# 2016
# Annual Consumer Confidence Report on the Quality of Naval Base Kitsap Keyport Drinking Water

*This is an annual report on the quality of water delivered by the drinking water system at Naval Base Kitsap Keyport. 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

Our water system provides drinking water to the residents and employees at Naval Base Kitsap Keyport. The drinking water is pumped from a groundwater source known as the "Lower Aquifer" through an 800 foot well located on base. 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 Keyport boundaries is secured and limited to water supply activities. Additionally, our aquifer is not exposed to air and is not subject to direct pollution and contamination the way surface water sources are. The aquifer is recharged by rainfall that falls on the Kitsap Peninsula and slowly percolates through the ground.

The Naval Base Kitsap Keyport water system is operated and maintained by experienced personnel licensed by the State of Washington. Treatment of the base's water consists of chlorine disinfection to control microbes that could be present in the water.

## 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).

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## 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

Your drinking water is regularly tested per applicable federal and state regulations for both the water source and the distribution system. The water system uses only EPA approved laboratory methods to analyze your drinking water. Samples are drawn from the sources and designated sample sites in the distribution system by licensed Water Shop personnel. The 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 |
| Lead and copper | Every 3 years |
| Asbestos | Every 9 years |
| Total Trihalomethane (TTHM) | Annually |
| Halo-Acetic Acids (HAA5) | Annually |
| Volatile Organic (VOC) | Every 3 years |
| Complete Inorganics (IOC)[2] | Every 9 years |
| Nitrates | Annually |
| Herbicides | Every 9 years |
| Pesticides | Every 9 years |
| Soil Fumigants | Every 3 years |
| Gross Alpha | Every 6 years |
| Radium 228 | Every 6 Years |
| Residual Chlorine | Daily |

[1] Parameters in this group include total coliform.

[2] Parameters in this group include metals, nitrate, and asbestos.

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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. The table below lists all of the drinking water contaminants that we detected during the 2016 calendar year. Although many more contaminants were tested, only those substances listed below were found in your water. 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. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

| Contaminates | MCLG | MCL | Your Water | Range | | Sample Date | Violation | Typical Sources |
|---|---|---|---|---|---|---|---|---|
| | | | | Low | High | | | |
| Inorganic Contaminates | | | | | | | | |
| Nitrate (ppm) | 10 | 10 | 0 | 0 | 0 | 2016 | No | Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits. |
| Volatile Organic Contaminants | | | | | | | | |
| Haloacetic Acids (HAA) (ppb) | N/A | 60 | 14.6 | 14.6 | 14.6 | 2016 | No | By-product of drinking water disinfection |
| Total Trihalomethane (TTHM) (ppb) | N/A | 80 | 40.9 | 40.9 | 40.9 | 2016 | No | By-product of drinking water disinfection |
| Radioactive Contaminates | | | | | | | | |
| Gross Alpha activity (pCi/L) | 0 | 15 | 1.1 | 1.1 | 1.1 | 2015 | No | Erosion of natural deposits |
| Radium-228 (pCi/L) | 0 | 5 | 1.0 | 1.0 | 1.0 | 2015 | No | Erosion of natural deposits |

| Contaminates | MCLG | AL | Your Water ($90^{th}$%) | Sample Date | # of Samples Exceeding AL | Violation | Typical Sources |
|---|---|---|---|---|---|---|---|
| Inorganic Contaminates | | | | | | | |
| Lead (ppb) | 0 | 15 | 3 | 2016 | 0 | No | Corrosion of household plumbing systems; erosion of natural deposits. |
| Copper (ppm) | 0 | 1.3 | 0.2 | 2016 | 0 | No | Corrosion of household plumbing systems; erosion of natural deposits. |

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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.

**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

**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).

**pCi/L –** Picocuries per liter. A measurement of radioactivity in water.

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

## Public Involvement

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

## 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



# *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:*

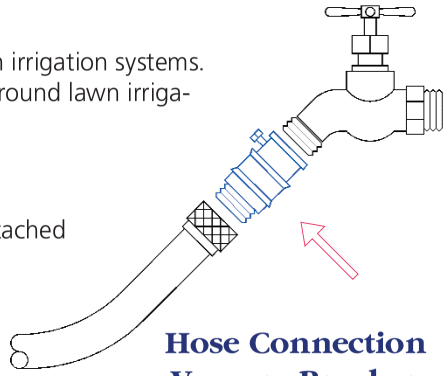
- ✔ Keep the ends of hoses clear of all possible contaminants.
- ✔ If not already equipped with an integral (built-in) vacuum breaker, buy and install hose bib type vacuum breakers on all threaded faucets around your home. These devices are inexpensive and are available at hardware stores and home improvement 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.