

BONNEY Lake

2006 Water Quality Report

"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."

A MESSAGE FROM MAYOR JOHNSON

Quality drinking water is fundamental to our way of life. The City of Bonney Lake has some of the best drinking water in the state. Your city staff is committed to continuing to provide delivery of quality drinking water. This report clearly shows that your drinking water meets and exceeds the required standards. The goal of this report is to help you understand what is in your water – and what isn't. Included are details describing where your water comes from, what it contains, and how it compares to stringent federal water quality standards. It also outlines the process used to protect your water from its source to you. We are committed to keeping you informed about water issues. Although this report is of a technical nature, it is important information. Should you have any questions or comments, we encourage you to call our staff (253) 447-4341.

PUBLIC IMPROVEMENT

The City of Bonney Lake's Water Department maintains 192 miles of water mains in the Bonney Lake water service area. The Public Works Operations Division provided safe, quality water to approximately 11,793 service connections with a high degree of reliability. Approximately 1,290,647,000 gallons of water were produced by the City of Bonney Lake's wells and springs. The City of Bonney Lake purchased an additional 19,266,984 gallons of water from Tacoma Water, for a combined production total of 1,309,913,984 gallons. During the month of July, our highest use month, the City produced 192,154,560 gallons from City wells and springs as well as purchasing 10,449,560 gallons from Tacoma Water. The lowest production month was February with 65,366,000 gallons. **This represents a 194% increase in water consumption in the summer compared to winter use. This additional water is used for watering lawns, washing cars, etc...**

BONNEY LAKE'S WATER SOURCE

The City of Bonney Lake's drinking water is supplied by groundwater pumped from springs at Victor Falls and Grainger Springs, with well water from our Tacoma Point and Ball Park sites. We also completed an agreement with Tacoma Water in 2005 to purchase up to 2 million gallons per day peak flow, when needed.

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

Continued . . .

Test Results

The items listed here are the result of an inorganic chemical analysis for the Bonney Lake system. These test results are from the Bonney Lake water sources after treatment. In July of 2005, the City placed the new Ballpark

Treatment Plant into service. This facility uses chlorine and filtration to remove iron and manganese down to levels typically less than 0.05 parts per million (ppm) for iron, and less than 0.025 ppm of manganese.

INORGANICS

	MCL	UNITS	2006 RESULTS			
			BALL PARK WELL	TACOMA POINT WELL	GRAINGER SPRING	VICTOR FALLS SPRING
Arsenic	0.01	mg/l	< 0.002	< 0.002	< 0.002	< 0.002
Barium	2	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium	0.005	mg/l	< 0.002	< 0.002	< 0.002	< 0.002
Chromium	0.1	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Mercury	0.002	mg/l	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Selenium	0.05	mg/l	< 0.005	< 0.005	< 0.005	< 0.005
Beryllium	0.004	mg/l	< 0.003	< 0.003	< 0.003	< 0.003
Nickel	0.1	mg/l	< 0.04	< 0.04	< 0.04	< 0.04
Antimony	0.006	mg/l	< 0.005	< 0.005	< 0.005	< 0.005
Thallium	0.002	mg/l	< 0.002	< 0.002	< 0.002	< 0.002
Cyanide	0.2	mg/l	< 0.05	< 0.05	< 0.05	< 0.05
Fluoride	4	mg/l	< 0.2	< 0.2	< 0.2	< 0.2
Nitrite - N	1	mg/l	< 0.2	< 0.2	< 0.2	< 0.2
Nitrate - N	10	mg/l	< 0.2	0.4	3.1	3.8
Total Nitrate/Nitrite	10	mg/l	< 0.4	< 0.5	3.1	3.8
Iron	0.3	mg/l	< 0.1	< 0.1	< 0.1	< 0.1
Manganese	0.05	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Silver	0.1	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Chloride	250	mg/l	9	3	7	7
Sulfate	250	mg/l	7	7	10	7
Zinc	5	mg/l	< 0.2	< 0.2	< 0.2	< 0.2
Sodium		mg/l	9	12	13	6
Hardness		mg/l	113	52	102	109
Conductivity	700	umhos/cm	200	140	220	211
Turbidity	1	NTU	< 0.1	0.2	0.3	0.7
Color	15	color units	< 5	< 5	< 5	< 5
Total Dissolved Solids	500	mg/l	N/A	N/A	N/A	N/A
Lead		mg/l	< 0.002	< 0.002	< 0.002	0.004
Copper		mg/l	< 0.02	0.04	< 0.02	0.02

KEY TO TABLE: MCL= Maximum (allowable) Contaminant Level; Mg/l = milligrams per liter/parts per million; umhos/cm = micromhos per centimeter; NTU = Nephelometric Turbidity Unit (Water Clarity)

THE CITY OF BONNEY LAKE'S 2006 WATER QUALITY REPORT

The City of Bonney Lake is committed to providing residents with a safe reliable supply of high-quality drinking water. The quality of our water meets, and in most cases exceeds, state and federal standards for both appearance and safety. This Consumer Confidence Report is required to be sent to all our customers each year by the Safe Drinking Water Act (SDWA). The City of Bonney Lake is proud to share our results with you. Contact the Public Works Department at (253) 447-4341 with your questions.

