PO Box 618, Preston, WA 98050

2015 Water Quality Report

The Upper Preston Water Association (UPWA) is pleased to provide you with this year's water quality report as required by the federal Safe Drinking Water Act (SDWA). This report is designed to inform you about the quality of water and services we deliver to you every day. If you have questions about this report or have concerns regarding the water association, please contact UPWA President Dave Parker at (425) 222-7939 or Secretary Laurence Istvan at (425) 222-7643.

Water Quality Monitoring

We regularly test your drinking water for contaminants in compliance with federal and state laws. This report covers the results of our testing for the period January 1, 2015 through December 31, 2015. A filtration system of the source water to reduce arsenic and manganese levels was installed and has been in operation since October 2010. Manganese and Arsenic results in this report are after filtration.

Drinking Water Facts

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man-made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

Contaminants that may be present in source water include:

- ***Microbiological contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.*
- ***Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or 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 and residential uses.*
- ***Radioactive contaminants**, which are naturally occurring.*
- ***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.*

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 (EPA) Safe Drinking Water Hotline at 1-800-426-4791.

Water Source

Your water comes from a 209' deep well adjacent to the Vasa Hall at 10539 324th Pl SE in Upper Preston. This well taps an underground water source known as the Snoqualmie Aquifer. The water association owns the property immediately surrounding the well and is able to restrict any activity that could contaminate it. Water is pumped from the well through a filtration system and into the distribution system to a 60,000-gallon storage tank at the top of SE 110th Street.

Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as cancer patients 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. Individuals in this situation should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). Web site: www.epa.gov/safewater

Definitions and Abbreviations

In this report, you may find some unfamiliar terms and abbreviations. To help you better understand them, we've provided the following definitions:

Maximum Contaminant Level (MCL)* - The highest level of a contaminant that is allowed in drinking water.

State Reporting Level (SRL) – The concentration level that the State requires laboratory equipment to be able to detect when looking for a specific chemical.

Non-Detects (ND) - Laboratory analysis indicates that the contaminant is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) – These are laboratory measurement units of detectable contaminants or other elements. To give you a perspective on these units, *one part per million* or *one milligram per liter* is comparable to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) – One thousandth of a ppm; equivalent to one penny in $10 million.

Nephelometric Turbidity Unit (NTU) – A measure of the clarity of water. Turbidity less than 5 NTU is not noticeable to the average person.

Note: *MCL's are set at very stringent levels. To understand the possible health effects of many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.*

New Water Use Efficiency Rule

In 2003, the Washington State Legislature passed Engrossed Second Substitute House Bill 1338, known as the Municipal Water Law. The law established that all water suppliers must use water more efficiently in exchange for water right certainty and flexibility to help meet future demand. In 2015, the entire Upper Preston water system used 6,656,400 gallons of water. The average low end daily use per customer was 150 gallons per day. During the summer, the average daily use per customer was 720 gallons per day.

Test Results

We test the water monthly for the presence of coliform bacteria and periodically as required by federal and state regulations for a wide variety of other contaminants. All monthly coliform testing for the 2015 calendar year were satisfactory.

Routine testing for regulated contaminants during the period of this report also found the following:

Detected Contaminant	Upper Preston Water	MCL	SRL
Arsenic	5 ppb	10 ppb	3 ppb
Fluoride	ND	4 ppm	.2 ppm
Nitrate	ND	10 ppm	.5 ppm

Arsenic occurs naturally in ground and surface water, and is associated with certain geologic conditions, as well as with contamination from certain human activities. In February 2002, the United States Environmental Protection Agency (EPA) tightened the maximum contaminant level for Arsenic from 50 ppb to 10 ppb. In addition, the State of Washington has moved to lower the state reporting level (SRL) to reflect this new standard. According to the EPA, some people who drink water that contains 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.

Fluoride also occurs naturally in ground water as a result of the erosion of natural deposits. According to the EPA, some people drinking water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care professional.

Three EPA secondary regulated contaminants were detected; Chloride, Manganese and Sodium. Secondary standards are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, color or odor).

Detected Contaminant	Upper Preston Water	MCL	SRL
Chloride	44 ppm	250 ppm	20 ppm
Manganese	ND	50 ppb	1 ppb
Sodium	56 ppm	None	5 ppm

Chloride in surface and groundwater comes from both natural and man-made sources, such as run-off containing road de-icing salts, the use of inorganic fertilizers, landfill leachates, septic tank effluents, animal feeds, industrial effluents, irrigation drainage, and seawater intrusion in coastal areas. It is also leached from various rocks into soil and water by weathering. Chlorides primarily affect the taste aesthetics of water.

Manganese is primarily a nuisance chemical with staining properties, although high levels can impart a bittersweet or metallic taste to drinking water. In our service area, the primary result of manganese is brownish stains in dishwashers, toilets, and laundry.

Sodium levels detected poses little health risk. According to the Environmental Protection Agency (EPA), adverse health effects may be anticipated with sodium concentrations in water greater than 20 mg/L. According to the Centers for Disease Control, limiting your total sodium intake to 1500 mg/day is recommended. Those needing to limit their sodium intake may wish to consult with their physician.

Lead and Copper

Results of the most recent laboratory tests taken in September 2013

Detected Contaminant	Upper Preston Water	MCL	SRL
Lead	ND	0.015 ppm	0.002 ppm
Copper	47 ppb or 0.047 ppm	1.30 ppm	0.20 ppm

Lead and Copper is generally not-detected (ND) in groundwater. However, these material concentrations can increase when water contacts plumbing materials containing lead, brass, and copper. Because domestic plumbing is the primary source of these metals, drinking water regulations require testing of the water in contact with domestic plumbing for at least 6 hours. Regular use of each faucet greatly reduces leaching from lead and copper plumbing into tap water. The Water Association has identified a number of representative homes and takes samples at inside taps when water has been standing for the required amount of time. If more than 10% of the first draw samples are greater than 0.015 ppm for lead or 1.30 ppm for copper, the water system is required to optimize treatment to minimize the levels of lead or copper.

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