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Drinking Water Quality Report for Sierra Water System

Pierce County
Water System ID #04643

2022

In this report, you will find information about:

YOUR WATER

Your Water System
Source Water Protection
Cross-Connection Control

TEST RESULTS

Possible Contaminants
Key Table Definitions
Lead Information
Water Quality Table
Bonney Lake Water Quality Table

WHERE DOES MY WATER COME FROM?

The water source for this system is a neighborhood well located in the Sierra development in Buckley. The well is 240 feet deep and capable of pumping 120 gallons per minute.

OTHER SOURCE RESULTS:

Due to the emergency well repair done in November of 2022, water purchased from the City of Bonney Lake was trucked to the Sierra system. The last page of this report contains the water quality information provided to us by the City of Bonney Lake.

HOW IS MY WATER TREATED?

Your water is treated by filtration and disinfection. Filtration removes particles suspended in the source water. Particles typically include clays and silts, natural organic matter, iron and manganese, and microorganisms. Disinfection involves the addition of chlorine or other disinfectants to kill dangerous bacteria and microorganisms (viruses, cysts, etc.) that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

We are proud to report that this system meets all state and federal guidelines for regulated contaminants, and is significantly below the EPA's required safety levels.

Water Quality Report Information



Valley Water District is pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with information because informed customers are our best allies.

Valley Water District vigilantly safeguards and routinely monitors your drinking water. We are providing this report as a snapshot of water quality monitoring for the calendar year of the report (unless otherwise noted). The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old.

How Can I Get Involved?

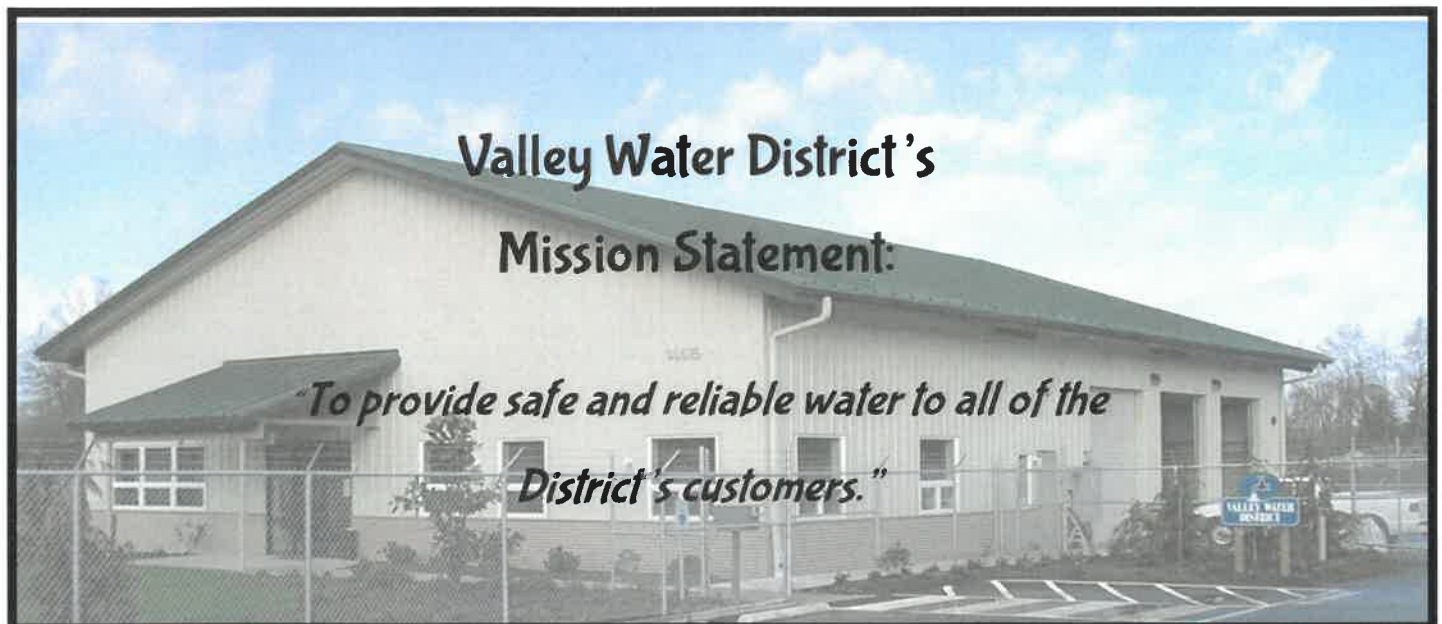
We want our valued customers to be informed about their water utility. If you would like to learn more, please attend any regularly scheduled Board Meeting held at the District Office on the first and third Monday of each month, at 2:00pm.

Questions?

If you have any questions about the information in this report, or any concern regarding water quality and the services we deliver every day, please contact the District office at 253-841-9698.

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Visit www.wateruseitwisely.com for great water saving tips!



