

City of Stanwood Water Quality Report For the Year 2007



Introduction

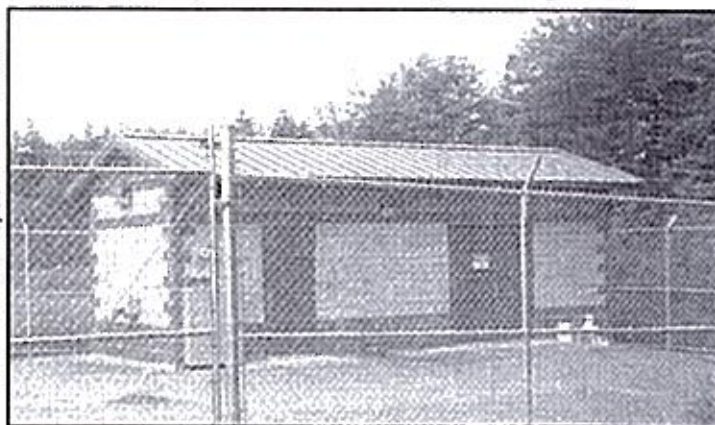
We are pleased to provide you with our annual Water Quality Report for the Calendar Year 2007. This report will inform you on the source of your water, what compounds are currently in your water, and how well your water complies with current regulations enforced by the Environmental Protection Agency (EPA) and Washington State Department of Health (DOH). In addition, we will provide a status update on the City's upcoming Bryant Well Field Treatment Facility, which is currently under construction.



Bryant Well No. 1, Rehabilitated in 2003

Stanwood Drinking Water Sources

The City currently has six groundwater sources that withdraw water from two aquifers. Aquifers are natural reservoirs of water found underground within layers of gravel, rock and sand. This water becomes replenished as rainwater seeps through layers of earth, which acts as a natural filter. Fure Well, Hatt Slough Springs, Cedarhome Well and both Bryant Wells are supplied by aquifers. The Bryant Wells are the City's primary source of water and provide the majority of the City's water supply. The Bryant Wells are located near Stanwood High School off 268th Street NW (Stanwood-Bryant Road). The Cedarhome Well was completed in spring 2008 and is located behind Cedarhome Elementary School. The City meters all water produced by the sources, as well as all water service connections to the system.



Cedarhome Well, Constructed in 2008

Your Water

We are lucky enough to have outstanding natural sources of water that have not required treatment in the past. We at the City of Stanwood work 24 hours a day, 7 days a week to provide quality water to all of our customers. We routinely monitor the quality of all of our water sources and the distribution system to ensure that they meet all current regulations. The **2007 Water Quality Monitoring Results Table** shown on the next page summarizes the makeup of your water in the past year. Other contaminants (such as lead and copper), which are not listed, were not detected.

2007 Water Quality Monitoring Results

This is what is in your tap water			This much is allowed		Where did this compound come from?
Detected Contaminants	Units	Result	EPA's MCL Standard	Comply?	Typical Sources
Arsenic	ppb	Average: 11.1 Range: 10 - 12	10	No	Erosion from natural deposits
Manganese	ppb	99	50	No	Erosion from natural deposits
Nitrate	ppm	0.2	10	Yes	Runoff from fertilizer use, animal waste, natural erosion
Total Coliform	Number of positive monthly samples	0 out of 65 annual samples	0	Yes	Microbes naturally present in the environment
Fecal Coliform and E. Coli	Number of positive monthly samples	0 out of 65 annual samples	0	Yes	Bacterial contamination from human or animal waste
Turbidity	NTU	0.3	TT	NA	Soil Erosion



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 to health. MCLGs allow for a margin of safety.

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

ppb = parts per billion = micrograms per liter (µg/L). This can be compared to one cent in \$10 million.

ppm = parts per million = milligrams per liter (mg/L). This can be compared to one cent in \$10,000.

NTU = Nephelometric Turbidity Units: Turbidity is a measure of the cloudiness of the water.

NA = Not Applicable: No EPA limit has been set yet.

HEALTH ISSUES: Are you at Risk?

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/Center for Disease Control and Prevention 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).

Arsenic

One naturally occurring mineral found in our groundwater supply is arsenic. Arsenic is a primary contaminant that can cause adverse health effects. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer. The EPA has recently lowered the MCL from 50 ppb to 10 ppb. On average, the arsenic concentrations found at the Bryant Wells fall just above the new limit. One of the main goals of our upcoming water treatment facility is to ensure that arsenic concentrations are reduced below the new EPA limit at all times.

Manganese

Over a long period of time, silverware, laundry, bathroom fixtures and anything else that comes into contact with water may become stained and discolored. This is caused by mineral deposits. Most of these minerals are secondary contaminants and do not contribute to health effects.

