

# 2010 CONSUMER CONFIDENCE REPORT



## QUALITY FIRST

May 20, 2011

Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. Last year, as in past years, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. We remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with quality drinking water.

*\*We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, feel free to contact us, we are always available to assist you.*

## COMMUNITY PARTICIPATION

At this time we do not hold any public participation meetings. If you have any questions, comments or concerns feel free to address them through writing and mailed to the address listed in the contact information section of this report. If you wish to speak with someone, you may use any of the listed numbers and you will be directed to the appropriate staff member who can best assist you with your needs.

### CONTACT INFORMATION:

For more information about this report, or for any questions in relations to your drinking water, please contact any of the contact numbers listed below.

EPA's Hotline: 1(800) 426-4791  
**Tulalip Utilities** (360) 716-4840

- Leland Jones Sr
- Jeramy Hadley
- Roxanne Jones

TUA: Fax (360) 651-4612

**After Hours Call:**  
**(360) 716-4840 or 425-551-3916**

*Report your concern as it will be designated to the appropriate staff member.*



Our tribal employees enjoying their work day locating and repairing a broken water line.



“It is our goal to Provide adequate safe drinking water for everyone in our community.”



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## WHERE DOES MY WATER COME FROM?

The John Sam Lake water system serves approximately 168

customers with 48 residential connections. John Sam Lake customers are fortunate because they enjoy an abundant water supply from a ground-water well that's concrete storage tank is above ground and that can hold up to 39,000 gallons of water. This one well supplies and serves four distinct sub-divisions in a rural area 15 miles north of Tulalip Bay. Water Production is estimated at approximately 5,000 gallons a day .

For additional treatment and disinfection, sodium hypochlorite is injected into the water and is safe to drink.

Ground water is the water present underground in the tiny spaces in rocks and soil. Underground areas where ground water accumulates in large amounts are called aquifers. Aquifers are layers of rock or soil that can store and supply enough water to wells and springs to be economically useful. Most ground water moves slowly usually no more than a few feet a day. Ground water in aquifers will eventually discharge to or be replenished by springs, rivers, wells, precipitation, lakes, wetlands, and the oceans as part of the Earth's water cycle

## SUBSTANCES THAT COULD BE IN YOUR WATER?

In order to ensure that tap water is safe to drink, the U.S. EPA and/or

the Washington state board of health prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include: Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or 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 may also come from gas stations, urban storm water runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

# IMPORTANT HEALTH INFORMATION



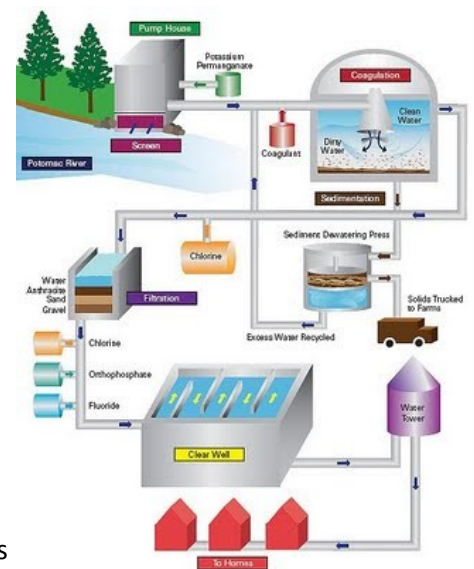
Some people may be more vulnerable to contaminants in drinking water than the general

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers 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 at (800) 426-4791 or <http://water.epa.gov/drink/hotline>

## WATER TREATMENT PROCESS

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to an aeration tank, which allows for oxidation of the high iron levels that are present in the water. The water then goes to a mixing tank where polyaluminumchloride and soda ash are added. The addition of these substances cause small particles to adhere to one another (called "floc") making them heavy enough to settle into a basin from which sediment is removed. Chlorine is then added for disinfection. At this point, the water is filtered through layers of fine coal and silicate sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges.

Chlorine is added again as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, soda ash (used to adjust the final pH and alkalinity), fluoride (used to prevent tooth decay) and a corrosion inhibitor (used to protect distribution system pipes) are added before the water is pumped to sanitized, underground reservoirs, water towers and into your home or business.



