"The City of Bonney Lake's mission is to protect the community's livable identity and scenic beauty through responsible growth planning and by providing accountable, accessible and efficient local government services."

The City of Bonney Lake's
2020 Water Quality Report

Greetings from Mayor Johnson:

What a crazy year it has been for all of us! I am hopeful we will look at Covid-19 in the rear view mirror.

As I did last year, I am still happy to report that in 2020 the City of Bonney Lake continues to produce a safe and reliable supply of drinking water which is fundamental to the high quality of life we all like to enjoy. You will note from this annual report that your drinking water continues to meet and exceed the required standards set by the U.S. Environmental Protection Agency (EPA). This "Consumer Confidence Report" is required to be sent to all our customers each year, by the EPA, through the Safe Drinking Water Act (SDWA). Over the last number of years, the City continues to be proactive in working with neighboring cities like Auburn and Tacoma, the owners of Lake Tapps (Cascade Water Alliance) to assure an affordable and reliable water supply for the next 30+ years.

This report is only one of many means the City uses to communicate with you. Other sources include our quarterly brochure "My Bonney Lake" which is mailed to all homes within our water district. In addition, other methods to communicate is my weekly In/Out newsletter, Wine Down with Mayor Johnson, our Facebook page, Twitter (@CityBonneyLake), our website https://www.ci.bonney-lake.wa.us/, and periodic inserts within your utility bill.

With Covid-19 cancelling all of our spring and summer events in 2020, we are working on putting some events together for June-August 2021. This will be dependent on the rules put in placed on events over the next few months, so stay up to date and keep checking our website or give us a call.

Should you have any questions or comments about this report feel free to contact our staff at (253) 447-3227 or ronscavageu@cobl.us.

Wishing you prosperous 2021.

Neil Johnson, Jr.
Mayor

Drinking Water and Novel Coronavirus Disease (COVID-19)
The Office of Drinking Water at the Washington State Department of Health and your City of Bonney Lake Water system operators work every day to protect the public water supply from bacteriological and viral contamination. Drinking water regulations use a multi-barrier approach to ensure safe and reliable drinking water. This approach is intended to protect your water in three ways:

- **Source water protection:** We obtain our drinking water from the best quality and most protected sources available. This reduces or removes the risk of contamination from entering the water system in the first place.
- **Treatment:** We treat the water with a chlorine disinfectant that is very effective in killing coronaviruses. COVID-19 is a coronavirus and chlorine is believed to be effective in killing COVID-19.
- **Monitoring:** We collect samples on a regular basis to assure the efforts we take to protect and treat the water are effective. If contamination were to be found we would work in partnership with the Department of Health to notify our customers and recommend steps needed to ensure their safety.

More information regarding this can be found on the Washington State Department of Health's Office of Drinking Water website at:
https://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater

Water System Operations
In 2020 the City of Bonney Lake Water Utility provided over 1.3 billion gallons of safe, quality drinking water to over 13,800 connections, or a total population of 38,648 users. This includes over 13,066 single family residences, 354 multifamily residences, and 214 commercial accounts. In 2020 the peak production and consumption day was September 10th, when 8.16 MG was produced and 9.66 MG was consumed during the Sumner Grade Fire. The average use per person in 2020 was 85 gallons per day. The second peak production day was August 9th when 7.31 MG was produced and the second highest demand day was August 16th with a demand of 7.73 MG.

The City of Bonney Lake's Water Department is maintained and operated by a staff of 15 full time operators. These operators hold a combined total of 30 drinking water certifications from the Washington State Department of Health. Not only are these operators responsible for assuring the quality of the drinking water, they are also responsible for maintaining 219 miles of pipe, 1,793 fire hydrants, 4 water production sources, one water filtration plant, 7 pressure booster stations, 5 water storage reservoirs, 29 pressure reducing stations, 13 emergency power generators, and 7 emergency interties with neighboring water systems.

