2016
Annual Consumer Confidence Report on the Quality of Jackson Park/Naval Hospital Bremerton Drinking Water

This is an annual report on the quality of water delivered by the drinking water system at Naval Base Kitsap Jackson Park and Naval Hospital Bremerton. Presented in this report is information on the source of our water, its constituents, and the health risks associated with any contaminants. Please read on for a full explanation of the quality of our water.

Our water is safe to drink.

Source of our Water

Jackson Park and Naval Hospital Bremerton (JP/NAVHOSP) purchases drinking water from the City of Bremerton. Bremerton's water sources consist of surface water from the Union River Reservoir and groundwater from production wells located in Kitsap County. All sources are managed per Washington State Department of Health (WDOH) requirements, Environmental Protection Agency (EPA) regulations, and best management practices for water supply systems. Bremerton owns and protects the 3,000 acre watershed surrounding the Union River supply. Access to the watershed is secured, patrolled, and limited to water supply and forestry management activities. Groundwater wells are also safeguarded through their wellhead protection efforts. Further information about the City of Bremerton's water system is included in the attached Drinking Water Quality report 2016. Additional information can be found at their website at http://www.ci.bremerton.wa.us/282/Drinking-Water-Quality-Report.

Both the JP/NAVHOSP and City of Bremerton's water systems are operated and maintained by experienced personnel licensed by the state of Washington. The Washington State Department of Health determined the City of Bremerton's water sources was of such good quality the city was not required to install filtration as long as all water quality, operational, and watershed protection requirements were met. The City of Bremerton consistently meets these quality standards. The City of Bremerton provides water that is treated with the following:

- Chlorine and Ultraviolet for disinfection to control microbes that could be present.
- Addition of sodium hydroxide to reduce lead and copper corrosion in plumbing.

Information from EPA

The sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land and through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material. It can also pick up substances resulting from the presence of animals or from human activity. These substances are referred to as contaminants by the EPA.

Contaminants that may be present in source water include:

a. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
b. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
c. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;
d. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems;
e. Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA and the WDOH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and Washington State Department of Agriculture (WDOA) 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 contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking water Hotline at 800-426-4791.

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 can be particularly at risk from infections. These people 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Household Cross Connection Protection

A cross connection happens when your drinking water plumbing is connected or in contact with a non-drinking water system such as a lawn sprayer, soap dispenser, sprinkler system, swimming pool, irrigation system, or water heating and cooling system. When water flows back from the non-drinking water system into your drinking water plumbing system, your drinking water becomes contaminated. Signs of contamination include discolored water and unusual smells. See attached pamphlet titled *Help Protect Your Drinking Water from Contamination* for more information on how to protect your drinking water from cross connections.

Additional Information for Lead

In Washington State, lead in drinking water comes primarily from materials and components used in household plumbing. The more time water has been sitting in pipes, the more dissolved metals, such as lead, it may contain. Elevated levels of lead can cause serious health problems, especially in pregnant women and young children.

To help reduce potential exposure to lead: for any drinking water tap that has not been used for 6 hours or more, flush water through the tap until the water is noticeably colder before using for drinking or cooking. You can use the flushed water for watering plants, washing dishes, or general cleaning. Only use water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from EPA's Safe Drinking Water Hotline at 1-800-426-4791 or online at http://www.epa.gov/safewater/lead.

Compliance (Action Level) for lead and copper samples is based on a 90th percentile. This means that the concentration of lead and copper must be less than or equal to the action level in at least 90% of the samples collected. In other words, out of every 10 locations sampled, 9 were at or below the Action Level.

Water Quality Summary

The Navy has water testing requirements in addition to the City of Bremerton's water quality program. The below information provides a summary of the water testing conducted by the Navy. Our water system uses only EPA approved laboratory methods to analyze drinking water. Samples are drawn from designated sample sites in the distribution system by licensed water shop personnel. All samples are then transported to an accredited laboratory where a full spectrum of water quality analyses is performed for the parameters listed below.

