (Sources 4, 5 and 20) and treatment plants at the corner of Rhody Drive and Kennedy St. in Port Hadlock provide most of the water for the system, over 1,000 gallons per minute during peak season. Your principle source depends on where you live: the Woodland Hills/Kala Point area is served primarily by four wells, the Airport well (Source 14), Willison Ave well (Source 11) and two Kala Point wells (Source 18, 19). Marrowstone and Indian Island are largely served by the Kivley well (Source 6) SE of Mountain Propane. There is also a well that serves most of Olympic Mobile Village (Source 15) and surrounding area around Four Corners. Treatment is required to remove iron and manganese at most sources. In order to reduce risk of corrosion, all of the Quimper water system is treated to prevent lead and copper from older pumping systems entering your drinking water. Source capacity was expanded in 2016 with an additional well at the Sparling wellfield (Source 20) as well as treatment capacity to accommodate the South Hastings Loop (Jefferson LUD3) system. LUD3 had to intertie with the Quimper water system once the City of Port Townsend's new water treatment plant came online late in 2016.

Potential Contaminants

In order to ensure that tap water is safe to drink, the EPA and the State of Washington prescribe regulations limiting the amount of certain contaminants in water that can be provided by public water systems. *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 (1-800-426-4791 or Sophia Petro at the State DOH (360-236-3046)).*

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 dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in the source water include:

Microbial contaminants, such as viruses, protozoans, and bacteria, which may come from 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, 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 can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants normally come from the radioactive decay of naturally occurring rocks and minerals and are known to cause cancer.

EPA Regulated Primary Contaminants

The data presented in the tables (following pages) is from testing done January 1- December 31, 2016 only. The State requires us to monitor for certain contaminants less than once per year because concentrations of these contaminants are not expected to vary significantly from year to year based on previous results. The EPA regulates monitoring of over 80 contaminants. Presence of contaminants in the water does not necessarily suggest the water poses a significant health risk.

Disinfection By-Products

The PUD uses chlorine as a disinfectant. When chlorine encounters organic compounds, particularly within the distribution system, it can form Trihalomethanes (THM's) and haloacetic acids (HAA5) which can cause kidney and liver problems as well as cancer with significant exposure over time.

Nitrate - Infants below the age of six months who drink water-containing nitrate in excess of the MCL could become seriously or fatally ill from "blue baby syndrome". Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Arsenic - While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. In 2015, wells that showed trace amounts of arsenic include Olympic Mobile Village and Kala Point (well 4). Of the wells that have trace amounts of arsenic, all are below the EPA regulatory standard of 10 ppb.

Lead and copper – The PUD on a once per 3-year schedule samples 20 random households within the Quimper water system for lead and copper. The PUD was not scheduled to sample last year (last sampled in 2013) and at that time no sampling tested above the Action Level for either lead or copper. Regardless, as a precaution, the PUD treats the system with an anti-corrosive agent called orthophosphate to prevent lead from getting into 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 water for drinking or cooking. 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

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. Such 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

More Information - We are happy to answer any questions you may have about your drinking water. Your water distribution manager is Eric Storey at 301-1799 if you have system questions. For questions about this report contact the office at 385-8375, or email bgraham@jeffpud.org. Search for more water test results for the Quimper System at www4.doh.wa.gov/SentryInternet/, search term "Quimper".

Public Comment - The public is invited to participate in decisions that affect drinking water through the Jefferson County PUD #1 Board of Commissioners (BOC). Your district is District 2 and your commissioner is Ken Collins. The BOC meets on the first and third Tuesdays of each month at 5:00 PM at the office in Port Hadlock at 230 Chimacum Road in Port Hadlock.

Definitions

<p>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.</p> <p>ND: none detected</p> <p>pCi/l: Pico curies per liter, measure of radioactivity</p> <p>ppm: parts per million or milligrams per liter.</p> <p>ppb: parts per billion</p> <p>n/a: Not applicable</p>	<p>Definitions:</p> <p>Action Level (AL): The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.</p> <p>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 technology.</p> <p>Presence/Absence: Indicates positive/negative test for bacteria.</p> <p>SO#: Source number listed with WA Dept of Health</p>
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Notable sample results from distribution within the Quimper water system.

Coliform bacteria – On 6/1/2016, a water sample within distribution came back indicating “presence” of coliform bacteria. A subsequent sample was required and in the second sample coliform bacteria was absent suggesting the first sample was contaminated and not representative of water at that site. No other samples taken in 2016 indicated the presence of coliform bacteria.

Disinfectant byproducts – The disinfectant byproducts total trihalomethanes and halo-acetic acids (HAA5) are two groups of regulated compounds resulting from the chlorination process when it reacts with organic carbon. The Sparling wellfield aquifer water table varies seasonally. When the water table rises in the winter and spring, organic material - likely from peat beds in the aquifer itself - increases in concentration in our raw water. The organic matter is challenging to treat as it also complicates our iron and manganese treatment. The 2/16/2016 sample taken from Blue Ridge Road was less than 1 ppb above the MCL for HAA5 at 60.8 ppb. This was likely due to the high seasonal concentrations of organic carbon in the water. Note that a sample taken at the same location 6 months later (8/3/2016) had little less than half the amount from the previous sample taken in February (2/16/2016).