Bonney Lake's Water Source

Nine million gallons per day (MGD) of the City of Bonney Lake's drinking water is supplied by groundwater pumped from springs at Victor Falls and Grainger Springs, and well water from our Tacoma Point and Ball Park sites. Additionally, we have water supply agreements to receive another four MGD from Tacoma Public Utilities (TPU). Throughout our water system, we have over 20 million gallons of water in reservoirs.

A Source Water Assessment has been performed for our area to provide baseline data about the quality of water before it is treated and distributed to customers. This is important because it identifies the origins of contaminants within our area and indicates the susceptibility of our water system to such contaminants.

To ensure that the tap water is safe to drink, the U.S. Environmental Protection Agency, through the Safe Drinking Water Act (SDWA), prescribes limits with substantial safety factors on the amount of certain contaminants in water provided by public water systems.

To ensure safe, high quality water, the Public Works Operations Division (PW-OPS) continuously monitors and samples the water quality. During the 2020 calendar year, PW-OPS took 480 routine bacteria samples, 30 bacteria samples to test new connections, and 47 investigative bacteria samples. Operators also took 16 sets of Disinfectant By-Products samples, 4 samples for full inorganic chemicals analysis and 33 Lead and Copper Monitoring Rule samples. Independent certified laboratories tests these samples to ensure the safety of your drinking water.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safety Drinking Water Hotline (800-426-4791) or visit their website at https://www.epa.gov/sdwa.

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 source water include:

- **Microbial contaminants**, such as viruses 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides** (synthetic organic chemicals), which may come from a variety of sources such as agriculture, storm water runoff, and residential uses. Of the 93 synthetic organic chemicals tested, no contaminants were detected.
- **Organic chemicals**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum products, can also come from gas stations, urban storm water runoff and septic systems. We test for volatile organic chemicals every three years.
- **Radioactive contaminants**, while unlikely, 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 water provided by public water systems. No radioactive materials were detected in Bonney Lake's water.

2020 Results

The water quality table at the end of the report shows substances we detected in our water system as well as the water we purchased from Tacoma Public Utilities (TPU). Tacoma's water supply is surface water coming from the Green River in southeast King County. It is also disinfected with chlorine, fluoridated and pH-adjusted with sodium hydroxide. In addition, Tacoma uses ozone to control taste and odor. This report includes Tacoma's water quality in our system. For more information on Tacoma Water, visit: **Water Quality- Tacoma Public Utilities**.

We participated in the 4th stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR4) program by performing additional tests on our drinking water. UCMR4 benefits the environment and public health by providing the EPA with data on the

occurrence of contaminant suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality.

Lead in 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 City of Bonney Lake 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 or at http://www.epa.gov/safewater/lead.

Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons include, but are not limited to, persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. The EPA/Center for Disease Control (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 (800-426-4791).

The primary sources of disease causing organisms will be from pets, food, general household cleanliness and personal hygiene. The risks of infection by Cryptosporidium or Giardia in your water supply are remote, as these organisms are not typically found in ground water sources such as those that supply the City of Bonney Lake system.

Chlorine Disinfection

Chlorine is added to Bonney Lake's water as a disinfectant to protect consumers from possible disease causing microorganisms.

Chlorine Residual

The state mandates a minimum chlorine residual level of 0.2 parts per million (ppm) throughout the water distribution system.

Chlorine Disinfection By-Products

When chlorine combines with organic material, it will form chlorine by-products known as Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). Systems with high amounts of organic material usually draw their water from surface water sources, such as rivers and lakes. Our water sources are groundwater sources, such as wells and springs. We typically have low amounts of organic material in our water, therefore having low amounts of disinfection by-products.

Sodium Hydroxide

The Tacoma Point Wells and Grainger Springs water supplies are treated with sodium hydroxide to raise the pH of the water, in effect making it less corrosive to plumbing fixtures. This minimizes the potential of exposure to lead or copper in your drinking water.