Sampling Schedule	
Parameter	Frequency
Coliform Monitoring[1]	Monthly
Chlorine Residual	Daily
Lead and Copper	Every 3 years
Total Trihalomethane (THM)	Quarterly
Halo-Acetic Acids (HAA5)	Quarterly
Asbestos	Every 9 years

[1] Contaminants in this group include total coliform, fecal coliform, and heterotrophic bacteria.

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Detected Contaminants

In order to ensure that tap water is safe to drink, EPA and WDOH prescribe regulations which limit the amount of contaminants in water provided by public water systems. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the 2016 calendar year. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of the data, though representative, may be more than one year old.

The City of Bremerton tests for over 50 inorganic and organic compounds in the source water. Compounds detected in the City of Bremerton's source water during 2016 met all the protective standards set by federal and state agencies. Please refer to the attached City of Bremerton Drinking Water Quality report 2016 for complete test results.

Due to being a consecutive system, meaning we purchase our water from the City of Bremerton, there are only a few water quality parameters that are tested for in our water system within the fence line of the base. The tables below list the drinking water contaminants that we detected by water testing performed on the JP/NAVHOSP water system within the fence line of the base. Please refer to the tables below and the attached City of Bremerton Drinking Water Quality report for 2016 for complete test results. Although many more contaminants were tested, only those substances listed below were found in your water.

Contaminates	MCLG	AL	Your Water (90^{th}%)	Sample Date	# of Samples Exceeding AL	Violation	Typical Sources
Inorganic Contaminates							
Lead (ppb)	0	15	8*	2015	1**	No	Corrosion of household plumbing systems; erosion of natural deposits.
Copper (ppm)	0	1.3	0.05*	2015	0	No	Corrosion of household plumbing systems; erosion of natural deposits.

* This is the 90th % value from the most recent testing which is below the AL demonstrating our system is in compliance with the Lead & Copper Rule.
** Sample exceeding the AL occurred on 7/8/2015 at Bldg. 78C with a value of 55 ppb.

Contaminates	MCLG	MCL	Your Water	Range		Sample Date	Violation	Typical Sources
				Low	High			
Volatile Organic Contaminants								
Haloacetic Acids (HAA) (ppb)	N/A	60	17.0*	3.7	25.5	2016	No	By-product of drinking water disinfection
Total Trihalomethane (TTHM) (ppb)	N/A	80	44.3*	17.5	74.9	2016	No	By-product of drinking water disinfection
Asbestos								
Asbestos (Million Fibers/L)**	0	7	ND	ND	ND	2016	No	Corrosion of plumbing systems

* LRAA for the 2016 calendar year
** Fibers longer 10 μm

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Definitions and Abbreviations

AL (Action Level) – The concentration of a contaminant, which, if exceeded, triggers treatment techniques or other requirements, which must be followed.

Level Detected – Laboratory analytical result for a contaminant; this value is evaluated against an MCL or AL to determine compliance.

LRAA – Locational Running Annual Average

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. Under the Safe Drinking Water Act, the EPA establishes these MCLs for compliance purposes.

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.

N/A – Not Applicable

ND – Not Detected. The compound was not detected above the Lab's Method Detection Limit

pCi/l – stands for picocuries per liter. A curie is a unit of radioactivity regarding the rate disintegration

ppb – 1 part per billion (equivalent to one penny in $10,000,000).

ppm – 1 part per million (equivalent to one penny in $10,000).

ppt – 1 part per trillion (equivalent to one penny in $10,000,000,000).

Range – Represents the end values recorded from the highest and lowest analytical results of a reported contaminant.

Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.

Public Involvement

Drinking water system information can be obtained by contacting the Naval Base Kitsap Public Affairs Office, at 360-627-4031.