Possible Contaminants

Common sources of drinking water—both tap and bottled water—include rivers, lakes, streams, ponds, and reservoirs (surface water), and wells and springs (groundwater).

As water travels over the surface of the land or through the ground, naturally occurring minerals and, in some cases, radioactive materials dissolve in the water.

Water can also pick up substances resulting from the presence of animals or human activity.

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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

Contaminants that may be present in source water include:

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

Inorganic contaminants, such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.

Pesticides and herbicides, which may come from various sources such as agriculture, urban stormwater runoff, and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals which are by-products of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff, and septic systems.

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

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which 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. Immunocompromised 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.

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 or down the drain. This includes motor oil, pesticides, paint, household cleaners, medicines, etc.

Check the SWAP information for your water system:

The WA State Department of Health Office of Drinking Water has compiled Source Water Assessment Program (SWAP) data for all community water systems. An interactive map with data for your water system is available at: <https://fortress.wa.gov/doh/swap/index.html>

Cross-Connection Control Survey

The purpose of this survey is to determine whether a cross-connection may exist at your home or business.

A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system.

Valley Water District is responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system.

If you have any of the devices listed below, please contact us so that we can discuss the issue, and if needed, survey your connection and assist you in isolating it if that is necessary.

Do you have one of these at your home or business?

- Lawn irrigation system
- Pool or hot tub
- Decorative pond or fountain
- Watering trough
- Fire sprinkler system
- Additional source(s) of water on the property



If you do, Washington State law may require that you have a "Backflow Prevention Assembly". The purpose of this device is to provide "cross connection control" - preventing contaminated water from flowing back into your drinking water - a serious health hazard.

However, even the best Backflow Prevention Assembly can fail because of freezing, debris, improper installation and unapproved plumbing connections. For this reason, the state's Department of Health requires these devices to be tested annually by a certified backflow assembly tester, with a copy of the test record sent to Valley Water District.

Customers with a BACKFLOW ASSEMBLY:

Consider "Opting In" to our TESTING PROGRAM!

In 2018, the District created a program that allows customers with backflow devices that are required to have annual testing done to "OPT IN" and have the District coordinate with a contractor to perform the test at a significantly reduced rate of \$28.00 per device (most testers charge \$40-\$90 per device). It's not too late to opt in if you haven't yet, you can find the Backflow Testing Agreement on the District website at www.valleywaterdistrict.com under FORMS.



If you are already opted in...no need to worry about future testing. Every year between May and September, the District will automatically have the contractor, Randy Horne with Aqua Backflow Testing, perform the testing for each property that has opted in.

KEY TABLE DEFINITIONS

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

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to 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.

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.

Minimum Reporting Level (MRL): Also known as the Method Reporting Limit: The smallest amount of a substance that can be reliably quantitated in sample.

NA: Not Applicable

Nephelometric Turbidity Unit (NTU): a standard to measure water clarity.

Not Detected (ND): This compound was analyzed and not detected at a level greater than or equal to the State Detection Reporting Level.

PPB = Parts per billion

PPM = Parts per million

Ug/L = Microgram per liter

µmhos/cm = The basic unit of measurement of conductivity.

mg/L = milligrams per liter

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

State Detection Reporting Limit (SDRL): The minimum reportable detection of an analyte as established by DOH.

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

Variations and Exemptions: State or EPA permission not to meet an MCL, an action level, or a treatment technique under certain conditions.

Information About Lead...

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. Valley Water District 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 1-800-426-4791 or online at <http://www.epa.gov/safewater/lead>.

About Monitoring Waivers

Organic Chemicals

Drinking water sources are sampled and tested a minimum of every six to nine years for an array of organic chemicals including volatile organic chemicals (VOCs) and synthetic organic chemicals (SOCs), such as herbicides and pesticides. VOCs are byproducts of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff, and septic systems.

Sampling frequencies for these groups of organic chemicals can vary depending on where the 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 across the state.

If there were detections of organic contaminants obtained during the most recent round of compliance monitoring, they are shown in the water quality data tables.

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 were any detections obtained during the most recent round of compliance monitoring, they are shown in the water quality data tables.



Water Quality Data 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 (if applicable) lists secondary contaminants of interest to many consumers, as well as any unregulated contaminant detections. Secondary contaminants can mainly 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.

Water Quality Testing Results for 2022 Sierra Water System

Table 1: PRIMARY CONTAMINANTS:

Contaminants	Unit	MCLG	MCL	Your Water	Range		Sample Date	Violation?	Typical Source
					Low	High			
Disinfectants & Disinfection By-Products									
Haloacetic Acids	ppb	NA	60	4.84	NA	NA	2020	No	By-product of drinking water disinfection
Trihalomethanes, Total	ppb	NA	80	11.45	NA	NA	2020	No	By-product of drinking water disinfection
Inorganic Contaminants									
Nitrate [measured as Nitrogen]	ppm	10	10	<0.2	NA	NA	2022	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Table 2: LEAD AND COPPER TESTING (2021):

Samples are collected at customer kitchen or bathroom taps in 5 homes. The number of homes sampled is based on population served by the water system. This testing is done every three years and the most recent sample date is from 2021.