City of Bonney Lake Water Availability

Victor Falls –	1,100 gpm (Gallons per minute)
Grainger Springs –	1,500 gpm
Ball Park #1 –	1,000 gpm
Ball Park #2 –	270 gpm
Tacoma Point #2, #4, #6 –	2,300 gpm
Total Owned by City	**6,170 gpm = 8,884,800 gpd** (Gallons per day)
Tacoma Water/Cascade Water Alliance Agreement	**2,178 gpm = 4,000,000 gpd**
Total Water Available	**8,348 gpm = 12,884,800 gpd**

Water Capital Improvement Projects completed in 2020

CIP Project **Project Cost**

1. SCADA System Upgrades Phase 6 **$57,297.56**

Phase 6 kicked off in 2019. The project included new control panels, programming, screen development and testing of the new communication system for the Panorama Booster Station. Phase 6 was completed in 2020.

2. 36th Street Water Main Replacement **$191,192.00**

The project was designed and constructed in 2020. 36th Water Main Replacement Project replaced approximately 975 feet of 4-inch PVC pipe with 8-inch ductile iron pipe.

3. Tacoma Point Reservoir Replacement Project **$6,500,000**

The Tacoma Point Reservoir Replacement Project will replace a 40 year old tank that no longer meets the demands for the City's north water service area and does not meet earthquake safety requirements. The planning and design of the new tank was started in 2020. Construction of the new tank is planned for 2021.

Water Capital Improvement Projects Planning 2021

CIP Project **Project Cost**

1. SCADA System Central Relocation **$50,000**

The SCADA System Central Relocation is part of the relocation of the Public Works facility to a new building. This project will manage the relocation of the SCADA Systems Central panels and antenna to the new facility.

2. Tacoma Point Reservoir Replacement Project **$56,500,000**

The Tacoma Point Reservoir Replacement Project will replace a 40 year old tank that no longer meets the demands for the City's north water service area and does not meet earthquake safety requirements. The planning and design of the new tank was started in 2020. Construction of the new tank is planned for 2021.

3. Ponderosa 748 Reservoir Recoating Project **$1,006,000**

This project will complete a recoat of both the interior and exterior coating of the Ponderosa 748 zone reservoir. This tank built in 1972 and has not been recoated since its construction. Included in the project is install a new ladder and fall arrest system for accessing the ventilation/hatch at the top of the tank. The project will also complete a power wash of the adjacent 800 zone tank.

4. Grainger Springs Building Replacement **$1,549,394**

This project will replace the original pump house at the Grainger Springs site. Design will be done in 2021 with plans for construction in 2022.

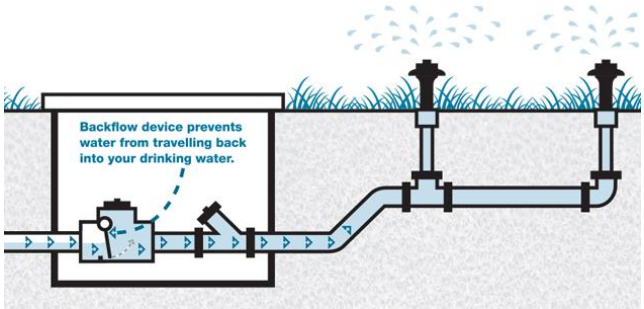
Cross Connection Control Program

The City of Bonney Lake implements an extensive cross connection control program to help ensure safe drinking water for its customers.

It's becoming that time of year again for irrigation startup! Annual notices to have your backflow assembly tested are mailed to customers 30 days before their due date.

A list of certified backflow assembly testers are provided on our website- **https://www.ci.bonney-lake.wa.us/Water/Cross_Connection**

The City of Bonney Lake monitors over 3,600 backflow assemblies that help protect your drinking water. Backflow assemblies are installed to allow water to flow in only one direction.



Where are cross connections found?

Cross connections can be found anywhere in a public water supply. Some examples of common cross connections:

• *Auxiliary water supplies* • *Hose bibs* • *Irrigation or lawn sprinkler systems* • *Solar heat systems*

• *Swimming pools and spas* • *Fire sprinkler systems* • *Boilers* • *Attachments to hoses to apply weed killer*

Pumping of any non-potable water interconnected or not to the City of Bonney Lake's water supply is considered a high health hazard and a reduced pressure backflow assembly is required.