## Q&A

### WHY DO I GET THIS REPORT

Community water system operators are required by Federal law to provide their customers an annual water quality report. The report helps people make informed choices about the water they drink. It lets people know what contaminants, if any, are in their drinking water and how these contaminants may affect their health. It also gives the system operators a chance to tell customers what it takes to deliver safe drinking water.

### WHY DOES MY WATER SOMETIMES LOOK "MILKY"?

The "milky" look is caused by tiny air bubbles in the water. The water in the pipes coming into your home or business is under pressure, so gasses (the air) are dissolved and trapped in the pressurized water as it flows into your glass. As the air bubbles rise in the glass, they break free at the surface, thus clearing up the water. Although the milky appearance might be disconcerting, the air bubbles won't affect the quality or taste of the water.

# WATER CONSERVATION!



\*There is no resource more precious than water. There is also no resource that is misused, abused, misallocated, and misunderstood the way water is. Safe drinking water, healthy and intact natural ecosystems, and a stable food supply are a few of the things at stake as our water supply is put under greater and greater stress.



**No drips:** A dripping faucet can waste 20 gallons of water a day. A leaking toilet can use 90,000 gallons of water in a month

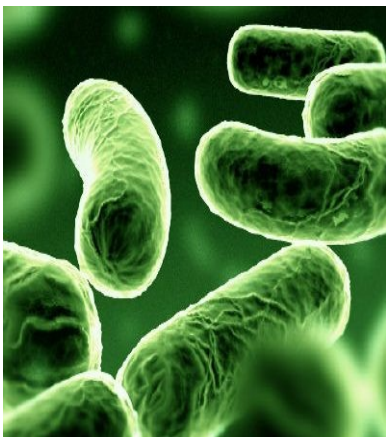
**Cultivate good water habits:** All the water that goes down the drain, clean or dirty, ends up mixing with raw sewage, getting contaminated, and meeting the same fate.

**Stay off the bottle!** By many measures, bottled water is a scam. In most first-world countries, the tap water is provided by a government utility and is tested regularly.

**\*\*\*Keep your eyes open:** Report broken pipes, open hydrants, and excessive waste. Don't be shy about pointing out leaks to your friends and family members, either. They might have tuned out the dripping sound a long time ago.

## NATURALLY OCCURRING BACTERIA

The simple fact is, bacteria and other microorganisms inhabit our world. They can be found all around us: *in our food; on our skin; in our bodies; and, in the air, soil, and water.* Some are harmful to us and some are not. **Coliform bacteria** are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested many water samples for coliform bacteria. In that time, none of the samples came back positive for the bacteria. Federal regulations now require that public water that tests positive for coliform bacteria must be further analyzed for fecal coliform bacteria. **Fecal coliform** are present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for fecal coliform to be present in water at any concentration. Our tests indicate no fecal coliform is present in our water.



## WHAT CAUSES THE PINK STAINS ON BATHROOM FIXTURES?

The reddish-pink color frequently noted in bathrooms on shower stalls, tubs, tile, toilets, sinks, toothbrush holders and on pets' water bowls is caused by the growth of the bacterium **Serratia marcescens**. *Serratia* is commonly isolated from soil, water, plants, insects, and vertebrates (including man). The bacteria can be introduced into the house through any of the above mentioned sources. The bathroom provides a perfect environment (moist and warm) for bacteria to thrive.

The best solution to this problem is to *continually clean* and dry the involved surfaces to keep them free from bacteria. Chlorine-based compounds work best, but **\*\*keep in mind that abrasive cleaners may scratch fixtures, making them more susceptible to bacterial growth.** Chlorine bleach can be used periodically to disinfect the toilet and help to eliminate the occurrence of the pink residue. Keeping bathtubs and sinks wiped down using a solution that contains chlorine will also help to minimize its occurrence.

# WHAT'S A CROSS CONNECTION???

## Cross-

connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems) or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (back pressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line ([back-siphonage](#)).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

\*\*\*Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained

## HOW MANY CONTAMINANTS ARE REGULATED IN DRINKING WATER?

The U.S. EPA regulates over 80 contaminants in drinking water. Some states may choose to regulate additional contaminants or to set stricter standards, but all states must have standards at least as stringent as the U.S. EPA's.



