



“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 2019 Water Quality Report

### Greetings from Mayor Johnson:

Happy Spring 2020!

Once again, I am happy to report that in 2019 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 has also been proactive in working with neighboring cities, Tacoma, and the 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, our Facebook page, Twitter (@CityBonneyLake), our website [www.ci.bonney-lake.wa.us](http://www.ci.bonney-lake.wa.us), and periodic inserts within your utility bill.

Like last year, we will have a variety of events this spring and summer, including our Tunes at Tapps (Outdoor Markets) which is every Wednesday starting July 8 through August and Bonney Lake Days will take place the weekend of August 14. Hope you can find time to catch one of our many events.

Should you have any questions or comments about this report, feel free to contact our staff at [\(253\) 447-3227](tel:2534473227) or [ronscavageu@cobl.us](mailto:ronscavageu@cobl.us).

Wishing you prosperous 2020!

A handwritten signature in black ink that reads "Neil Johnson Jr." with a stylized flourish at the end.

## **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 as well.
- **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 2019 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 13,000 single family residences, 340 multifamily residences, and over 200 commercial accounts. In 2019 the peak production and consumption day was August 5<sup>th</sup> when 6.7 MG was produced and 7.4 MG was consumed. The average use per person in 2019 was 81 gallons per day. On August 5<sup>th</sup>, the peak day for water consumption, the average customer used 202 gallons per day, an increase of 149% of the average daily use, and 236% more than the normal winter daily use.

The City of Bonney Lake's Water Department is maintained and operated by a staff of 14 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 217 miles of pipe, 1,762 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 2019 calendar year, PW-OPS took 480 routine bacteria samples, 21 bacteria samples to test new connections, and 54 investigative bacteria samples. Operators also took 8 sets of Disinfectant By-Products samples, 4 samples for full inorganic chemicals analysis, 2 sets of Radionuclides samples, and 4 investigative Nitrate 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 [www.epa.gov/safewater/sdwa/index.html](http://www.epa.gov/safewater/sdwa/index.html).

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.

### **2019 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.

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  |
| <b>Total Owned by City</b>                               | <b>6,170 gpm = 8,884,800 gpd (Gallons per day)</b> |
| <b>Tacoma Water/Cascade<br/>Water Alliance Agreement</b> | <b>2,178 gpm = 4,000,000 gpd</b>                   |
| <b>Total Water Available</b>                             | <b>8,348 gpm = 12,884,800 gpd</b>                  |

## New in 2019

### Water Capital Improvement Projects

### Project Costs

#### **1. SCADA System Upgrades Phase 5 & 6**

**\$133,805**

Phase 5 kicked off in 2018 with the purchase of the hardware and software to replace the obsolete systems at the City's central SCADA location. In 2019 the programming, screen development and testing of the new system was completed with full implementation happening in early 2020. Phase 6 completed the Water system upgrades with the replacement of the PLC at the Panorama Booster Station.

#### **2. Ponderosa Booster Station Emergency Generator Replacement \$145,369**

This project replaced the original generator that powered the high demand pumps only at this location. The new generator powers both the high demand pumps, the normal demand pumps and the telemetry system. This assures water system redundancy and optimal control during emergencies.

#### **3. 25<sup>th</sup> Street E Water Main Replacement**

**\$121,475**

This project replaced 500' of substandard 2" PVC pipe. The existing pipe was prone to failure. The project included installation of 220' of 8" ductile iron pipe, 275' of 4" ductile iron pipe, 1 fire hydrant, and 4 new water service lines.

#### **4. South Prairie Booster Station Upgrades**

**\$320,327**

This station is the intertie to Tacoma Public Utilities (TPU) water supply. Prior to this project the maximum amount of water the City could receive from TPU was 2 MGD. This upgrade included the addition of 2 new 125 horse power motors, pumps, Variable Frequency Drives, and piping to enable 4 MGD flows that assure adequate water supply is available to the City during high demand periods.