Brownish-black staining is typically caused by high levels of manganese in the water. Although the manganese concentration seen in the past year was higher than DOH's standard, this contaminant is known to vary and even comply with the standard in previous years. Fortunately, the same treatment technology selected to remove arsenic can also remove manganese. Another treatment facility goal is to ensure manganese concentrations comply with the manganese standard at all times.

Nitrate

We are fortunate to have very low levels of nitrate in our groundwater. Nitrates in drinking water at levels above 10 ppm pose a health risk for infants less than six months of age. High nitrate levels can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time due to rainfall or agricultural activity.

Total Coliform

Coliform bacteria are typically harmless and naturally found in the environment, but they serve as an indicator for microbial growth and the potential for other harmful bacteria, such as *E. coli* or fecal coliform to develop.

Although our water is primarily supplied from groundwater sources, the Bryant Wells are located close to Church Creek, which is surface water. Because of this, there is concern for hydraulic connection between the two sources and the possibility of bacterial cross contamination.

Compared to groundwater, surface water is a much more suitable environment for harmful bacteria to grow. An initial DOH analysis concluded that the Bryant Wells are in hydraulic connection to surface water. This warranted a microscopic particulate analysis to see if this well is contaminated with surface water bacteria. The tests came back negative, and it was determined that the City's main groundwater source is not under the direct influence of surface water. However, because it is still in hydraulic connection, DOH has required the City to disinfect this source with chlorination. Through our upcoming treatment facility, our water supply will soon become a fully chlorinated water system. This will ensure that our water is disinfected at all times.



Turbidity

Turbidity is a measure of the cloudiness of the water. We monitor turbidity because it is a good general indicator of water quality. This measurement will become more meaningful once the new treatment facility is operational. Turbidity will then directly correspond to treatment performance. For example, high turbidity will indicate that compounds are unexpectedly passing through our treatment filter.

Help Conserve Water: Water Efficiency Performance Report

We would like to thank you for doing your part in helping our community conserve water. Through our commitment to water conservation, we have reduced our residential water use by more than one-third over the past 10 years. That means an average single family household is saving over 50,000 gallons of water a year. That's almost 2 bathtubs full of water every day!

Not only does water conservation translate to a lower utility bill for you, but since we are using water much more wisely, we are committing to effective management of our limited water resources for endangered species and our future generations.

The City of Stanwood's goal is to reduce our per capita water use to 139 gallons per day by 2015 and we need your continued support to help get us there. Here are ways you can save even more water around your house.

City of Stanwood Comparison of 1997 and 2007 Water Use Data			
	Year		Percent Change
	1997	2007	
Total Water Production	361 MG	341 MG	-5%
Total Authorized Consumption	286 MG	311 MG	9%
Distribution System Leakage	21%	9%	-57%
Average Single Family Use per Household	352 gpd	214 gpd	-39%
MG = million gallons gpd = gallons per day			

- Fix leaks in your toilets, faucets and sprinklers.
- Replace your showerheads with low-flow models.
- Wash only full loads of clothes and dishes.
- Install aerators on your bath and kitchen faucets.
- Replace dishwashers and washing machines with Energy Star® models.
- Select drought-tolerant or native plants for your next landscaping project.
- Water your lawn deeply to water less frequently.

Our Public Works Department is also working hard to reduce the amount of water loss or distribution system leakage. They are fixing leaks in the system, replacing old water main and expanding our metering of un-billable uses like our flushing program to meet our goal of achieving less than 10 percent distribution system leakage by 2018, based on a 3-year rolling average. We are happy to report for the first time that our distribution system leakage was less than 10 percent in 2007 and we are well on our way to meeting the goals that we set in our public forum on January 24, 2008. Thank you to all who attended and provided your input!

Tap Water vs. Bottled Water

Tap water and bottled water are equally safe to drink since both must meet the water quality requirements of the US Environmental Protection Agency. The US Food and Drug Administration require bottles to list added ingredients, similar to how this report lists the ingredients of your tap water. In many cases, the origins of bottled water come from groundwater sources similar to your Bryant Well Field. The additional costs of bottled water come from additional purification, producing the plastic containers (derived from crude oil), trucking and stocking the product at your local store.

Stanwood Water	\$0.004/gal
Arlington Water	\$0.005/gal
Brand Name Bottled Water	\$2.00/gal
Milk	\$2.99/gal
Regular Unleaded Gasoline	\$4.05/gal

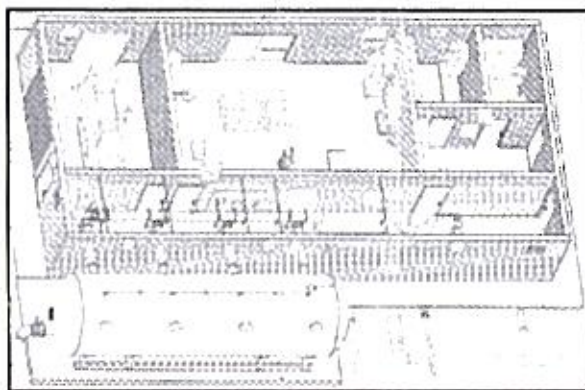
The Bryant Well Field Treatment Facility

Construction of the new Bryant Well Field Treatment Facility is currently underway and can be noticed on your right when travelling westbound on State Route 532 just after 64th Avenue NW (Woodland Road) but before 72nd Avenue NW (Lindstrom Road). Construction activities mainly impact a short stretch of 268th Street NW (Stanwood-Bryant Road) and traffic delays may occur. Please be cautious of loose gravel and steel plates when travelling on this road.

