2023 Consumer Confidence Report Bywater Bay Water System (ID# 02043P)			
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Environmental Protection Agency (EPA) Drinking Water Hotline	----	1-800-426-4791	-----

The Bywater Bay water system is owned, operated, and managed by PUD No.1 of Jefferson County located south of Port Ludlow. Your district commissioner is Dan Toepper. 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 in Port Townsend every first and third Tuesday and second Tuesday in December. For details, go to jeffpud.org for more information on how to attend.

Your water comes from three groundwater wells. Sources 1 – Shine well 1- is 295 feet deep, Source 02 – Alpine Ct well - is 323 feet deep, and Source 03 – the Reynolds well - is 400 feet deep. Source 1 is located about 2 miles west of Stark Road and 750 feet north of State Route 104 surrounded by vacant Olympic Property Group designated forest land. It is screened in a sand and gravel aquifer. Source 2 is located at the end of Alpine Court and is also screened in a sand and gravel aquifer. Source 3 is located off Teal Lake Road and accesses a bedrock aquifer. For Source 1 and 2, we remove the iron and manganese from the water to reduce staining and chlorinate it to facilitate the process as well as disinfect against microbial contaminants. Source 3 has produced high chlorides after prolonged use and has been offline since 2022, ultimately to be evaluated for a reduced pumping schedule or possible replacement.

Source Number (Well ID#)	*Susceptibility Rating*
SO1 (AAB869)	Low
SO2 (AAB870	Low
SO3 (ABP999)	High

Susceptibility reports for each source which are the basis for the ratings above are available upon request.

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).

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).

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 use your hot water tap for any food or drink preparation. 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.

Arsenic in Your Drinking Water:
Your drinking water currently meets EPA's revised drinking water standard for arsenic. However, it does contain low levels of arsenic. In 2022, arsenic concentrations of 8 ppb in SO1, 4.7 ppb in SO2 (in 2023) and 6.5 ppb in SO3 were detected. 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.

PFAS Sampling Done In 2023
Bywater Bay was sampled for per and polyfluoroalkyl substances (PFAS) otherwise known as "forever chemicals) in 2023. Results for all sources were below the detection limit of 2 parts per trillion (ppt) for the testing method. Note that even if the detection limit is 2 parts per trillion, it doesn't mean that the tested PFAS chemical is not present in concentrations lower than 2 ppt.

State and Federal Regulations
The tables below list the drinking water tests for the 2023 calendar year. We are required to test for certain compounds less than once per year because we are granted waivers for certain types of compounds that are highly unlikely to occur at a particular location. To ensure that tap water is safe to drink, the Department of Health and EPA prescribe regulations that limit the amounts 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.

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:

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**.** **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.	**Action Level (AL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. **Treatment technique (TT):** A required process intended to reduce the level of a contaminant in drinking water if MCL is exceeded. **ND:** none detected

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.

Presence/Absence: Indicates positive/negative test for bacteria.

SO: Source number listed with WA Dept of Health.

pCi/l: Pico curies per liter, measure of radioactivity.

ppm: parts per million or milligrams per liter (mg/L).

ppb: parts per billion or micrograms per liter (µg/L).

ppt: parts per trillion or nanograms per liter (ng/L).

n/a: Not applicable.

Secondary Maximum Contaminant Level (SMCL): These standards are developed to protect the aesthetic qualities of drinking water and are not health based**.**

Testing Type	Last Testing Date in Last 5 years (Source #)
Microorganisms (Total Coliform Bacteria)	**Monthly (Distribution)**
Nitrate	**Annual (All Sources)**
Arsenic	**2022 (S01, SO2 & SO3)**
Chloride	**2021 (All sources)**
Lead & Copper	**2022 (Distribution)**
Inorganic Compounds	**2022 (SO3) , 2023 (SO2)**
Volatile Organic Compounds	**2019 (SO1), 2021 (SO2 & SO3)**
Disinfectant Byproducts	**2020 (Distribution)**
Radionuclides	**2017 (SO2), 2020 (SO1), 2021 (SO3)**
Herbicide, Insecticide and/or Pesticide	**2018, 2019, 2021 (Various, See Below)**
PFAS	**2023**

Primary Regulated Contaminants						
Microbiological (Distribution)	**MCLG**	**MCL**	**Your Water Results**	**Sample Date**	**Violation (Y/N)**	**Typical Sources**
Total Coliform Bacteria	Absence	Presence	**Absence**	Once per month	N	Naturally present in the environment
Disinfectant Residual (mg/L)	MCLG	MCL	Your Water Results	Sample Date	Violation (Y/N)	Typical Sources