Lead and copper – Lead and copper in distribution are the result of corrosion of household plumbing. The PUD adds a type of phosphate to the water to reduce its corrosive impact on your plumbing and keep copper and lead from reaching unhealthful levels. The PUD regularly and randomly tests for lead and copper annually. One lead sample was over the Action Level in 2016 at 18 ppb. Note that 18 Of 20 samples did not detect lead. Our Quimper groundwater sources in general are non-corrosive.

Water Quality Results – Quimper Distribution

Source (Source #)	Date of sample	Contaminant	MCL or Action Level	MCLG	Results	Violation	Typical Source of Contaminant
Distribution (Baycliff Place)	6/1/2016	Coliform bacteria	Presence	NA	Presence	No*	*Likely a sampling error; not reproduced
Distribution (Baycliff Place)	6/3/2016	Coliform bacteria	Absence	NA	Presence	No*	Animal and human waste, septic discharge
Distribution (Blue Ridge Road)	8/3/2016	Halo acetic acids (HAA5)	60 ppb	n/a	29.2 ppb	No	Byproduct of chlorination
Distribution (Blue Ridge Road)	5/4/2016	Halo acetic acids (HAA5)	60 ppb	n/a	27.8 ppb	No	Byproduct of chlorination
Distribution (Blue Ridge Road)	2/16/2016	Halo acetic acids (HAA5)	60 ppb	n/a	60.8 ppb	Yes	Byproduct of chlorination
Distribution (Oak Road)	8/3/2016	Total Trihalomethanes (TTM)	80 ppb	zero	35.5 ppb	No	Byproduct of chlorination
Distribution (Oak Road)	8/3/2016	Halo acetic acids (HAA5)	60 ppb	n/a	22.3 ppb	No	Byproduct of chlorination
Distribution (Oak Road)	5/25/2016	Total Trihalomethanes (TTM)	80 ppb	zero	52.8 ppb	No	Byproduct of chlorination
Distribution (Oak Road)	5/25/2016	Halo acetic acids (HAA5)	60 ppb	n/a	25.0 ppb	No	Byproduct of chlorination
Distribution (20 random addresses)	7/19/2016	Lead	15 ppb	zero	18 of 20 samples ND; range 1 ppb to 18 ppb	No, One sample over Action Level	Corrosion of plumbing; erosion of natural deposits
Distribution (20 random addresses)	7/19/2016	Copper	1.3 ppm	1.3 ppm	20 of 20 samples range from 0.03 to .91 ppm; mean 0.34 ppm	No	Corrosion of plumbing; erosion of natural deposits

Water Quality Results – Quimper Water System (Sources)

In 2016, pesticides and herbicides were tested for the New Sparling well (SO20). None were detected.

Source (Source #)	Date of Sample	Chemical Contaminant	MCL or Action Level	MCLG	Results	Violation	Typical Source of Contaminant
Kivley Well (SO6)	4/26/2016	Nitrate	10 mg/l	10 mg/l	1.97 mg/l	No	Septic discharge, human and animal waste
Willison well (SO11)	5/6/2015	Radium 228	5 pCi/l	zero	1 pCi/l	No	Natural occurring radioactive deposits
Willison well (SO11)	7/13/2016	Total Trihalomethanes (TTM)	80 ppb	zero	0.7 ppb	No	Byproduct of chlorination
Sparling well (SO5)	4/26/2016	Total Trihalomethanes (TTM)	80 ppb	zero	87.8 ppb	Yes	Byproduct of chlorination
Sparling well (SO5)	4/26/2016	Total Trihalomethanes (TTM)	80 ppb	zero	87.8 ppb	Yes	Byproduct of chlorination
Sparling well (SO5)	4/26/2016	Manganese	0.05 mg/l	NA	0.022 mg/l	Yes	Byproduct of chlorination
New Sparling well (SO20)	4/26/2016	Nitrate	10 mg/l	10 mg/l	0.12 mg/l	No	Septic discharge, human and animal waste
New Sparling well (SO20)	4/26/2016	Radium 228	5 pCi/l	zero	2.1 pCi/l	No	Natural occurring radioactive deposits
New Sparling well (SO20)	4/26/2016	Total Trihalomethanes (TTM)	80 ppb	zero	31.4 ppb	Yes	Byproduct of chlorination
Olympic Mobile Village Well (SO15)	4/26/2016	Nitrate	10 mg/l	10 mg/l	0.44 mg/l	No	Septic discharge, human and animal waste
Olympic Mobile Village Well (SO15)	4/26/2016	Radium 228	5 pCi/l	zero	1.0 pCi/l	No	Natural occurring radioactive deposits