

Skagit View Village Water Quality Report

Public Water System ID No. 96879 5



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Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

At Skagit PUD, we are committed to providing you the safest and most reliable drinking water possible. This report is a snapshot of the quality of water that we provided in 2009. Inside are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

For information about your drinking water, please call (360) 424-7104 or visit our Web site at SkagitPUD.org. We welcome your comments and suggestions. We also invite you to attend Skagit PUD commission meetings. The commissioners hold open meetings every Tuesday of the month at 4:30 p.m. in our Aqua Room located at 1415 Freeway Drive, Mount Vernon.

Who Regulates Water Quality?

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and Washington State Department of Health (DOH) prescribe regulations which limit the amount of contaminants in water provided by public water systems such as Skagit View Village.

Other standards for water protection include:

- Assessing drinking water sources;
- Protecting wells;
- Making sure water is treated by qualified operators;
- Ensuring the integrity of water distribution systems;
- Conducting water quality monitoring; and
- Making information available to the public on the quality of their drinking water.

Source of Your Drinking Water

The District obtains water for Skagit View Village from a well located within Skagit View Village. This well draws water from an aquifer approximately 70 feet below the ground surface. This well was turned over to the District as part of the Skagit View Village Local Utility District.

Skagit PUD reconstructed much of the water system in 2005.

A facility automatically pumps water out of the aquifer to a water tank located south of Skagit View Village. The water is then treated by an aeration process to adjust the pH, as described on the next page. A booster pump helps deliver the

water to a storage tank. From here, water flows by gravity to the community, based on water demands from the homes in Skagit View Village.

Chlorine as a Disinfectant

Chlorine is added on a continual basis to drinking water that is distributed to Skagit View Village. Although the taste and odor of this disinfectant is undesirable to some people, chlorine is added to eliminate harmful bacteria that may be found in water. Chlorine is the best method of protection for water systems that are the size of Skagit View Village.

Source Water Protection

To achieve improved protection of public water supply sources and the health of Washington's citizens, the Washington State Department of Health has developed the Source Water Assessment Program (SWAP).

The SWAP program evaluates potential threats to the safety of our water supplies by assessing sources of contamination. The SWAP is designed to give you and your community more information about the source of your drinking water, and any threats to its long-term quality that we can identify and address

through a pollution prevention approach.

To learn more about the SWAP, contact the Washington State Department of Health at (360) 236-3149 or visit www.doh.wa.gov/ehp/dw.



Drinking Water Improvement Project:

Copper in Your Water

You have been notified in past water quality reports that the Action Level for copper, as determined by the EPA, in the Skagit View Village water system has been exceeded. As a result, the Skagit PUD undertook actions to help reduce the levels of copper at the taps of customers.

Copper is naturally present in your water at a low level of 0.02 ppm. It is the pH (acidity), of your water that causes elevated levels that exceed the Action Level, which is 1.30 ppm, when the water reaches your tap. As a result, Skagit PUD undertook a Corrosion Control Process in the Skagit View Village system that adjusts the pH of the water by stripping carbon dioxide from the water.

When carbon dioxide is dissolved in water, it reacts with the water to form a weak acid and lower the pH. The acidity causes copper in your household plumbing to dissolve into the water, hence elevated levels of copper at your tap.

Skagit PUD installed a non-chemical corrosion control process in Skagit View Village in the spring of 2005. A Venturi-aeration process reduces the corrosivity of the potable water by stripping carbon dioxide from the water, thus reducing the levels of copper that occur at your taps.

We are monitoring the effectiveness of this corrosion control strategy, thanks to our volunteer water testers in your community. Please contact Skagit PUD for the results of ongoing copper monitoring in Skagit View Village.

Health Effects of Copper

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress.

Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

You Can Reduce Your Copper Exposure By Flushing

While the District is working to further reduce the amount of copper that dissolves into your water, it is recommended that you let the water run before using it for cooking or drinking whenever the household water remains unused for more than six (6) hours. This would include the times when you first get up in the morning or when you come home from work. The longer the water sits in your household pipes, the more copper it may contain.

Flushing the faucet means running the cold-water faucet until the water feels a cold as it can get, or for a period of about one minute. Also, avoid cooking with or consuming water from hot water taps as hot water dissolves copper more readily than cold water does.

Take note of this example to explain the effectiveness of flushing your faucets. Skagit PUD wanted to know how much copper decreases by flushing a faucet in the morning. The PUD had a volunteer from Skagit View Village collect two samples. In the very first glassful of water, copper was measured at 1.4 ppm. Immediately after the first sample was collected, the volunteer let the faucet run for more than a minute. In this 'fully flushed' glassful of water, copper was measured at 0.1 ppm. Flushing your faucet really works!