## TAP VS. BOTTLED



Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

## LEAD IN HOME PLUMBING

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*. We are 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

For a detailed discussion on the NRDC study results, check out their Web site at [www.nrdc.org/water/drinking/bw/exesum.asp](http://www.nrdc.org/water/drinking/bw/exesum.asp)



# SAMPLING RESULTS

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

## John Sam Lake District #2 - PSWID # 105300098

### Regulated Substances

CONTAMINATES	UNITS	MCL	MCLG	Amount Detected	Range Low – High	SAMPLE DATE	VIOLATION	TYPICAL SOURCE OF CONTAMINATION
Arsenic	Mg/L	10	0	.2	.2 – 10	12/22/2010	NO	Erosion of Natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
BARIUM	Ppm	2	2	.002	.002 - 2	12/22/2010	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beta/Photon Emitters	pCi/L	50	0	5.77–0	5.77 - 0	12/29/2010	No	Decay of natural and man made deposits
Chromium	ppb	100	100Chromium	.004	.004– .1	12/22/2010	no	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate	ppm	10	10	2.3	2.3– 10	2010	NO	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits

### Tap water samples were collected for Lead and Copper analyses from sample sites

Copper, Free	ppm	0	1.3	..282	0	2010	NO	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	ppb	15	0	.001	0	2010	NO	Corrosion of household plumbing systems; Erosion of natural deposits

### Secondary substances

Sulfate	ppm	250	N/A	3.5	3.5-250	2010	no	Runoff /leaching from natural deposits; industrial wastes
Zinc	ppm	5	N/A	.02	.02-0	2010	no	Runoff /leaching from natural deposits; industrial waste

Coliform are naturally Present in our environment; not a health threat in itself; it Is used to indicate whether other potentially harmful bacteria may be present.

Contaminant	Sample Type	Result	Sample Dates
COLIFORM	Routine	Positive	8/6/2010
COLIFORM	Routine	Positive	8/6/2010
COLIFORM	Routine	Positive	9/29/2010
COLIFORM	Routine	Positive	10/1/2010
COLIFORM	Routine	Positive	8/19/2010
COLIFORM	Routine	Positive	9/15/2010
COLIFORM	Routine	Positive	10/28/2010

The Tulalip Utility Authority have been working diligently in the monitoring this substance so that it doesn't create or continue causing our drinking water to be tainted. Since our last violation of 2010 there have been none there after reported.

### How do you come in contact with coliform?

Coliform are a family of bacteria common in soils, plants and animals. You can come in contact with these bacteria by eating or drinking (ingesting) soils on plants and in water sources such as ponds, lakes and rivers. Fecal coliform bacteria can be found in water contaminated by domestic sewage or other sources of human and animal waste

### What is coliform?

Total coliform bacteria are a collection of relatively harmless microorganisms that live in large numbers in soils, plants and in intestines of warm-blooded (humans) and cold-blooded animals. Coliform aid in the digestion of food

### Can coliform harm your health?

Finding coliform or other bacteria in water does not necessarily always mean you will become ill. However, if these organisms are present, other disease-causing organisms may also be present. The presence of fecal contamination is a sign that a possible health risk exists for individuals exposed to this water. Health symptoms related to drinking or swallowing water contaminated with fecal coliform bacteria generally range from no ill effects to cramps and diarrhea (gastrointestinal distress). Sanitarians and those who test water look for total and fecal coliform bacteria to alert people to the possible dangers and suggest proper treatments to remove potentially harmful bacteria from the water. The presence of any fecal coliform in drinking water is of immediate concern as many diseases can be spread through fecal transmission.

# DEFINITIONS:

**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 to health. MCLGs allow for a margin of safety

**ND (Not detected):**

Indicates that the substance was not found by laboratory analysis.

**pCi/L (picocuries per liter):**

A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**TT (Treatment Technique):** A required process intended to

**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 benefits of the use of disinfectants to control microbial contaminants.

**NA:** Not applicable reduce the level of a contaminant in drinking water.

## QUESTIONS COMMENTS CONCERNS:

If you have any questions or comments about this report or if you may have any other concerns, feel free to contact our office and your call will be directed to the appropriate designee. Thank you

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Hours of Operation: Monday—Friday, 8:00am—4:30 P.M.

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