

Juniper Beach Water District presents herein our annual Water Quality Report (known as a “Consumer Confidence Report”), as required by the Federal Safe Drinking Water Act (SDWA). Juniper Beach Water District 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, to minimize 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 TJ Lurvey or Sandra Bodamer 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	All passed	Naturally present	No
HaloAcetic acids (DBP’s)	September	Ug/l	60	60	6.6	Chlorine interaction with natural organic matter.	No
Trihalo Methane (DBP’s)	September	Ug/l	80	80	63.8	Chlorine interaction with natural organic matter.	No
Nitrate	August	Mg/l	10	10	ND	Runoff – fertilizers, natural deposits, septic tanks	No
Radionuclides	October	pCi/l	15	15	1.1	Erosion of natural deposits	No
Radium 228	October	pCi/l	5	5	1.2	Erosion of natural deposits	No

**Nitrates in Water**

Nitrates in drinking water at levels above 10 ppm are considered to be a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

**Arsenic in Water**

Your drinking water currently meets EPA’s revised drinking water standards for arsenic. However, it does contain low levels of arsenic, 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.

The Smith Rd well water, currently servicing just two homes, has levels of arsenic of 8.5 ppb, average. Because this is an average the level, at times, exceed the new state MCL of 10 ppb. As a result, the system is now required to test quarterly and make progress towards removing those homes from that supply – which is expected to be completed by summer of 2016. 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**

**We are pleased to report that there were no violations in 2015.**

**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 and voluntary tests in other months; this is to ensure that our water source is not being contaminated by salt water. Levels are set out below:

<b>Contaminant</b>	<b>Test Date</b>	<b>Unit</b>	<b>MCL</b>	<b>MCLG</b>	<b>Result</b>	<b>Source</b>
Chloride	Monthly	Mg/l	250	250	31/55	Salt water or natural deposits
Conductivity	Monthly	Umhos/cm	700	700	570/670	

**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>.

Five houses were checked for lead and copper content in the water. Results showed very low levels – lead were hardly detected, the highest being 0.0018 which is below the action level of 0.015mg/L and copper levels were below 0.25 which is below the state AL of 1.3 ppm.

**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.

Radioactive contaminants, which are usually naturally occurring. 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.

We have not installed water meters but plan to have them installed by the end of 2016.

For the 12 months ended December 31, 2015 the amount of water pumped by our water system was 6,439,477 gallons (4,597,202 gallons in 2014), an average of 147 gallons (105 in 2014) per house per day.

A summary of our water usage follows:

Water Pumped	House meters	Backwash	Flushing & reservoir cleaning	Authorized Consumption	Net Loss	Loss %
6,439,477	5,141,685	421,150	95,000	5,657,835	781,642	12%

**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.*