Water Quality

The tables below list all the drinking water contaminants that we detected during the 2009 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 to December 31, 2009. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

2009 Drinking Water Results – Regulated Contaminants

Lead and Copper	AL	MCLG	Skagit View Water	Number of sites found above the Action Level			Typical Source of Contaminant
Lead (ppb) (2007)	15	0	2.0	None			Corrosion of household plumbing
Copper (ppm) (2007)	1.3	1.3	1.68	2 sites above AL out of 5 sites sampled			Corrosion of household plumbing
Microbiological Contaminants	MCL (MRDL)	MCLG (MRDLG)	Skagit View Water	Range of Detections	Sample Date	Violation	Typical Source of Contaminant
Turbidity (NTU)	TT	n/a	0.25	n/a	2008	NO	Soil erosion
Total Coliform Bacteria	>5% Samples	0.0	0%	n/d	2009	NO	Naturally present in environment
Disinfection By-Products							
Trihalomethanes (ppb)	80	n/a	4.4	n/a	2008	NO	By-product of drinking water chlorination
Haloacetic Acids (ppb)	60	n/a	1.1	n/a	2008	NO	By-product of drinking water chlorination
Chlorine Residual (ppm)	4	4	0.62	0.25 - 0.90	2009	NO	Measure of disinfectant added to water
Inorganic Compounds							
Nitrate (ppm)	10	0	0.65	n/a	2009	NO	Erosion of natural deposits
Radionuclides							
Beta/Photon Emitters (pCi/L)	50	0	5.2	n/a	2009	NO	Erosion of natural deposits
Alpha Emitters (pCi/L)	5	0	1.9	n/a	2009	NO	Erosion of natural deposits
Secondary Regulated Compounds							
Manganese (ppm)	5	0	0.003	n/a	2009	NO	Naturally present in the environment

MONITORING WAIVER.

The Washington State Department of Health has reduced the monitoring requirements for volatile organic chemicals, inorganic chemicals, and synthetic organic chemicals because the source is not at risk of contamination. The last samples collected for these contaminants were taken in October and December 2006 and were found to meet all applicable EPA and Department of Health standards.

Water Quality Definitions

Total Coliforms: A group of non-pathogenic bacteria used in testing water to indicate the presence of pathogenic bacteria. They are naturally present in the environment. If coliforms were found in more samples than allowed, it would be a warning of potential problems.

Haloacetic Acids: A disinfection by-product from chlorinating water that contains natural organic matter.

Trihalomethanes: A disinfection by-product from chlorinating water that contains natural organic matter. The most common by-product is chloroform.

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

MRDL: Maximum Residual Disinfectant Level. 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.

MRDLG: Maximum Residual Disinfectant Level Goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the health benefits of the use of disinfectants to control microbial contaminants.

Turbidity: A measure of the cloudiness of water due to suspended particles.

NTU: Nephelometric Turbidity Units. A unit of measure for turbidity based on the amount of light

that is reflected from the water.

ppm: Part per million. One part per million is equivalent to half of an aspirin tablet dissolved in a full bathtub of water (approximately 50 gallons).

ppb: Part per billion. One part per billion is equivalent to half of an aspirin tablet dissolved in 1,000 bathtubs of water (approximately 50,000 gallons).

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

AL: Action Level. The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement a water system must follow.

Understanding Potential Sources of Contaminants

DRINKING WATER, INCLUDING BOTTLED WATER, may reasonably be expected to contain at least small amounts of some contaminants. The presence of some contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791) or at www.epa.gov/safewater/.

The sources of drinking water (both tap water and bottled water) include lakes, rivers, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants in drinking water sources may include:

- Microbial contaminants, such as viruses and bacteria, which may come from septic systems, wildlife, and farm animals.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, and farming.
- Pesticides and herbicides, which may come from a

variety of sources such as agriculture, urban storm water runoff, and residential uses.

- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which 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. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as people with cancer undergoing chemotherapy, people 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 from their health care providers

about drinking water.

EPA and Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other

microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

CROSS CONNECTION

Keeping contaminants out of your water

IT IS A LOGICAL ASSUMPTION that because water is always under pressure, it can only flow in one direction. However, can it flow the opposite way from its intended direction? The answer is **yes**, and when it does it can cause disastrous results. Water will always flow toward the point of lowest pressure.

If a water main in the public water system should break, or if a fire occurred and the fire department opened several hydrants, the pressure in the water mains could drop dramatically, causing a reversal of flow. The potential for this reversal of flow is why Skagit PUD is concerned about the possibility of contaminants or pollutants being siphoned back into the water system.

When the plumbing at a residence is connected to the potable water supply, and it is connected to piping carrying another fluid or gas, such as

an air conditioner containing chemicals to kill algae, the contaminant could be drawn back into our water mains. A garden hose submerged into a hot tub or swimming pool, or inserted into your car's radiator to flush out antifreeze, or attached to a fertilizer sprayer, could siphon these contaminants back into our water mains. Incidents such as these have been documented throughout the country and have happened all too often.

Fortunately, back flow from a cross connection can be prevented. Skagit PUD's Cross Connections Program protects the water system from contaminants by ensuring that customers have properly installed and maintained back flow prevention devices. Call Water Quality at (360) 848-2138 for more information.