#### **5. Tacoma Point Reservoir Replacement Analysis**

**\$64,440**

This project addressed the location and sizing of the new reservoir being designed to replace the existing Tacoma Point reservoir. The existing reservoir is not seismically sound nor is it capable of supplying adequate pressures or flows to the northern end of the distribution system.

## **Cross Connection Control Program**



It's becoming that time of year again! 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](https://www.ci.bonney-lake.wa.us/Water/Cross_Connection)

The City of Bonney Lake monitors over 3,330 backflow assemblies that help protect your drinking water.

## **Where are cross connections found?**

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

- A chemical dispenser, insecticide or herbicide dispenser is attached to a hose bib, a pressure drop can cause chemical laden water to be pulled into the drinking water supply.
- If an irrigation sprinkler system lacks a proper backflow device, dirty water from the lawn can be siphoned back into the sprinkler head, and flow back into the water supply.

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.

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.

## **2020 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      \$1.66      = \$0.22 per 100 gallons

Over 10 CCF per month      \$3.29      = \$0.44 per 100 gallons

Winter rates will be reflected on bills covering October 1<sup>st</sup> through May 31<sup>st</sup>

#### **Summer**

0 -10 CCF per month      \$1.66      = \$0.22 per 100 gallons

11-20 CCF per month      \$3.59      = \$0.48 per 100 gallons

21-30 CCF per month      \$5.02      = \$0.67 per 100 gallons

31 or more CCF per month      \$6.47      = \$0.87 per 100 gallons

Summer rates will be reflected on bills covering June 1<sup>st</sup> through September 30<sup>th</sup>

### **Consumption Rates for Customers Outside City Limits:**

#### **Winter**

0 -10 CCF per month      \$2.40      = \$0.32 per 100 gallons

Over 10 CCF per month      \$4.80      = \$0.64 per 100 gallons

Winter rates will be reflected on bills covering November 1<sup>st</sup> through June 30<sup>th</sup>

#### **Summer**

0 -10 CCF per month      \$2.40      = \$0.34 per 100 gallons

11-20 CCF per month      \$5.02      = \$0.67 per 100 gallons

21-30 CCF per month      \$7.05      = \$0.94 per 100 gallons

31 or more CCF per month      \$9.85      = \$1.32 per 100 gallons

Summer rates will be reflected on bills covering July 1<sup>st</sup> through October 31<sup>st</sup>

Note: Current City of Bonney Lake utility rates can be found at:






[http://www.cobl.us/utility\\_billing](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>.

### **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.
-  Install an instant water heater near your kitchen sink so you don't have to run the water while it heats up. This also reduces energy costs.
-  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.

### **Outside the home:**

💧 Use a hose nozzle or turn off the water while you wash your car. You'll save up to 100 gallons every time.

💧 Limit grass watering to no more than three times a week with 30-minutes per sprinkler zone.

💧 Spreading a layer of organic mulch around plants retains moisture and saves water, time and money.

💧 Use drip irrigation for shrubs and trees to apply water directly to the roots where it's needed.

💧 The City's customer peak demand periods for water are just before and after sunrise. We encourage customers to do the following: avoid watering grass and gardens during the day when most evaporation occurs; automated sprinkler systems should be set to use water in the late evening or very early in the morning hours.





**REGULATED SUBSTANCES**

| Substance | Year Sampled | MCL | Highest Level Detected | Ideal Goals (MCLG) | Range of Level Detection | Regulation Met? | Potential Sources of Contaminant |
|-----------|--------------|-----|------------------------|--------------------|--------------------------|-----------------|----------------------------------|
|-----------|--------------|-----|------------------------|--------------------|--------------------------|-----------------|----------------------------------|

**REGULATED AT THE GROUND WATER SOURCE**

|          |      |        |          |                       |                           |     |                                   |
|----------|------|--------|----------|-----------------------|---------------------------|-----|-----------------------------------|
| Nitrate  | 2019 | 10 ppm | 4.91 ppm | 0 - 5 ppm             | Less than 0.20 - 4.91 ppm | Yes | Septic Systems, Agricultural Uses |
| Hardness | 2019 | NA     | 117 ppm  | <i>Not applicable</i> | 50.4 - 117 ppm            | Yes | Erosion of Natural Deposits       |
| Sodium   | 2019 | NA     | 14.6 ppm | <i>Not applicable</i> | 7.6 - 14.6 ppm            | Yes | Erosion of Natural Deposits       |

