

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 or brought into our local office. (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

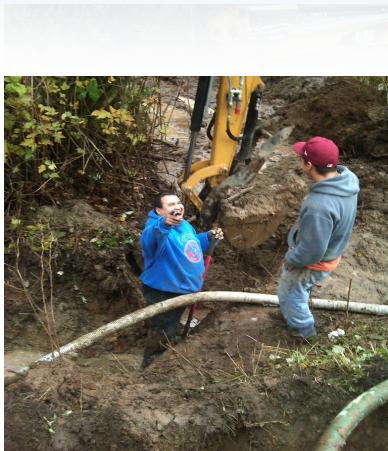
TUA: Fax (360) 651-4612

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.”



WHERE DOES MY WATER COME FROM?

The Mission Highlands water system serves approximately

88+ persons and presently has 30+ connections. Mission Highlands customers are supplied water from one community ground water well adjacent to Turk Drive in the centralized region of the reservation. Storage is provided by a 312,000 gallon concrete storage reservoir located on the north side of the subdivision. This well was established and drilled in 2006 at a capacity of 90 gallons per minute. Production of this well is estimated at 10,446 gallons per day. No fluoride equipment is provided at this time.

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.

IMPORTANT HEALTH INFORMATION



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

Immunocompromised 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>

DRINKING WATER FROM YOUR HOSE?

So you're out watering your container gardens or the kids are out playing in the sprinkler (ok, so what else is new?). It's hot, you're thirsty and there is refreshing water coming out of the hose. You stoop down to get a nice cool drink...WAIT! There's bad news...your garden hose may be and could potentially be hazardous to your health. Many hoses are made of polyvinyl chloride (PVC), a substance in which uses *lead* as a stabilizer.

When water sits in a PVC hose, lead can leach into the water in concentrations that can reach 10 to 100 times the allowable lead levels!

The good news is that you can buy hoses that are lead free. They are made from FDA approved materials and the fittings are often nickel plated, because brass can also leach lead. They are labeled "drink-safe," or "safe for potable water."

With any hose, even one labeled "drink-safe," let the water run until it's cold before you drink from it, because bacteria can grow in warm standing water.



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.

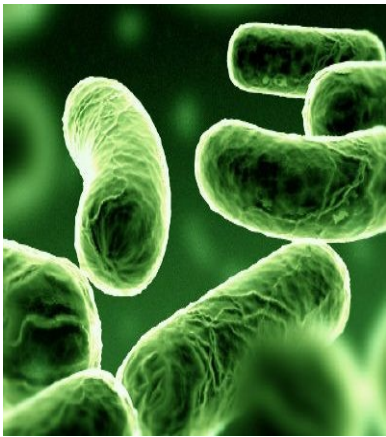


WATER CONSERVATION!

*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.



1. **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
2. **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.
3. **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.
4. *****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. *****Serratia will not survive in chlorinated drinking water.**

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.

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



SAMPLING RESULTS

During the past year we have taken numerous water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The tables below show 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.

Mission Highlands #1 PSID 105300150

Regulated Substances

| CONTAMINATES | UNITS | MCL | MCLG | Amount Detected | Range Low – High | SAMPLE DATE | VIOLATION | TYPICAL SOURCE OF CONTAMINATION |
|------------------------|-------|-----|------|-----------------|---------------------|-------------|-----------|---|
| CHLOROFORM | UG/L | 0.1 | 0 | 0.8 | 0.8-0.1 | 2/17/2010 | NO | are disinfection by-products commonly produced during the chlorination of water and wastewater |
| TTHM | UG/L | .08 | N/A | 0.8 | 0.8—0 | 2/17/2010 | NO | Total Trihalomethanes (TTHM) are a by product of chlorinating water that contains natural organics. |
| Bromoform | Ug/l | .1 | 0 | 0.0 | 1.5-0 | 8/18/2010 | NO | The major source of toluene in drinking water is discharge from petroleum factories |
| BROMO DICHLORO-METHANE | UG/L | .1 | 0 | 0 | 0 - 1.3 | 2/18/2010 | NO | Fire retardant, solvent, intermediate in synthesis of other compounds Fire-extinguisher fluid ingredient, heavy liquid for mineral and salt separations; laboratory use |
| ZINC | MG/L | 5 | 0 | .007 | .007-5 | 12/22/2010 | NO | Mining, smelting metals (like zinc, lead and cadmium) and steel production |