Be aware of situations where your water supply does or could contact non-potable liquid and make sure any plumbing work is permitted and done by a licensed plumber who is knowledgeable in cross connection control. The City of Bonney Lake works hard to supply customers with safe, clean drinking water. With an understanding of the hazards associated with cross-connections and backflow, **you can help** us protect our drinking water.

If you have questions regarding the Cross Connection Control Program, or have not received your annual inspection notification, please contact us at (253) 447-3227 or (253) 447-4319.

INCIDENTS – DO THEY REALLY HAPPEN?

Yes! Here are four examples:

- Backflow from auxiliary well connected to public water system. *(King County – 2006)*
- Propylene glycol from a chiller backsiphoned into laboratory cold water during plumbing maintenance in college laboratory building. *(Thurston County – 2007)*
- Main break caused backsiphonage at heating boiler at residence. *(Mason County – 2005)*
- Contaminants containing chemicals from the HVAC system entered into a hospital potable system through an unauthorized hose bib and/or isolation valve during construction of new floors. *(Pierce County – 2003)*

2021 Water Consumption Charges to Customers

Water consumption is recorded by water meters in cubic feet (7.48 gallons = 1 cubic foot). Water meters are read in hundreds of cubic feet (CCF). 1 CCF = 748 gallons

Consumption Rates for Customers Inside City Limits:

Winter

0 -10 CCF per month	$1.80	= $0.24 per 100 gallons
Over 10 CCF per month	$3.57	= $0.48 per 100 gallons

Winter rates will be reflected on bills covering October 1st through May 31st

Summer

0 -10 CCF per month	$1.80	= $0.24 per 100 gallons
11-20 CCF per month	$3.90	= $0.52 per 100 gallons
21-30 CCF per month	$5.45	= $0.73 per 100 gallons
31 or more CCF per month	$7.02	= $0.94 per 100 gallons

Summer rates will be reflected on bills covering June 1st through September 30th

Consumption Rates for Customers Outside City Limits:

Winter

0 -10 CCF per month	$2.60	= $0.35 per 100 gallons
Over 10 CCF per month	$5.21	= $0.70 per 100 gallons

Winter rates will be reflected on bills covering November 1st through June 30th

Summer

0 -10 CCF per month	$2.60	= $0.35 per 100 gallons
11-20 CCF per month	$5.45	= $0.73 per 100 gallons
21-30 CCF per month	$7.65	= $1.02 per 100 gallons
31 or more CCF per month	$10.69	= $1.43 per 100 gallons

Summer rates will be reflected on bills covering July 1st through October 31st

Note: Current City of Bonney Lake utility rates can be found at:
http://www.cobl.us/utility_billing

How to Save Money on Water and Sewer Bills:

Both Water and Sewer charges are based on how much water you use. To save money on both, the following water conservation suggestions are offered for residential customers. It is important to minimize both daily water consumption quantity and to minimize water use during peak water use periods. You can find additional water conservation tips at **https://wateruseitwisely.com.**

General:

- Visit a car wash that recycles water.
- Use a broom instead of a hose to clean the driveway and sidewalk.
- Install covers on pools and spas and check for leaks around your pumps.
- Report all significant water losses (broken pipes, open hydrants, errant sprinklers, etc.) to the property owner or local authorities.
- Check to make sure all of your pipes are properly insulated. It can take longer for water to heat up if your pipes are not insulated, which results in the water running for much longer periods of time.

Inside the home:

- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Shorten your shower by a minute or two and you'll save up to 150 gallons per month.
- Replace old toilets with a 1.28 gallon per flush high efficiency toilets. Older toilets can use 3.5 or more gallons per flush.
- Put food coloring in your toilet tank. If color seeps into the toilet bowl without flushing, you have a leak. Replacing the flapper valve can save up to 1,000 gallons a month.
- Know where your master water shut-off valve is located, just in case you have a water leak issue. Try it once a year to make sure it works. This could save water and prevent damage to your home.
- Install an aerator on your bathroom or kitchen faucet and save about 1 gallon a minute. An aerator reduces the flow from the faucet, and uses air to maintain good water pressure.