Sodium hypochlorite (as Cl_2)	4	4	**0.07 – 0.19**	Monthly	N	Water additive to control microbes
Inorganic Compounds (Primary Contaminants)	**MCLG**	**MCL**	**Your Water Results (Source)**	**Sample Date**	**Violation (Y/N)**	**Typical Sources**
Nitrate (mg/L) (SO1)	10	10	**ND**	4/25/2023	N	Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits.
(SO2)			**ND**	4/25/2023	N	
(SO3)			**ND**	4/25/2023	N	
Arsenic (ppb) (SO1)	Zero	10	**8.0**	4/18/2022	N	Erosion of natural deposits; runoff from orchards, runoff from glass and electronics production wastes
(SO2)			**4.7**	6/14/2023	N	
(SO3)			**6.5**	4/18/2022	N	
Lead and Copper (mg/L) ***(Distribution)***	**AL**	**No. of Homes Sampled**	**Results at Homes**	**Sample Date**	**Violation (Y/N)**	**Typical Sources**
Lead (ppb)	15	10	**6 homes were ND, 90th percentile was 9.4 ppb, none above action level**	2/11/2022	N	Corrosion of household plumbing, erosion of natural deposits
Copper (ppm)	1.3	10	**2 homes were ND, 90th percentile was 0.11 ppm, non above action level**	2/11/2022	N	Corrosion of household plumbing; erosion of natural deposits
Radionuclide (Source 1 & 3)	**MCLG**	**MCL**	**Your Water Results**	**Sample Date**	**Violation (Y/N)**	**Typical Sources**
Gross Alpha (pCi/L) (SO1)	0	15	ND	4/21/2020	N	Erosion of natural deposits

Gross Alpha (pCi/L) (SO2)	0	15	ND	8/9/2023	N	Erosion of natural deposits
Gross Alpha (pCi/L) (SO3)	0	15	ND	4/22/2021	N	Erosion of natural deposits
Radium 228 (pCi/L) (SO1)	0	5	ND	4/21/2020	N	Erosion of natural deposits
Radium 228 (pCi/L) (SO2)	0	5	0.373	8/9/2023	N	Erosion of natural deposits
Radium 228 (pCi/L) (SO3)	0	5	ND	4/22/2021	N	Erosion of natural deposits
Synthetic Organic Compounds (µg/L)	**MCLG**	**MCL**	**Your Water Results**	**Sample Date**	**Violation (Y/N)**	**Typical Sources**
Herbicides & Pesticides (SO3)	Various	Various	ND	10/6/2021	N	Various
Volatile Organic Compounds (µg/L)	**MCLG**	**MCL**	**Your Water Results**	**Sample Date**	**Violation (Y/N)**	**Typical Sources**
Toluene (ppb) (SO3)	1,000	1.000	0.54 ^	4/22/2021	N	Discharge from petroleum factories, residue on pump
Disinfectant Byproducts µg/L) (Distribution)	**MCLG**	**MCL**	**Your Water Results (4205 Paradise Bay Road)**	**Sample Date**	**Violation (Y/N)**	**Typical Sources**
Haloacetic Acids (HAA5) (ppb)	Zero	60	5.7	11/7/2023	N	Byproduct of chlorination (Chloroform detected)

Total Trihalomethanes (TTHMs) (ppb)	Zero	80	23.8	11/7/2023	N	Byproduct of chlorination (Chloroform detected)

Per-and Polyfluoroalkyl Substances (PFAS)	MCLG	MCL	Your Water Results	Sample Date	Violation(Y/N)	Typical Sources
PFAS 25 different chemicals)	0	Variable	ND	6/26/2023	N	Fluoropolymer coatings and products that resist heat, oil, stains, grease, and water

Secondary Unregulated Contaminants						
Inorganic Compounds)	**MCLG**	**SMCL**	**Your Water Results**	**Sample Date**	**Violation (Y/N)**	**Typical Sources**
Chlorine (mg/l) (SO1)	NA	250 mg/L	6.27 mg/l	12/7/2023	N	Naturally occurring in environment; seawater intrusion
			6.78 mg/l	8/16/2023	N	
			6.81 mg/l	3/28/2023	N	
Chlorine (mg/l) (SO2)	NA	250 mg/L	18.7 mg/l	12/7/2023	N	Naturally occurring in environment; seawater intrusion
			21.6 mg/l	6/14/2023	N	
			21.4 mg/l	8/16/2023	N	
			25.1 mg/l	3/28/2023	N	
Chlorine (mg/l) (SO3)	NA	250 mg/L	3.41 mg/l	12/7/2023	N	Naturally occurring in environment; seawater intrusion
			4.11 mg/l	8/16/2023	N	
			9.58 mg/l	3/28/2023	N	

The Washington State Department of Health (WA DOH) reduced the monitoring requirements for [name of monitoring group(s)] because the source is not at risk of contamination. The last sample collected for these contaminants was taken on [date(s)] and was found to meet all applicable standards.

Source	Monitoring Group	Sample Frequency with Waiver	Last Sampled	Due (set by WA DOH)
SO1	Complete Inorganic (IOC)	9 year	2019	2028
	Volatile Organic (VOC)	6 year	2019	2025
	Herbicides	9 year	2018	2027
	Pesticides	3 year	2009	Not scheduled
	Soil Fumigants	3 year	None	Not scheduled
SO2	Complete Inorganic (IOC)	9 year	2023	Not scheduled
	Volatile Organic (VOC)	6 year	2021	Not scheduled
	Herbicides	9 year	2018	2027
	Pesticides	3 year	2009	Not scheduled
SO3	Volatile Organic (VOC)	6 year	2021	Not scheduled
	Herbicides	9 year	2021	2030
	Pesticides	3 year	2012	Not scheduled

All PUD water system water quality data for sources and distribution can be found at the WA Department of Health Sentry Internet website at https://fortress.wa.gov/doh/eh/portal/odw/si/. Search “Bywater Bay”.

Notes:

^ Toluene detected in SO3; two follow-up tests performed 7/1/2021 and 10/6/2021 did not detect toluene.