| | | | | | | | | |
|-----------|------|------|---|-------|-----------|------------|----|--|
| MANGANESE | MG/L | ..05 | 0 | 0.084 | .084—.05 | 12/22/2010 | NO | Mining, smelting metals (like zinc, lead and cadmium) and steel production |
| Arsenic | Mg/l | .01 | 0 | .006 | .006– .01 | 12/22/2010 | no | Erosion of Natural deposits; runoff from orchards; runoff from glass and electronics production wastes |

| | | | | | | | | |
|--------|-----|---|---|------|----------|------------|----|--|
| BARIUM | Ppm | 2 | 2 | .008 | .008 - 2 | 12/29/2010 | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| | | | | | | | | |

| CONTAMINANT | UNITS | MCL | MCLG | RESULTS | RANGE | SAMPLE DATE | VIOLATION | POSSIBLE SOURCE OF CONTAMINATION |
|-------------|-------|-----|------|---------|----------|-------------|-----------|--|
| BARIUM | Ppm | 2 | 2 | .021 | .021 - 2 | 12/22/2010 | NO | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Iron | MG/L | .3 | 0 | .13 | .13 - 3 | 12/22/2010 | NO | Iron is mainly present in water in two forms: either the soluble ferrous iron or the insoluble ferric iron |
| FLOURIDE | MG/L | 4 | 4 | .13 | .13 - 4 | 12/22/2010 | NO | Fluoridated water has fluoride at a level that is effective for preventing cavities; this can occur naturally or by adding fluoride. ¹² |
| RADIUM | PCI/L | 5 | 0 | 1.77 | 1.77-0 | 6/9/2010 | NO | |

Tap water samples were collected for Lead and Copper analyses from various sample sites and homes throughout the community.

| | | | | | | | | |
|--------|-----|-----|-----|-------|----------|-----------|----|---|
| Copper | ppm | 1.3 | 1.3 | 0.022 | .022-1.3 | 3/16/2010 | NO | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead | ppb | 0 | 0 | 0.002 | 0.002-0 | 3/16/2010 | NO | Corrosion of household plumbing systems; Erosion of natural deposits |

WHY IS MY WATER BROWN?

Have you recently found your water faucet is running with brown water? It can be frustrating to find this problem reoccurring, especially when you were looking forward to a nice relaxing bath!

Your water may be brown because it contains too much iron. Iron is rather common and occurs naturally as a metal in soil. As a result, it is normally present in your drinking water. Under normal conditions, drinking water provides about 5% of the iron that you are supposed to drink or eat each day.

You need iron to survive, iron is used as part of the hemoglobin in your blood which transports oxygen in your blood. although this is of little comfort when you were simply looking for a refreshing drink or relaxing soak!

Although not dangerous to drink, brown water is unappealing and annoying. Iron-containing water may have a funny, metallic taste. Be careful when coming into contact with brown water in your home as it can stain your clothing, towels and surfaces such as bathtubs or toilets.

Iron can get into your water in several ways and one of the most common ways is when rust gets dislodged from water pipes which is why you may be wishing to avoid it. This can happen when pressure in the pipes changes, for example when water pipes are repaired or when water in the pipes is shut off and then turned back on again, thus finding its way into your water supply. If you get water from a well, it is also possible that more iron than normal entered your well water from the surrounding soil and dirt as opposed to it arriving from water works happening close by.

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 comments or concerns free to contact our office and your call will be directed to the appropriate designee.

Thank you

Tulalip Utility Authority • 3015 mission beach Road, Tulalip WA 98271

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

360.716.4840 Office

360.651.4612 Fax