



Jefferson County
Public Utility District

2024 Water Use Efficiency & Annual Water Quality Report

PWSID #02043P

Bywater Bay

System Report

Your water comes from three underground wells in the area. Each well taps into a different aquifer and plays a role in supplying clean, reliable water to our community. Source 1, the Shine Well, is 295 feet deep and off Stark Road, just north of Hwy 104. It draws water from a sand and gravel aquifer surrounded by forestland. Source 2, at the end of Alpine Court, is 323 feet deep and also pulls from a sand and gravel aquifer.

To keep your water safe and looking good, we treat it to remove iron and manganese (which can cause staining) with a small amount of chlorine to help with that process and to disinfect.

We're always working to ensure your water stays safe, clean, and dependable.



Jose Escalera
PUD Water Superintendent



Bywater Bay extension to Margaret Street customers.

Health Effects of Contaminates

Nitrates: As a precaution, we notify local doctors and health care providers if nitrate levels in the water exceed normal levels. Infants under six months old are especially at risk. Drinking water with nitrates above the maximum contaminant level (MCL) can cause serious illness or even death. Symptoms include shortness of breath and "blue baby" syndrome. Nitrate levels can rise suddenly due to rainfall or agricultural activity. If you care for an infant, consult your health care provider for guidance.

Total Coliform: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Arsenic: Your drinking water currently meets the EPA's standard for arsenic. However, arsenic is a mineral that can cause cancer at high levels and may also lead to skin damage and circulatory issues. The EPA continues to study the health effects of long-term exposure to low levels of arsenic.

Copper: Copper is an essential nutrient, but high levels in drinking water can be harmful. Short-term exposure above the action level may cause stomach upset. Long-term exposure may lead to liver or kidney damage. People with Wilson's Disease should consult their doctor about copper in their water.

Lead: 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 water with excess lead over many years could develop kidney problems or high blood pressure.

Manganese: Manganese is known to occur naturally in well water due to the type of rock a well may be drilled into. Concentrations above the national guidelines may contribute to problems with taste, odor and color of the water coming out of your tap.

Chloride, Sodium and Salt Water Intrusion: Chloride and sodium levels rise when a well begins to pump from an aquifer mixing with sea water.

Turbidity: (cloudiness in water) does not pose a direct health risk, but it

can reduce the effectiveness

of disinfection and support microbial growth. High turbidity may signal the presence of harmful organisms such as bacteria, viruses, and parasites, which can cause nausea, cramps, diarrhea, and headaches.



2024 Water Quality Summary Report - Bywater Bay - System ID #: 02043P

The table in this report shows the drinking water contaminants we detected during the calendar year. Their presence does not necessarily mean the water poses a health risk. Unless otherwise noted, all data is from testing conducted during the report year. Some contaminants are monitored less frequently, as their levels typically remain stable over time per EPA or state guidelines.

Contaminant	Source	Violation?	Results/Unit	MCLG	MCL	Sampling	Typical Source
Microbiological							
Total Coliform Bacteria	Dist	No	No Detect	Absence	Presence	One per month	Naturally present in the environment.
Primary Contaminants							
Nitrate (mg/L)	S01	No	No Detect	NA	10	4/25/23	Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits
	S02	No	No Detect	NA	10	4/25/23	
	S03	No	No Detect	NA	10	4/25/23	
Arsenic (ppb)	S01	No	8.0	0	10	4/18/22	Erosion of natural deposits, orchard runoff, glassware and electronics
	S02	No	4.7	0	10	6/14/23	
	S03	No	6.5	0	10	4/18/22	
Radionuclides							
Gross Alpha	S01	No	No Detect	0	15pCi/L	4/21/20	Erosion of natural deposits.
	S02	No	No Detect	0	15pCi/L	8/9/23	
	S03	No	No Detect	0	15pCi/L	4/22/21	
Radium 228	S01	No	No Detect	0	5pCi/L	4/21/20	Erosion of natural deposits.
	S02	No	No Detect	0	5pCi/L	8/9/23	
	S03	No	No Detect	0	5pCi/L	4/22/21	
Synthetic Organic Compounds (µg/L)							
Herbicides & Pesticides	S03	No	No Detect	Various	Various	10/6/21	Various.
Volatile Organic Compounds (µg/L)							
Toluene (ppb)	S03	No	0.54^	1,000	1.000	4/22/21	Discharge from petroleum factories; residue on pump.
Disinfectant Byproducts							
Haloacetic Acids (HAA5) (ppb)	Dist	No	5.7	0	60	11/7/23	Byproduct of Chlorination.
Total Trihalomethanes (TTHMs) (ppb)	Dist	No	23.8	0	80	11/7/23	Byproduct of Chlorination. (Chloroform detected)
Contaminant	Source	Violation?	Results/Unit	MCLG	AL	Sampling	Typical Source
Lead & Copper (taken at customer's tap)							
Lead (ppb)	Dist	No	*6/10 homes ND	0	15	5/8/24	Corrosion of plumbing and pipes. 90th percentile is 4ppb. *None above action level
Copper (mg/L)	Dist	No	*3/10 homes ND	0	1.3	5/8/24	Corrosion of plumbing and pipes. 90th percentile is 0.11ppm. *None above action level. Homes provided results.
Per and Polyfluoroalkyl Substances (PFAS)							
Per and Polyfluoroalkyl Substances (25 total) (ppt)	S01	No	No Detect	0	Variable	6/13/23	Wastewater discharge, runoff from landfills, fire extinguishing foam, electronics, textiles, food, packaging, etc.
	S02	No	No Detect	0	Variable	6/13/23	
	S03	No	No Detect	0	Variable	6/13/23	
Contaminant	Source	Violation?	Results/Unit	MCLG	MRDL	Sampling	Typical Source
Residual Disinfectant							
Sodium Hypochlorite (as Cl²)	All	No	0.07 – 0.19	4	4	One per month	Disinfectant; residual water additive to control microbes.
Contaminant	Source	Violation?	Results/Unit	MCLG	SMCL	Sampling	Typical Source
Secondary Unregulated Contaminants							
Chlorine (mg/L as Cl)	S01	No	7.38	N/A	250mg/L	10/9/24	Naturally occurring in environment; seawater intrusion.
		No	4.72			7/17/24	
		No	6.75			4/9/24	
		No	6.18			1/9/24	
	S02	No	21.6	N/A	250mg/L	10/9/24	
		No	15.8			7/17/24	
		No	18.4			4/9/24	
		No	19.8			1/9/24	
	S03	No	3.34	N/A	250mg/L	10/9/24	
		No	2.89			7/17/24	
		No	3.35			4/9/24	
		No	3.22			1/9/24	