This facility was designed to improve system reliability and optimize system resources by maximizing water reuse and reducing waste. This facility will be energy efficient and blend in with the surrounding environment in an aesthetically pleasing manner.

When completed, this facility will result in safer water by reducing arsenic, manganese and hydrogen sulfide contaminants in the City's main potable water supply. It will also provide a chlorine residual to ensure continuous disinfection throughout the distribution system.

The Bryant Well Field Treatment Facility is tentatively scheduled to be completed in November 2008.



Treatment Facility Floor Plan



Bryant Well Field Treatment Facility Under Construction

Make Your Voice Heard

We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled council meetings. They are held on the **2nd and 4th Thursdays of each month at the School District Office at 26920 Pioneer Highway**. If you have any questions regarding this report or your water utility, please contact the **Public Works Department at 360-629-4179** Monday through Friday between 9:00 a.m. and 5:00 p.m.

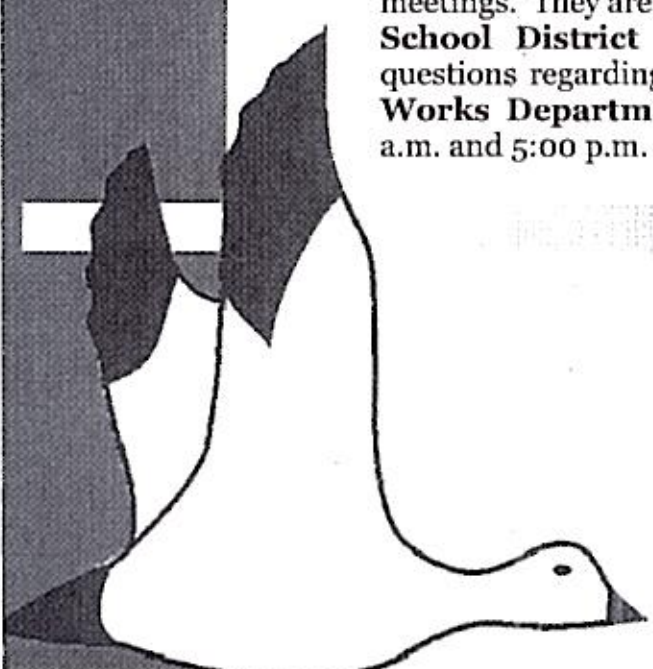
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City Council
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Conrad Ryer
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Arne Wennerberg
Bill Carlton
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Leonard Kelley





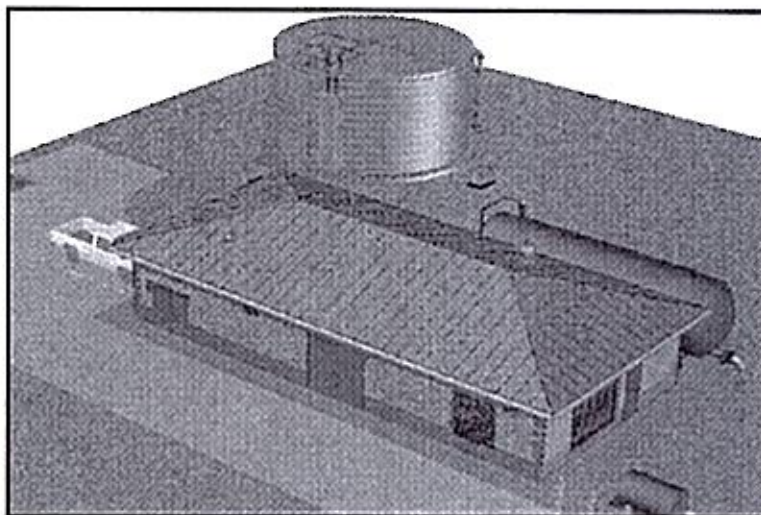
QUALITY ON TAP REPORT

CITY OF STANWOOD WATER DEPARTMENT

PUBLISHED JUNE 2008



LEARN THE FACTS ABOUT YOUR WATER



INCLUDES AN UPDATE TO THE BRYANT WELL FIELD TREATMENT FACILITY

STANWOOD, WA 98292
POSTAL PATRON



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