

2010
Annual Consumer Confidence Report on the Quality of
Naval Base Kitsap Bremerton Drinking Water System

This is an annual report on the quality of water delivered by the drinking water system at Naval Base Kitsap Bremerton. Under the "Consumer Confidence Reporting Rule" of the Federal Safe Drinking Water Act, community water systems are required to report this water quality information to their customers. Presented in this report is information on the source of our water, its constituents, and the health risks associated with any contaminants. Our water is safe to drink. Please read on for a full explanation of the quality of our water.

Source of our Water

Naval Base Kitsap Bremerton purchases drinking water from the City of Bremerton. Bremerton's water sources are surface water from the Union River Reservoir and groundwater from production wells located Kitsap County. The City of Bremerton owns and protects the 3000 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. Further information, including the latest Water Quality Report for City of Bremerton drinking water can be found at their website at www.ci.bremerton.wa.us. Access to the Naval Base Kitsap Bremerton water system is secured and limited to water supply activities.

Both the Naval Base Kitsap Bremerton and City of Bremerton's water systems are operated and maintained by experienced personnel certified by the State. In 1992, the Washington State Department of Health determined the City of Bremerton's Union River water source was of such good quality the city was not required to install filtration as long as all water quality, operational, and watershed protection requirements are met. Treatment of the City of Bremerton's water currently consists of:

- Chlorine for disinfection to control microbes that might be present in the water.
- Sodium hydroxide to reduce corrosion of lead and copper from customer plumbing.

Information from EPA

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 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 by the Environmental Protection Agency (EPA) as contaminants.

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 Washington State Department of Health prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration and Washington State Department of Agriculture 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. Insofar as the term "contaminant" refers to everything from naturally occurring minerals to synthetic organic chemicals, the mere 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. Immuno-

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compromised people such as people 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 and Centers for Disease Control and Prevention (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 at 800-426-4791.

Please Note: The City of Bremerton has tested for cryptosporidium since 1994 and has never detected this organism in the source water.

Monitoring of Your Drinking Water

The water system uses only EPA approved laboratory methods to analyze your drinking water. Samples are drawn from designated sample sites in the distribution system by Water Shop personnel. Sample points are rotated on a monthly basis for Chlorine residual and biological contaminants and for other possible contaminants sample locations are determined by the specific regulatory agency. All samples are then transported to an accredited laboratory where a full spectrum of water quality analyses is performed. The table below details the schedule for sampling various contaminant groups, conducted by the City of Bremerton or Navy personnel on the NBK water systems.

City of Bremerton Sampling Schedule			
Compound	Monitoring Frequency	Compound	Monitoring Frequency
Chlorine residual	Continuous	Giardia/Cryptosporidium	Once a month
Turbidity	Continuous	Nitrate	Annually
pH	Continuous	Inorganic chemicals	Annually
Total coliform	Weekly	Volatile organic compounds	Every 3 years
Disinfection byproducts	Quarterly	Radionuclide	Every 4 years
Naval Base Kitsap Bremerton Sampling Schedule			
Biological contaminants (total coliform group) ¹		10 samples every month	
Lead and copper		20 samples every 3 years	
Disinfectant By-Products		Per State direction	

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

Definitions and Abbreviations

To gain a better understanding of the content of this report, several key terms and abbreviations should be defined. These are as follows:

Action Level (AL) – 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.

Maximum Contaminant Level (MCL) – 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.

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 Residual Disinfectant Level (MRDL) – 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.

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Maximum Residual Disinfectant Level Goal (MRDLG) – 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.

mg/L - Milligrams per Liter; a unit of measure equivalent to a part per million (ppm)

N/A – Not Applicable.

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

NTU - Nephelometric Turbidity Unit is a measurement of water clarity.

ppb - Parts per billion; a unit of measure equivalent to a single penny in \$10,000,000

ppm - Parts per million; a unit of measure equivalent to a single penny in \$10,000

Range - The range of the highest and lowest analytical values of a reported contaminant.

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

µg/L - Micrograms per Liter; a unit of measure equivalent to a part per billion (ppb)

Detected Contaminants

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 2010 met all the protective standards set by federal and state agencies. Please refer to their web site (www.ci.bremerton.wa.us) for results of their tests. This year the NBK-Bremerton water system sampled for biological contaminants and residual chlorine. One October sample was positive, which required repeat sampling. The repeats were all negative, indicating the original positive sample was due to a faulty fixture. The table below shows detection results from the last 3 years, all other test results were below the lab's detection limits, and therefore below the applicable regulatory levels.

Compound	Highest Level Allowed (MCL, AL, or MRDL)	MCLG or MRDLG	Highest Level Detected	Sample Date	Range	Meets Standard?	Potential Sources
Contaminants Detected in the City of Bremerton Water							
Turbidity	Treatment Technique	N/A	3.21 NTU	2008	0.42 – 3.21 NTUs	Yes	Soil runoff
Nitrate	10 ppm	10 ppm	0.8 ppm	2009	0-0.8 ppm	Yes	Fertilizer use
Radium 228	5 pCi/L	0	1.6 pCi/L	2009	0-1.6 pCi/L	Yes	Erosion of natural; deposits
Contaminants Detected at Naval Base Kitsap Bremerton							
Copper	1.3 mg/L (AL)	1.3 mg/L	0.26 mg/L 90 th percentile ₂	Jan & Sep 09	ND – 0.42	Yes	Corrosion of building plumbing system
Lead	0.015 mg/L (AL)	0.0 mg/L	0.006 mg/L 90 th percentile ₂	Jan & Sep 09	ND – 0.007	Yes	Corrosion of building plumbing system
Coliform	N/A	Positive	Positive	29 Oct 2010	N/A	Yes, repeat samples negative	Low usage of fixture

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Compound	Highest Level Allowed (MCL, AL, or MRDL)	MCLG or MRDLG	Highest Level Detected	Sample Date	Range	Meets Standard?	Potential Sources
Disinfectant By-Products	TTHM 0.080 mg/L	N/A	0.028 mg/L	28 Jan 09	ND – 0.028 mg/L	Yes	By products of chlorination
	HAA5 0.060 Mg/L		0.029 mg/L	14 Apr 08	<0.015- 0.029 mg/L	Yes	

² This is the 90th percentile value which is calculated from the 20 samples taken in 2009. Statistical ranking designation, the 90th percentile of a list is the number such that 90 percent of the elements in the list are less than that number. For example, if a student scores in the 85th percentile on a standardized test, then 85 percent of those taking the test had lower scores.

Public Involvement

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