

Township 29 Water Association presents herein our annual Water Quality Report (known as a “Consumer Confidence Report”), as required by the Federal Safe Drinking Water Act (SDWA). Township 29 Water Association is committed to providing you with water that meets or exceeds all state and federal drinking water standards. This report sets out where our water comes from, what the current year tests show about it, and other information that you may wish to know about drinking water.

**WATER SOURCE**

Our system pumps groundwater from an Island County aquifer, and transmits the water to the reservoir. The water is chlorinated at the treatment plant as part of the arsenic removal system (see below); this also minimizes the risk of any coliform bacteria growing in your system. It is also filtered to remove the majority of any iron and manganese in the water. The reservoir was again cleaned this year; it is our intent to continue with a regular cleaning schedule. If you experience any extended deterioration in water quality please call King Water and they will flush the lines.

King Water Company performs water system management and operations, is responsible for all water testing and ensures compliance with all federal, state and county standards. King Water is a state certified Satellite Management Agency. For more information about this report, or for any questions you may have about your drinking water, please contact Sandra Bodamer or Clive Defty at King Water (telephone 888-241-2503 or 360-678-5336).

**WATER QUALITY TABLE**

**Terminology**

Maximum Contaminant Level Goal (MCLG) - 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.

Maximum Contaminant Level (MCL) - the highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLGs as feasible using the best available treatment technology.

Action Level (AL) – the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Parts per million (ppm) or Milligrams per liter (Mg/l) – one part per million corresponds to one minute in 2 years or one penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (Ug/l) – one part per billion corresponds to one minute in 2,000 years or one penny in \$10,000,000.

The information set out below is based on tests conducted during the year. Terms used in the Water Quality Table and in other parts of this report are defined above.

<b>Contaminant</b>	<b>Test Date</b>	<b>Unit</b>	<b>MCL</b>	<b>MCLG</b>	<b>Result</b>	<b>Source</b>	<b>Violation</b>
Bacteria	Monthly	N/A	N/A	N/A	See below	Naturally present	Yes
Arsenic	Quarterly	ppb	10	10	23	Erosion of natural deposits	Yes
Nitrate	August	Mg/l	10	10	None detected	Runoff – fertilizers, natural deposits, septic tanks	No

**Arsenic in Water**

The new arsenic treatment plant was put on line at the beginning of 2014. Chemicals and process times are still being adjusted but, for the first quarter of 2014, your drinking water currently meet’s EPA’s revised drinking water standards for arsenic. However, it does contain low levels of arsenic (5.14 ppb), compared to the state MCL of 10 ppb. There is a small chance that some people who drink water containing low levels of arsenic for many years could develop circulatory disease, cancer, or other health problems. Most types of cancer and circulatory disease are due to factors other than exposure to arsenic. The EPA’s standard balances the current understanding of arsenic’s health effects against the cost of removing arsenic from drinking water.

For 2013, your drinking water had levels of arsenic that exceed the new state MCL of 10 ppb. Some people who drink water that contains arsenic over the MCL for many years could experience skin damage or problems with their circulatory system, and may have an increased risk of developing cancer.

**EXPLANATION OF VIOLATIONS**

In July, the routine monthly water sample tested positive for coliform bacteria. Repeat samples confirmed the contamination. The reservoir was immediately cleaned and the system chlorinated. Follow up samples in August confirmed that the contamination had been eliminated.

**We are pleased to report that there were no other violations in 2013.**

**Iron and Manganese**

Typical of much of the Island's water, our water contains elevated levels of Iron and Manganese, which are abundant in the rocks and soils in the area. These are secondary contaminants and the US EPA has not mandated treatment to reduce the levels of contamination. Scientific findings suggest that the levels found pose no threat to human health. Manganese and iron are considered to be an aesthetic problem. At sufficient concentrations, iron can adversely affect the taste of water and can leave rust colored stains on laundry, plumbing fixtures and porcelain. Manganese can cause similar problems, has a bitter metallic taste and may leave black "specks" in ice cubes. Manganese can also produce staining and cause water to have a brown or black discoloration.