Outside the home:

- Adjust sprinklers to water the lawn, not driveways and sidewalks.
- Use a timer when watering with a hose.
- Add a rain sensor to your automatic system.
- Keep irrigation systems running efficiently – repair, replace, or adjust sprinkler heads, and check the system for leaks.
- Use drip irrigation in your planted beds and garden.
- Water your lawn before sunrise and after sunset to reduce evaporation
- Use mulch in the garden and around shrubs to save moisture.

REGULATED SUBSTANCES

Substance	Year Sampled	MCL	Highest Level Detected	Ideal Goals (MCLG)	Range of Level Detection	MCL Violation	Potential Sources of Contaminant
REGULATED AT THE GROUND WATER SOURCE							
Nitrate	2020	10 ppm	4.69 ppm	0 - 5 ppm	< 0.20 - 4.69 ppm	No	Septic Systems, Agricultural Uses
Hardness	2020	NA	114.0 ppm	*Not applicable*	47.0 - 114.0 ppm	No	Erosion of Natural Deposits
Sodium	2020	NA	10.9 ppm	*Not applicable*	6.9 - 10.9 ppm	No	Erosion of Natural Deposits
REGULATED IN THE TREATMENT PLANT							
Fluoride*	2020	4 ppm	.82 ppm*	4 ppm	0 - .82 ppm*	No	Treatment Additive
Turbidity	2020	5 NTU	0.024 NTU*	*Not applicable*	0.01 - 0.24 NTU*	No	Soil Erosion, Pipe Sediment
EPA UNREGULATED CONTAMINANT MONITORING (UCMR4)							
Manganese	2018	50ppb	22.5* ppb	*Not regulated (SMCL = 0.050 ppm)*	ND - 22.5* ppb	*Not applicable*	
Anatoxin-a	2018	*Not applicable*	0.7 ppb	*Not regulated*	0.7 ppb	*Not applicable*	****** Please see note below
Bromochloroacetic acid	2018	*Not applicable*	1.1 ppb	*Not regulated*	0.5 - 1.1 ppb	*Not applicable*	Byproduct of Disinfection
Bromodichloroacetic acid	2018	*Not applicable*	1.1 ppb	*Not regulated*	0.5 - 1.1 ppb	*Not applicable*	Byproduct of Disinfection
Chlorodibromoacetic acid	2018	*Not applicable*	0.5 ppb	*Not regulated*	ND - 0.5 ppb	*Not applicable*	Byproduct of Disinfection
Tribromoacetic acid	2018	*Not applicable*	<2 ppb	*Not regulated*	ND - <2 ppb	*Not applicable*	Byproduct of Disinfection
REGULATED IN THE DISTRIBUTION SYSTEM							
Chlorine	2020	4 ppm	1.59 ppm*	4 ppm	0.35-1.59 ppm*	No	Treatment Additive
Haloacetic Acids	2020	60 ppb	7.28 ppb	*Not applicable*	ND - 7.28 ppb	No	By Product of Disinfection
Total Trihalomethanes	2020	80 ppb	21.99 ppb	0 - 24 ppb	2.50 - 21.99 ppb	No	By Product of Disinfection

REGULATED AT THE CONSUMERS TAP

		90% of taps sampled must be below action level	90% of taps sampled were at or below this level	Ideal Goals (MCLG)	# of sites above the AL	Regulation Met?	Potential Sources of Contaminant
***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 Intertie)

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

Key to Table

AL (Action Level): The Concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
MCL (Maximum Contaminant Level): The highs level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk of health. MCLGs allow for a margin safety.
NTU (Nephelometric Turbidity Unit): Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
ppm: One Part Per Million
ppb: One 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 algal blooms.