Contaminants	90% of taps sampled must be below AL	90% of taps sampled were at or below this level	MCLG	# of Samples Exceeding AL	Violation?	Typical Source
Inorganic Contaminants						
Copper (ppm)	1.3 AL	0.37	1.3	0 of 5	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	15 AL	1.3	0	0 of 5	No	Corrosion of household plumbing systems; erosion of natural deposits

Table 3: SECONDARY CONTAMINANTS: The samples below were taken in 2022.

Analytes	Results	MCL	EPA Regulated Secondary	State Regulated	Typical Source
Iron	0.16	0.3	Yes	No	Iron is naturally occurring. As rainwater it infiltrates the soil and underlying geologic formations dissolves iron, causing it to seep into aquifers that serve as sources of groundwater for wells.
Manganese	0.025	0.05	Yes	No	Manganese is a naturally occurring mineral that is present in soils, rocks, and sediment.

Abbreviations are explained in the "Key Table Definitions" on the previous page of this report.

SEE LAST PAGE FOR BONNEY LAKE WATER QUALITY RESULTS (Used as Emergency Source for this system)

2022 Water Quality Table provided by City of Bonney Lake

REGULATED SUBSTANCES						
Substance	Year Sampled	MCL	Highest Level Detected	Ideal Goals (MCLG)	Range of Level Detection	Potential Sources of Contaminant
REGULATED AT THE GROUND WATER SOURCE						
Nitrate	2022	10 ppm	4.71* ppm	0 - 5 ppm	0.36 - 4.71* ppm	No Septic Systems, Agricultural Uses
Hardness	2022	NA	48.0 ppm	Not applicable	84.0 - 136.0 ppm	No Erosion of Natural Deposits
Sodium	2022	NA	10.7 ppm	Not applicable	6.9 - 14.2 ppm	No Erosion of Natural Deposits
REGULATED IN THE TREATMENT PLANT						
Fluoride*	2022	4 ppm	0.76 ppm	4 ppm	0 - 0.76 ppm	No Treatment Additive
Turbidity	2022	5 NTU	0.06 NTU	Not applicable	<0.02-0.06 NTU*	No Soil Erosion, Pipe Sediment
EPA UNREGULATED CONTAMINANT MONITORING (UCMR4)						
Manganese	2022	50ppb	<10 ppb	Not regulated (SMCL = 0.050 ppm)	<10 ppb	Not applicable Naturally occurring
Chloroform	2022	Not applicable	7.2 ppb	Not regulated	0.5-7.2 ppb	Not applicable Industrial contamination
Iron	2022	Not applicable	<0.1 ppb	Not regulated	ND-<0.1 ppm	Not applicable Byproduct of Disinfection
REGULATED IN THE DISTRIBUTION SYSTEM						
Chlorine	2022	4 ppm	1.62 ppm	4 ppm	0.22-1.62 ppm	No Treatment Additive
Haloacetic Acids	2022	60 ppb	4.51 ppb	Not applicable	ND - 4.51 ppb	No By Product of Disinfection
Total Trihalomethanes	2022	80 ppb	15.78 ppb	0 - 24 ppb	ND - 15.78 ppb*	No By Product of Disinfection
REGULATED AT THE CONSUMERS TAP						
			90% of taps sampled must be below action level	Ideal Goals (MCLG)	# of sites above the AL	Regulation Met?
***Copper	2020	1.3 ppm	0.92 ppm	1.3 ppm	0 of 33 sites	Yes Corrosion of household plumbing; Erosion of natural deposits
*** Lead	2020	0.015 ppm	0.007 ppm	0.015 ppm	0 of 33 sites	Yes Corrosion of household plumbing; Erosion of natural deposits
Total Coliform	2020	<5% positive	0.00%	0	0 of 480 sites	Yes Naturally present throughout the environment

* Tacoma Supplied Water (South Prairie Booster Interite)

*** Lead and Copper Results From 2020 Monitoring, Required Every 3 Years

Key to Table

AL- Action Level is the concentration which, if exceeded, triggers treatment or other requirements which a water system must follow. Action Levels are reported at the 90th percentile for homes at greatest risk.

(MCL) Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available technology.

(MCLG) Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

NTU- Nephelometric Turbidity Unit is a standard to measure water clarity.

ppm = Part Per Million

ppb = Part Per Billion

SDRL - (State Detection Reporting Level): indicates the minimum reporting level required by the Washington State Department of Health.

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

EPA: Environmental Protection Agency

WA DOH: Washington State Department of Health

ND: Not Detected

*****A neurotoxin produced by a certain species of cyanobacteria (formerly known as blue green algae). Cyanobacteria are sometimes found in surface water when conditions favor growth and formation of algae blooms.