Utility Meetings

Jefferson PUD is customer-owned. If you wish to attend a board meeting, the PUD board provides both in-person and hybrid options for meetings every first and third Tuesday of each month, and the second Tuesday in December. In-person attendance is in our 310 Four Corners Road conference room. For details, visit: jeffpud.org for more information on how to attend. To learn more about how the PUD manages your water system, please visit: jeffpud.org/water-quality-and-safety

BYWATER BAY - WATER USE EFFICICENCY REPORT

With increasing pressure from drought and climate impacts, population growth, and limited water rights, long-term water disruptions are a real concern. Our Water Use Efficiency (WUE) program takes a

proactive approach by supporting water supply reliability and public health, promoting responsible water stewardship, and improving efficiency of water systems.

Definitions

Authorized Consumption (AC): Volume of water used by consumers as shown through meter readings, fire-fighting, system flushing, tank cleaning and street cleaning.

Average Daily Demand (ADD): Average volume of water a typical single family home uses each day.

Distribution System Leakage (DSL): Water lost from

the system through leaking pipes, illegal water use, volume difference of total water produced and authorized consumption (TP-AC). $\text{Percent DSL} = \frac{(\text{TP}-\text{AC})}{\text{TP}} \times 100\%$

Total Water Produced (TP): Volume of water pumped from a well, diverted from a surface water or purchased from another system.

Bywater Bay System	
Water Produced	17,478,190 gallons
Water Consumed	16,408,452 gallons
Distribution System Leakage (DSL)	6.1%
3-Year Average DSL	4.2%
Gallons Per Day Per Customer Goal (GPD)	199
GPD per Customer	159
Total Water Saved per Customer	14,600 gallons
Total Water Saved by Utility	1,021,810 gallons

Important Information About Drinking Water Quality

Drinking water—including bottled water—may contain small amounts of some contaminants. This is normal and does not necessarily mean the water poses a health risk. For more information about contaminants and their potential health effects, you can contact the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Certain individuals may be more vulnerable to contaminants in drinking water than the general population. This includes people with weakened immune systems, such as those undergoing chemotherapy, individuals who have had organ transplants, people with HIV/AIDS or other immune disorders, some elderly individuals, and infants. These people should consult their healthcare providers for advice on drinking water safety. The EPA and CDC offer guidelines to help reduce

the risk of infection from microbial contaminants like *Cryptosporidium*. These guidelines are also available through the Safe Drinking Water Hotline.

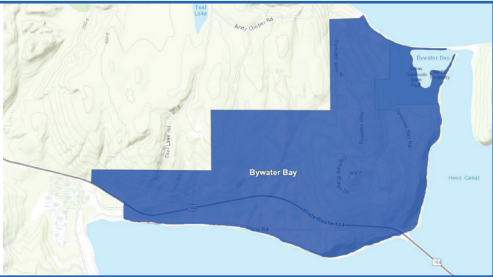
To protect public health, the EPA sets Maximum Contaminant Levels (MCLs) for regulated substances. These limits are very strict. To put this in perspective, a person would have to drink 2 liters of water at the MCL every day for a lifetime to have only a one-in-a-million chance of experiencing a health effect.