Water Quality is of the utmost importance to your Mayor, City Council and Public Works staff, many of whom live in our service area and drink the same water you do. Since they are also purchasers of the water, you can be assured they will do their best to keep the costs as low as possible without sacrificing quality. We provide water to approximately 31,000 people in Bonney Lake's water service area.

2006 WATER QUALITY REPORT

Continued . . .

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 SDWA, prescribes limits with the 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 Operation Division continually monitors and samples the water quality. During the 2006 calendar year the Bonney Lake Water Department took 360 routine bacterial samples, and 118 bacteria samples to test additions to the water system. An independent certified laboratory 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 online at 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 stormwater 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, stormwater 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, and 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 productions 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 system. No radioactive materials were detected in Bonney Lake's water.

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/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 are remote, as these organisms are not typically found in ground water sources such as those that supply our system.

CHLORINE DISINFECTION

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

Chlorine Residuals - The state mandates a minimum chlorine residual level of 0.2 parts per million (ppm) throughout the water distribution system. This residual for Bonney Lake water sources ranges from 0.2 up to 0.65 ppm. Tacoma Water Utility uses a surface water source. Due to higher levels of contaminants in surface water, higher levels of chlorine must be used. Tacoma chlorine residual in Bonney Lake is routinely 1.0 ppm.

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's) that are regulated by the Washington State Department of Health (DOH). The maximum level permitted for TTHM is 80 parts per billion (ppb) and for HAA5 the maximum level is 60 ppb. The results of testing conducted in 2006 ranged from 0.5 – 62.6 ppb for TTHM and less than 49.7 ppb for HAA5.

On occasion, there may be a chlorine odor or temporary milkiness to the water. This is not a health hazard. However, if noticed on a regular basis you can contact the Public Works Operations office at (253) 447-4341 for more information.

CROSS CONNECTION CONTROL

The City of Bonney Lake has implemented a cross connection control program to prevent backflow of contaminated water from a customer's water system into the public water system. A cross connection control device is required if you use water for purposes other than drinking, such as: for a booster system, boilers, yard sprinkler systems, fire sprinkler systems and soft drink dispensing machines. The City requires customers with their water line connected to these other uses to submit, on an annual basis, a report that their device has been tested by a state certified professional.

HOW TO SAVE MONEY ON WATER AND SEWER BILLS

Both Water and Sewer charges are partially 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 water consumption quantity and to minimize use of water during peak use periods.

INSIDE THE HOME

- ☞ Fill an empty container with water and place it inside the water tank of the toilet, unless using low volume toilets. Then, flush more often, only when needed.
- ☞ Use showers instead of tub baths.
- ☞ Use flash heaters under the counter of sinks to warm water instantly instead of letting the water run until it is warm.
- ☞ Turn dishwashers on when going to bed instead of during peak water use times, when dinners are being prepared.
- ☞ Buy flow restrictors to place in shower heads.
- ☞ When doing laundry, match the water level to the size of the load.

OUTSIDE THE HOME

- ☞ Always use a nozzle on the end of hoses when washing vehicles. Turn nozzle off while washing the vehicle. Turn on to rinse vehicle.
- ☞ Limit grass watering to no more than three times a week with 30-minutes per zone.
- ☞ Place 3-6 inches of mulch or wood chips on top of all gardens and around trees to keep water from evaporating.
- ☞ Wash cars on grassy areas instead of in your driveway. The water will serve two purposes.
- ☞ Water grass and gardens after the sun goes down or just before sunset. Water will sink into the ground instead of evaporating into the air. One peak demand period is just before and after sunrise. Customers with automated sprinkler systems are strongly encouraged to water lawns in the late evening or early morning instead of when people are waking up.

CITY OF BONNEY LAKE WATER AVAILABILITY

Victor Falls	1,100 gpm
Grainger Springs.....	1,500 gpm
Ball Park #1	1,000 gpm
Ball Park #2	270 gpm
Tacoma Pt. #2, 4, 6	2,300 gpm
Total Owned By City:	6,170 gpm or 8,884,800 gpd
Tacoma Water Agreement:	2,000,000 gpd

gpm – Gallons Per Minute
gpd – Gallons Per Day

WATER QUALITY ROUNDUP

The 13 items listed below were detected in Tacoma Water's water during 2006.