**REGULATED IN THE TREATMENT PLANT**

|             |      |       |         |                       |                |     |                             |
|-------------|------|-------|---------|-----------------------|----------------|-----|-----------------------------|
| Fluoride*   | 2019 | 4 ppm | .89 ppm | 4 ppm                 | .53 - .89 ppm  | Yes | Treatment Additive          |
| Turbidity * | 2019 | 5 NTU | .08 NTU | <i>Not applicable</i> | 0.01 - .26 NTU | Yes | Soil Erosion, Pipe Sediment |

**2018 EPA UNREGULATED CONTAMINANT MONITORING (UCMR4)**

|                          |      |                       |           |   |                |                       |                             |
|--------------------------|------|-----------------------|-----------|---|----------------|-----------------------|-----------------------------|
| Manganese                | 2018 | 50ppb                 | 22.5* ppb | <i>Not regulated (SMCL = 0.050 ppm)</i> | ND - 22.5* ppb | <i>Not applicable</i> |                             |
| Anatoxin-a               | 2018 | <i>Not applicable</i> | 0.7 ppb   | <i>Not regulated</i>                    | 0.7 ppb        | <i>Not applicable</i> | ***** Please see note below |
| Bromochloroacetic acid   | 2018 | <i>Not applicable</i> | 1.1 ppb   | <i>Not regulated</i>                    | 0.5 - 1.1 ppb  | <i>Not applicable</i> | Byproduct of Disinfection   |
| Bromodichloroacetic acid | 2018 | <i>Not applicable</i> | 1.1 ppb   | <i>Not regulated</i>                    | 0.5 - 1.1 ppb  | <i>Not applicable</i> | Byproduct of Disinfection   |
| Chlorodibromoacetic acid | 2018 | <i>Not applicable</i> | 0.5 ppb   | <i>Not regulated</i>                    | ND - 0.5 ppb   | <i>Not applicable</i> | Byproduct of Disinfection   |
| Tribromoacetic acid      | 2018 | <i>Not applicable</i> | <2 ppb    | <i>Not regulated</i>                    | ND - <2 ppb    | <i>Not applicable</i> | Byproduct of Disinfection   |

**REGULATED IN THE DISTRIBUTION SYSTEM**

|                       |      |        |           |                       |                  |     |                            |
|-----------------------|------|--------|-----------|-----------------------|------------------|-----|----------------------------|
| Chlorine              | 2019 | 4 ppm  | 1.21 ppm* | 4 ppm                 | 0.33 - 1.37 ppm* | Yes | Treatment Additive         |
| Haloacetic Acids      | 2019 | 60 ppb | 4.41 ppb  | <i>Not applicable</i> | ND - 4.41 ppb    | Yes | By Product of disinfection |
| Total Trihalomethanes | 2019 | 80 ppb | 12.81 ppb | 0 - 24 ppb            | 1.87 - 12.81 ppb | Yes | 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 |           | # of sites above the AL | Regulation Met? | Potential Sources of Contaminant                             |
|----------------|------|--|---|-----------|-------------------------|-----------------|--|
| ***Copper      | 2017 | 1.3 ppm  | 0.92 ppm  | 1.3 ppm   | 2 of 38 sites           | Yes             | Corrosion of household plumbing; Erosion of natural deposits |
| *** Lead       | 2017 | 0.015 ppm                                      | 0.007 ppm                                       | 0.015 ppm | 1 of 38 sites           | Yes             | Corrosion of household plumbing; Erosion of natural deposits |
| Total Coliform | 2019 | <5% positive                                   | 0.00%   | 0         | 0 of 480 sites          |                 | Naturally present throughout the environment                 |

\* Tacoma Supplied Water

\*\* Tacoma Sample Results

\*\*\* Lead and Copper Results From 2017 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 highest 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 of 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.