Drinking water sources—whether tap or bottled—include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water moves across land or through the ground, it can pick up naturally occurring minerals, radioactive materials, and substances resulting from animal or human activity.

Source Susceptibility Rating

Water source susceptibility rating refers to the vulnerable a public water system's source is to contamination.

Wellhead Assessment Rating	Wellhead Number	A copy of the source susceptibility report submitted to the WA State Dept of Health is available upon request.
Low	S01	
Low	S02	
High	S03	



Please take a moment to complete the brief online questionnaire by visiting: jeffpud.org/water-use-questionnaire. Your feedback helps us identify areas that could pose a higher risk of contamination and helps us protect our shared water supply and ensure we're meeting safety standards.

jeffpud.org • (360) 385-5800 • Bill Graham - Resource Manager • bgraham@jeffpud.org

State Waivers

Waivers mean no testing or modified testing frequency for a specified contaminant is required for a set period of time. The Washington State Department of Health reduced the monitoring requirements for SOC (pesticides) and Soil Fumigants because the source is not at risk of contamination. The PUD was found to meet all applicable standards.

Inorganic Contaminants: 1 sample every 9 years;

Synthetic Organic Contaminants (herbicides): 1 sample every 9 years;

Volatile Organic Contaminants: 1 sample every 6 years;

Dioxin, Diquat, Endothal, Glyphosphate, Insecticides: complete waivers;

Asbestos: no samples through 2025.

Per-and Polyfluoroalkyl Substances (PFAS): no samples through 2025.

Unregulated Contaminants Statement

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.

Secondary Contaminants Statement

Secondary contaminant standards are developed to protect the aesthetic (taste, color and odor) qualities of drinking water and are not health based. Secondary contaminants include iron, manganese, silver, chloride, sulfate and zinc. Exceeding the MCL for any of these secondary contaminants does not mean the water system is in violation of the state or federal standard.

Tap Water & Bottle Water Safety

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

Washington State Office of Drinking Water – Lead Statement

In Washington State, lead in drinking water comes primarily from materials and components used in household plumbing and service lines. Jefferson PUD is responsible for providing high quality water, but cannot control the variety of materials used in plumbing components. Elevated levels of lead can cause serious health problems, especially in pregnant women and young children. To help reduce potential exposure to lead: for any drinking water tap that has not been used for 6 hours or more, flush water for thirty (30) seconds to two (2) minutes through the tap until the water is noticeably colder before using for drinking or cooking. You can use the flushed water for watering plants, washing dishes or general cleaning. Only use water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from EPA's Safe Drinking Water Hotline at 1-800-426-4791 or online at <http://www.epa.gov/safewater/lead>.

Contaminants that May Be Present in Water

Microbial contaminants, such as viruses, parasites and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic contaminants, such as salts and metals, which can be occur naturally or result from urban storm water 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 storm water runoff and residential uses.

Radioactive contaminants which can occur naturally or result from oil and gas production and mining activities.

Organic chemical contaminants, including synthetic and volatile chemicals, which are by-products of industrial processes and petroleum production. Also from gas stations, urban storm water runoff and septic systems.

Terms and Abrevitions for Water Table

Action Level (AL): The concentration of a contaminant that, if exceeded, requires a water system to take specific treatment or corrective actions.

Lead and Copper 90th Percentile: Indicates that 90% of homes tested had lead or copper levels at or below this value.

Maximum Contaminant Level (MCL): The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as possible, based on the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant below which there is no known or expected risk to health. MCLGs include a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest amount of a disinfectant (like chlorine) allowed in drinking water. Disinfectants are used to control microbes.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant below which there is no known or expected health risk. MRDLGs do not account for the benefits of using disinfectants.

N/A (Not Applicable): Indicates the term or value does not apply in a given context.

Nephelometric Turbidity Unit (NTU): A measure of water clarity. Turbidity above 5 NTU is usually noticeable to the average person.

Non-Detects (ND): Lab analysis did not find the contaminant in the water sample.

Parts per Billion (ppb) / Micrograms per Liter (µg/L): One part contaminant per billion parts of water—equivalent to 1 teaspoon in a 4-acre lake that is 1-foot deep, or 1 teaspoon in 1.32 billion gallons.

Parts per Million (ppm) / Milligrams per Liter (mg/L): One part contaminant per million parts of water—equivalent to 1 teaspoon in 1,320 gallons of water.

Secondary Maximum Contaminant Level (SMCL): Guidelines set to protect the look, taste, and smell of drinking water. These are not based on health concerns.

State Reporting Level (SRL): The minimum level of a contaminant that must be reported to state regulatory agencies.

Treatment Technique (TT): A required treatment process used to reduce the level of a contaminant in drinking water.

< (Less Than): Indicates the amount of a substance is below the detection limit or a regulatory threshold.