

2009  
Annual Consumer Confidence Report on the Quality of  
Naval Base Kitsap Bangor Drinking Water System

***This is an annual report on the quality of water delivered by the Naval Base Kitsap Bangor Drinking Water System. 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**

The Naval Base Kitsap Bangor water system provides drinking water to over 15,000 people, drawing water from the Sea Level Aquifer through four groundwater source wells located on base. The depths of the wells range from 300 to 500 feet below the ground surface. Groundwater wells are safeguarded through wellhead protection efforts. All water facilities are monitored and patrolled. Access to the water system within the Naval Base Kitsap Bangor boundaries is secured and limited to water supply activities.

The water system is operated and maintained by experienced personnel certified by the State. Treatment of the base's water currently consists of:

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

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**Monitoring of Your Drinking Water**

The water system uses only EPA approved laboratory methods to analyze your drinking water. Samples are drawn from the wellhead and designated sample sites in the distribution system by Water Shop personnel. The samples are then transported to an accredited laboratory where a full spectrum of water quality analyses are performed. The table below details the schedule for sampling the various contaminant groups.

**Monitoring Groups and Monitoring Frequency Table**

Monitoring Group	Monitoring Frequency
Biological contaminants (total coliform group) <sup>1</sup>	4 samples per week
Lead and copper	Sampled every 3 years
Volatile Organic Compounds	Sampled every 3 years
Inorganic contaminants <sup>2</sup>	Sampled every 3 or 9 years
Synthetic Organic Compounds	Sampled every 3 years
Radionuclide	Depends on results.
Residual Chlorine	15 samples daily
Nitrates	Sampled every year
Perchlorate	2 samples in 2007 required Navy

<sup>1</sup> Contaminants in this group include total coliform, fecal coliform, and heterotrophic bacteria.

<sup>2</sup> Contaminants in this group include metals, nitrate, and asbestos.

**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.

Disinfection By-Products (DBP) – For systems required to test for DBP's the system is required to meet the MCL as an average at each compliance sampling location.

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.

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.

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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**

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. In 2009, samples were taken and tested for: Lead and copper, biological contaminants, residual chlorine, nitrates, and disinfectant byproducts. The table below shows the latest test results for a contaminant group, but only displays contaminants that resulted in a detection. All other test results were below the lab's detection limits.

Compound	Highest Level Allowed (MCL, AL, or MRDL)	MCLG or MRDLG	Highest Level Detected	Sample Date	Range	Meets Standard ?	Potential Sources
Radium 228	15 pCi/L	-	0.09 pCi/L	13 Apr 08	ND – 1.1 pCi/L	Yes	Natural erosion
Gross Alpha	15 pCi/L	-	0.2 pCi/L	26 Mar 08	ND-0.2 pCi/L	Yes	Natural erosion
Sodium	20 mg/L <sup>3</sup>	-	7.75 mg/L	12 Sept 08	6.97-7.75 mg/L	N/A	Natural erosion
Trihalomethanes (Total)	80 µg/L (MCL)	-	1.31 µg/L	September 2008	0.0 – 1.31 µg/L	Yes	By-product of drinking water disinfection
Copper	1.3 mg/L (AL)	1.3 mg/L	0.051 mg/L 90 <sup>th</sup> percentile <sup>4</sup>	July 2009	ND – 0.07 mg/L	Yes	Corrosion of plumbing systems
Lead	0.015 mg/L (AL)	0.015 mg/L	0.002 mg/L 90 <sup>th</sup> percentile <sup>4</sup>	July 2009	ND-0.004 mg/L	Yes	Corrosion of plumbing systems
Manganese	0.05 mg/L (MCL)	-	0.025 mg/L	01 Apr 08	0.025 mg/L	Yes	Natural erosion
Arsenic	0.01 mg/L (MCL)	-	0.003 mg/L	26 Mar 08	ND-0.003 mg/L	Yes	Found naturally in some sediments and has been historically used as a component of pesticides

<sup>3</sup> Although there is no MCL for sodium, EPA has established a recommended level of 20 mg/L as a level of concern for those consumers that may be restricted for daily sodium intake in their diets.

<sup>4</sup> 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% 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.