Consumer Confidence Report Information Provided to the Navy by the City of Bremerton
Data from Calendar Year 2016

Source Water Information

The City of Bremerton's drinking water sources are surface water from the Union River and groundwater from production wells located in the Bremerton area. Bremerton owns and protects the 3,000 acre watershed surrounding the Union River supply. Access to the watershed is limited and only water supply and forestry management activities take place there. Groundwater wells are also safeguarded through wellhead protection efforts. All water facilities are monitored and patrolled.

Bremerton's Water Needs Minimal Treatment

The City of Bremerton's water system is operated and maintained by experienced personnel certified by the state. The Washington State Department of Health has determined that Bremerton's source water in the Union River is of such good quality that the City is not required to install filtration as long as all water quality, operational, and watershed protection requirements are met. Bremerton consistently meets these high quality standards. Treatment of Bremerton's water currently consists of ultraviolet light and chlorine for disinfection and adjustment to increase pH to reduce corrosion of lead and copper from customer plumbing. Corrosion control has been in place since 1999.

Required Source Water Quality Data:

Your drinking water is regularly tested in accordance with all federal and state regulations. The City of Bremerton tests for over 50 inorganic and organic compounds in the source water. These results meet the health protective primary standards set by federal and state agencies. ***Not listed are the compounds that were tested for but were NOT detected.*** The amounts allowed in drinking water are so small they are measured in parts per million and parts per billion.

Substances Detected						
Parameter	Highest Level Allowed EPA's MCL	Ideal Goals EPA's MCLG	Potential Sources	Highest Level Detected in 2015 to Determine Compliance	Range of Levels Detected in 2015	Meets Protective Health Standard
Regulated at the Surface Water Source						
Turbidity	Treatment Technique 5 NTU	N/A	Soil runoff	2.09 NTU	0.59 – 2.09 NTU	Yes
Sodium Most recently sampled in 2012	No Limit Set	N/A	Naturally-occurring	5.73 ppm	ND – 5.73 ppm	Yes
Regulated at the Groundwater Sources						
Sodium Most recently sampled in 2012	No Limit Set	N/A	Naturally-occurring	7.39 ppm	7.39 ppm	Yes

Definitions:

EPA is the United States Environmental Protection Agency.

MCLG (Maximum Contaminant Level Goal) is the level of a contaminant in drinking water below which no known or expected risk to health exists. MCLGs allow for a margin of safety.

MCL (Maximum Contaminant Level) is 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.

ND (Not Detected) means the laboratory did not detect this parameter above the state reporting limit.

NTU (Nephelometric Turbidity Unit) is the measurement of water clarity. Monitoring turbidity is an indicator of water quality.

ppb (part per billion) is the same as a **ug/L (microgram per liter)** and equivalent to one penny in $10,000,000.

ppm (part per million) is the same as **mg/L** (milligram per liter) and is equivalent to one penny in $10,000.

Treatment Technique is a required process intended to reduce the level of a contaminant. Bremerton's surface supply is not used when turbidity increases above set points.

Submitted by: Kathleen Cahall, City of Bremerton Water Resources Manager
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Common Household Hazards

Chemical Spray Applicators

The chemicals used on your lawn and garden can be toxic or fatal if ingested. These chemicals include pesticides, herbicides, and fertilizers. Even strong cleaning chemicals sprayed on cars, house siding, etc., may cause health problems if ingested.

Submerged Hoses

Water held in pools, ponds or other vats open to the air and exposed to humans or animals may contain microbiological contaminants. Hoses submerged in buckets or containers can act as a conduit for contaminants under backflow conditions.

Underground Lawn Irrigation Systems

Underground irrigation systems often have puddles of standing water around the ground-level sprinkler heads. The sprinkler heads **are not** designed to be drip-tight under backflow conditions. The puddles of water may contain microbiological contaminants, such as excrement from animals or chemical residue from fertilizer and herbicides sprayed on the lawn.