Not listed are 58 volatile organic chemicals and 85 synthetic organic chemicals including herbicides and pesticides for which we tested that were not detected. Also not listed is coliform, no coliform was detected in 2006. Additional information on all data can be obtained by calling Tacoma Water at 253-502-8392.

SUBSTANCE	HIGHEST LEVEL ALLOWED (MCL*)	HIGHEST LEVEL DETECTED	RANGE OF LEVEL DETECTED OR # EXCEED AL*	IDEAL GOALS (MCLG*)	POTENTIAL SOURCES OF CONTAMINANT
REGULATED AT THE GROUNDWATER SOURCES					
Trichloroethylene	5 ppb*	1.9 ppb	0.0 - 1.9 ppb	0	Time Oil Superfund Site
Nitrate	10 ppm*	3.8 ppm	<0.5 - 3.8 ppm	10 ppm	Agricultural uses, septic
Arsenic	10 ppb	2 ppb	0 - 2 ppb	0	Natural Erosion
UNREGULATED AT THE GROUNDWATER SOURCES					
Chloroform	not regulated	0.06 ppb	0 - 0.06 ppb	not regulated	Environmental contamination
Trichlorofluoromethane	not regulated	3.8 ppb	0 - 3.8 ppb	not regulated	Time Oil Superfund Site
REGULATED AT THE TREATMENT PLANT					
Fluoride	4 ppm	1.00 ppm	0 - 1.00 ppm	0.8 - 1.3	Treatment Additive
Turbidity	5 NTU*	4.21	0.28 - 4.21 NTU	not applicable	Natural Erosion
REGULATED AT THE CONSUMER'S TAP					
Lead	15 ppb AL	60 ppb	5 of 79 sites exceed AL	0	Household Plumbing
Copper	1.3 ppm AL	0.809 ppm	1 of 79 sites exceed AL	1.3 ppm	Household Plumbing
REGULATED IN THE DISTRIBUTION SYSTEM					
Total Trihalomethane	80 ppb average	64.3 ppb	1 - 64.3 ppb	0	Disinfection interaction
Haloacetic Acid	60 ppb average	49.8 ppb	1 - 49.8 ppb	0	Disinfection interaction
SECONDARY CHEMICAL SUBSTANCES					
National Secondary Drinking Water Regulations are nonenforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects such as taste, color, or odor.					
SUBSTANCE	HIGHEST LEVEL ALLOWED (MCL*)	HIGHEST LEVEL DETECTED	RANGE OF LEVEL DETECTED OR # EXCEED AL*	IDEAL GOALS (MCLG*)	POTENTIAL SOURCES OF CONTAMINANT
Manganese	0.05 ppm*	0.185 ppm	<0.01 - 0.185 ppm	0	Natural deposits
Iron	0.3 ppm*	0.33 ppm	<0.1 - 0.33 ppm	0	Natural deposits
Sulfate	250 ppm*	20 ppm	<10 - 20 ppm	0	Natural deposits
Sodium	NA*	13.8 ppm	<5 - 13.8 ppm	NA*	Natural deposits
¹ samples taken 2004 resampling of consumers tap with highest detection resulted in 12ppb lead * DEFINITIONS Maximum Contaminant Level (MCL): 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 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. Note: There is no MCL established for sodium; although the EPA has a recommended level of 20 mg/L for sodium as a level of concern for customers that may be restricted for daily sodium intake in their diets. 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 contamination. ppm - One part per million. ppb - One part per billion. pCi/L - Picocuries per liter TT - Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water. NTU - Nephelometric Turbidity Unit is a standard unit to measure water clarity AL: Action Level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow. Action Levels are reported at the 90th percentile for homes at greatest risk.					



CITY OF BONNEY LAKE
19306 Bonney Lake Blvd.
P.O. Box 7380
Bonney Lake, WA 98391-9916

2007 WATER CONSUMPTION RATES

Inside City Limits:

<u>Winter</u>	
0 -10 CCF per month	\$1.03
Over 10 CCF per month	\$2.05

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

<u>Summer</u>	
0 -10 CCF per month	\$1.03
Over 10 CCF per month	\$3.50

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

Outside City Limits:

<u>Winter</u>	
0 -10 CCF per month	\$1.50
Over 10 CCF per month	\$2.97

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

<u>Summer</u>	
0 -10 CCF per month	\$1.50
Over 10 CCF per month	\$5.08

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