The treatment system we have should remove the majority of iron and manganese present in our system. King Water periodically tests the water for iron and manganese, to ensure that the treatment system is working properly.

**Conductivity and Chlorides**

The system is tested twice a year for conductivity and chlorides; this is to ensure that our water source is not being contaminated by salt water. Levels are set out below:

Contaminant	Test Date	Unit	MCL	MCLG	Result	Source
Chloride	Aug. & April	Mg/l	250	250	280 & 260	Salt water or natural deposits
Conductivity	Aug. & April	Umhos/cm	700	700	1,300 & 1,100	

**Lead and Copper**

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. Your water system is 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 <http://www.epa.gov/safewater/lead>.

**Repairs and maintenance - Shared responsibilities**

Sometimes problems occur associated with snow, freezing weather, heavy rains and flooding – all of which can cause water pipes to break and necessitate the need to get the water turned off in an emergency. Please remember that it is the responsibility of your water system (the purveyor) to deliver safe drinking water to your property. As a rule, this responsibility stops at the meter or shut off valve – usually located at, or close to, the property line. However, **it is the responsibility of the home owner to know where their shut off valve is located and keep the area clear and readily accessible.**

**Substances expected to be in Drinking Water**

To ensure that tap water meets acceptable drinking standards, the US EPA prescribes regulations limiting the amount of certain contaminants that may be in drinking water. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances

resulting from the presence of animals or from human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some of these contaminants. However, their presence does not necessarily mean that the water poses a health risk. Such substances may include:

Microbial contaminants, such as bacteria and viruses, which may come from sewage treatment plants, septic systems agricultural livestock or wildlife. These are tested for monthly.

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, mining or farming. These are tested for based on a schedule prescribed by the state Department of Health (DOH); they include nitrates, which are tested for annually.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, storm water runoff and residential uses. These are tested for based on a schedule prescribed by the DOH.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes, gas stations, storm water runoff and septic systems. These are tested for based on a schedule prescribed by the DOH.

**ADDITIONAL HEALTH INFORMATION**

Some people may be more vulnerable to contaminants in drinking water than the general population. They include immuno-compromised persons such as persons with cancer, those undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, the elderly and infants, who can be particularly at risk from infections. These people should seek advice from their health care providers before drinking any water. More information about EPA/CDC guidelines to lessen the risk of infection by Cryptosporidium, other contaminants and potential health effects can be obtained by calling the Environmental Protection Agency Safe Drinking Water Hotline (800-426-4791).

**ANNUAL WATER USE EFFICIENCY REPORT**

The State legislature directed the Department of Health (DOH) to adopt an enforceable **Water Use Efficiency** (WUE) program, which became effective January 22, 2007. All Group A water systems, as defined in the Law, are required to comply and the first annual Water Use Efficiency report was due by July 1, 2011. If meters are not yet installed, a plan must be developed to have service meters installed on all homes by January 22, 2017.

For the 12 months ended December 31, 2013 the amount of water pumped by our water system was 736,360 gallons (595,500 gallons in 2012), an average of 84 gallons (68 in 2012) per house per day.

A summary of our water usage follows:

Water Pumped	House meters	Flushing & reservoir cleaning	Authorized Consumption	Net Loss	Loss %
736,360	716,090	10,000	726,090	10,270	1.4%

**Important Notice:**

*Water services in your water system may have been installed with, or upgraded to include, a check valve that helps protect the water system from a backflow event. This occurs when a drop in pressure in the mains allows water to be drawn into the mains from the service connection; as a result the system water can be contaminated.*

*The installation of the check valve causes the home to become a "closed system" and makes it susceptible to damage caused by thermal expansion of the water. This is a potentially dangerous condition caused by your water heater overheating and excessive pressure build up from a malfunction of the pressure relief valve on the heater. Please ensure that your water heater has been properly installed with working protection devices (T&P valve and expansion tank); if in doubt, consult with your plumber.*