For further information contact your local water purveyor or the PNWS/AWWA Cross-Connection Control Committee through the PNWS office at (877) 767-2992 or on the web at www.pnws-awwa.org

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Help protect your
Drinking Water
from
Contamination

Household Hazards

American Water Works Association
Pacific Northwest Section

How Contamination Occurs

Water normally flows in one direction, from the public water system through the customer's cold or hot water plumbing to a sink tap or other plumbing fixture. The plumbing fixture is the end of the potable water system and the start of the waste disposal system.

Under certain conditions water can flow in the reverse direction. This is known as ***backflow***. Backflow occurs when a backsiphonage or backpressure condition is created in a water line.

Backsiphonage may occur due to a loss of pressure in the water distribution system during a high withdrawal of water for fire protection, a water main or plumbing system break, or a shutdown of a water main or plumbing system for repair. A reduction of pressure below atmospheric pressure creates a vacuum in the piping. If a hose bib was open and the hose was submerged in a wading pool during these conditions, the non-potable water in the pool would be siphoned into the house's plumbing and back into the public water system.

Backpressure may be created when a source of pressure, such as a pump, creates a pressure greater than that supplied from the distribution system. If a pump supplied from a non-potable source, such as a landscape pond, was accidentally connected to the plumbing system, the non-potable water could be pumped into the potable water supply.

How to Prevent Contamination of Your Drinking Water

Protect your drinking water by taking the following precautions:

Don't:

- Submerge hoses in buckets, pools, tubs, sinks, ponds, etc.
- Use spray attachments without a backflow prevention device.
- Connect waste pipes from water softeners or other treatment systems to the sewer, submerged drain pipe, etc.
- Use a hose to unplug blocked toilets, sewers, etc.

Do:

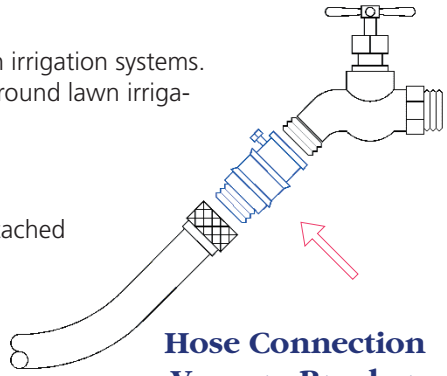
- ✔ Keep the ends of hoses clear of all possible contaminants.
- ✔ If not already equipped with an integral (built-in) vacuum breaker, buy and install hose bib type vacuum breakers on all threaded faucets around your home. These devices are inexpensive and are available at hardware stores and home improvement centers.
- ✔ Install an approved backflow prevention assembly on all underground lawn irrigation systems. Remember, a plumbing permit is required for the connection of an underground lawn irrigation system to your plumbing system.

Hose Connection Vacuum Breaker

Hose connection vacuum breakers are specifically made for portable hoses attached to threaded faucets. Their purpose is to prevent the flow of contaminated water back into the drinking water. These devices screw directly to the faucet outlet. They can be used on a wide variety of installations, such as service sinks, hose faucets near a wading pool, laundry tub faucets, etc.

Some units are designed for manual draining for freezing conditions. Some are furnished with breakaway set screws as a tamper proof feature.

These device are not intended for operation under continuous pressure.



Hose Connection Vacuum Breaker

Protection of the Water Purveyor's Distribution System

In general, the installation of plumbing in compliance with the plumbing code will provide adequate protection for your plumbing system from contamination.

However, the water purveyor may require (as a condition of service) the installation of a backflow prevention assembly on the water service to provide additional protection for the public water system. A backflow prevention assembly will normally be required where a single-family residence has special plumbing that increases the hazard above the normal level found in residential homes, or where a hazard survey cannot be completed.

To help determine if a backflow prevention assembly is required, the water purveyor may send residential customers a Cross Connection Control Survey Questionnaire. The water purveyor will evaluate the returned questionnaires to assess the risk of contamination to the public water system. Based on the results of the evaluation, the installation of backflow prevention assemblies may be required on services to some customers.